

DOCKSIDE

Training Session

“Implementation of distance-learning courses”

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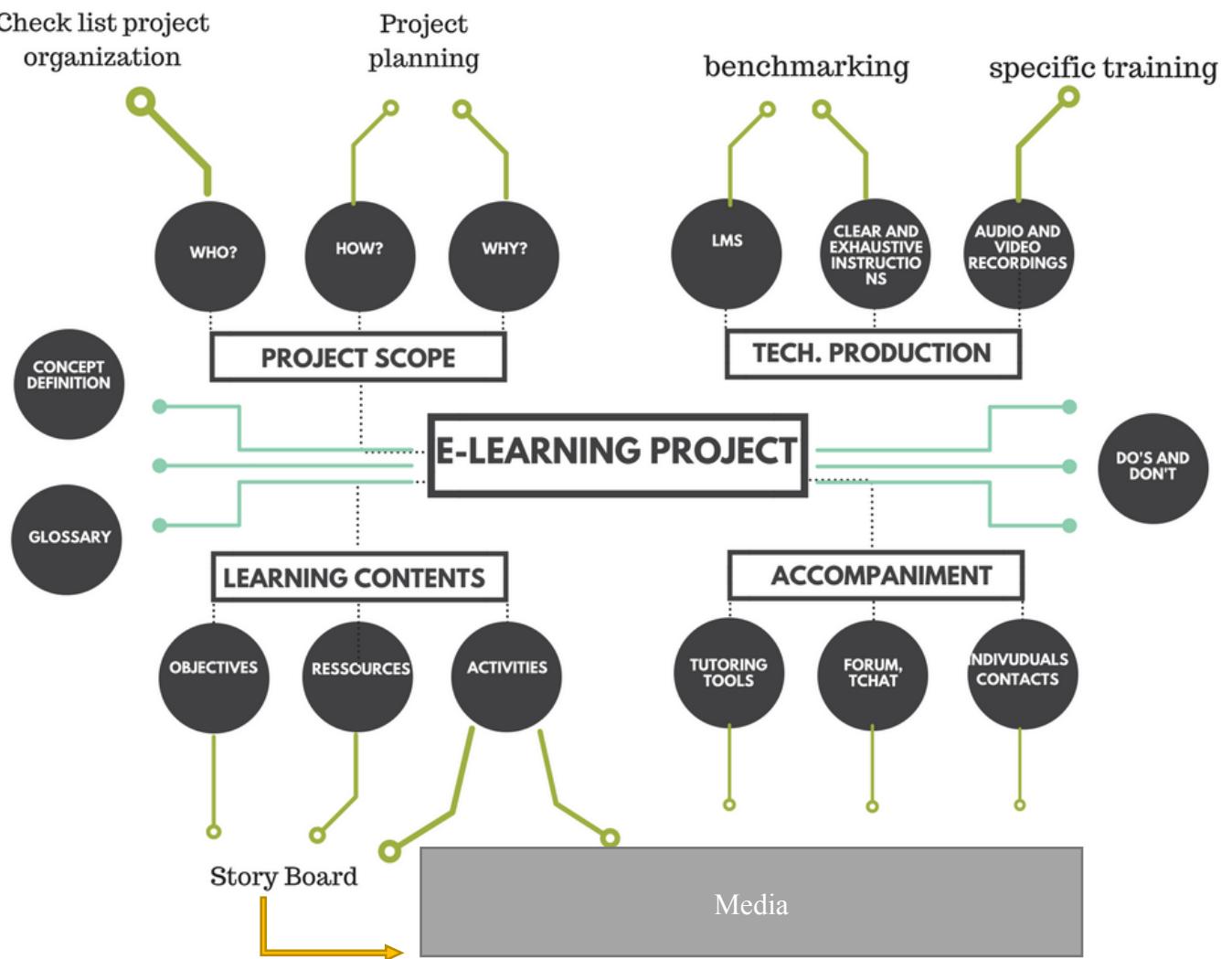
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- ▶ https://www.usdla.org/wp-content/uploads/2015/05/AIMSGDL_2nd_Ed_styled_010311.pdf
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1. Concepts and definitions

As defined by American Journal of Distance Education (1987):

Distance education is institutionally based formal education where the learning group is separated and where interactive communications systems are used to connect instructors, learners, and resources¹.

Alternatively, the United States Distance Learning Association, has adopted the term distance learning, and defines it as the acquisition of knowledge and skills through mediated information and instruction.

Given the numerous definitions of what appears to be essentially the same construct, what are the necessary and sufficient elements of distance learning? On a practical level, for an activity to be considered *distance learning* it should include—at minimum—the following:

- Physical distance between the student and the teacher – the most obvious element
- An organization that provides the content – in contrast to purely self-directed learning
- A curriculum – learning must have an objective and therefore must have structure
- Measurement of learning – without which no learning can be observed to have taken place

E-learning has taken on different meanings, depending on the organization defining it, and has been variously defined as:

- the facilitation of learning via electronic media or through the Internet or an intranet⁶
- Internet-enabled learning⁷
- Instructional content or learning experiences delivered or enabled by electronic technology⁸

With rapid advancements in web-based collaborative tools, the next generation of e-learning emerged, e.g., e-Learning 2.0, which has been defined as *the idea of learning through digital connections and peer collaboration enhanced by technologies driving Web 2.0 users empowered to search, create, and collaborate in order to fulfill intrinsic needs to learn new information*⁹

E-learning 2.0: Refer to new ways of thinking about e-learning inspired by the emergence of Web 2.0.

Blended learning refers to the appropriate combination of instructional media to achieve learning objectives. most often, it is used to define a curriculum that includes portions of traditional classroom instruction with other portions accessed on-line. It can also refer to the use of multiple media—synchronous or asynchronous—to achieve an optimal integration of instructional methods based upon sound instructional design.

2. GLOSSARY

*Source: American Society for Training & Development, www.astd.org

>> Animation: The rapid sequential presentation of slightly differing graphics to create the illusion of motion. Animation can have greater purpose in illustrating a process than a static visual, but it requires more information to be processed by the computer and thus higher bandwidth. Compare to audio, video, text, and graphic.

>> Assessment: The process used to systematically evaluate a learner's skill or knowledge level.

>> Asynchronous learning: Learning in which interaction between instructors and students occurs intermittently with a time delay. Examples are self-paced courses taken via the Internet or CD-ROM, Q&A mentoring, online discussion groups, and e-mail.

>> Audio conferencing: Voice-only connection of more than two sites using standard telephone lines.

>> Bandwidth: The information carrying capacity of a communication channel.

>> Blog (Weblog): An extension of the personal Web site consisting of regular journal-like entries posted on a Webpage for public viewing. Blogs usually contain links to other Web sites along with the thoughts, comments, and personality of the blog's creator.

>> Chat: Real-time text-based communication in a virtual environment. Chat can be used in e-learning for student questions, instructor feedback, or even group discussion.

>> Coaching: A process in which a more experienced person, the coach, provides a worker or workers with constructive advice and feedback with the goal of improving performance.

>> Discussion boards: Forums on the Internet or an intranet where users can post messages for others to read.

>> Evaluation: Any systematic method for gathering information about the impact and effectiveness of a learning offering. Results of the measurements can be used to improve the offering, determine whether the learning objectives have been achieved, and assess the value of the offering to the organization.

>> F2F (face-to-face): Term used to describe the traditional classroom environment.

>> Feedback: Communication between the instructor or system and the learner resulting from an action or process.

>> ILT (instructor-led training): Usually refers to traditional classroom training, in which an instructor teaches a course to a room of learners. The term is used synonymously with on-site training and classroom training.

>> Instructional design: The systematic development of instructional specifications using learning and instructional theory to ensure the quality of instruction. In job-related training, the aim of instructional design is to improve employee performance and to increase organizational efficiency and effectiveness.

>> Instructional designer (ID): An individual who applies a systematic methodology based on instructional theory to create content for learning.

>> Learning environment: The physical or virtual setting in which learning takes place.

>> Learning game: Learning games are simulations involving a competitive component, a challenging goal and a set of rules and constraints. The term “learning game” is also used to indicate simpler game-show quizzes used to support memorization of factual knowledge.

>> Learning object: A reusable, media-independent collection of information used as a modular building block for e-learning content. Learning objects are most effective when organized by a metadata classification system and stored in a data repository

>> Learning objective: A statement establishing a measurable behavioural outcome, used as an advanced organizer to indicate how the learner’s acquisition of skills and knowledge is being measured.

>> Learning platforms: Internal or external sites often organized around tightly focused topics, which contain technologies (ranging from chat rooms to groupware) that enable users to submit and retrieve information.

>> LMS (learning management system): Software that automates the administration of training. The LMS registers users, tracks courses in a catalog, records data from learners; and provides reports to management. An LMS is typically designed to handle courses by multiple publishers and providers. It usually doesn’t include its own authoring capabilities; instead, it focuses on managing courses created by a variety of other sources.

>> Modular: Made up of standardized units that can be separated from each other and rearranged or reused.

>> Multimedia: Encompasses interactive text, images, sound, and color. Multimedia can be anything from a simple PowerPoint slide show to a complex interactive simulation.

>> Navigation: 1) Moving from Webpage to Webpage on the World Wide Web. 2) Moving through the pages of an online site that may not be part of the WWW, including an intranet site or an online course.

>> Offline: The state in which a computer is in operation while not connected to a network.

>> Online: The state in which a computer is connected to another computer or server via a network. A computer communicating with another computer.

>> Online learning: Learning delivered by Web-based or Internet-based technologies. See Web-based training and Internet-based training.

>> Online training: Web- or Internet-based training.

>> Open-source software: 1) Generally, software for which the original program instructions, the source code, is made available so that users can access, modify, and redistribute it. The Linux operating system is an example of open source software. 2) Software that meets each of nine requirements listed by the non-profit Open Source Initiative in its Open Source Definition.

>> Podcast: A series of digital-media files which are distributed over the Internet using syndication feeds for playback on portable media players and computers. The term podcast, like broadcast, can refer either to the series of content itself or to the method by which it is syndicated; the latter is also called podcasting. The term derives from the words “iPod” and “broadcast;” the Apple iPod being the brand of portable media player for which the first podcasting scripts were developed

>> Post: To place a message in a public message forum. Also, to place an HTML page on the World Wide Web.

>> Role play: (noun) A training technique in which learners act out characters in order to try out behaviours, practice interactions, communicate for a desired outcome, and/or solve a dynamic problem. Role plays can reinforce learning and help people apply new information, skills, and techniques; (verb) To participate in a role play.

>> Self-assessment: The process by which the learner determines his or her personal level of knowledge and skills.

>> Serious games: A software application developed with game technology and game design principles for a primary purpose of learning.

>> Simulations: Highly interactive applications that allow the learner to model or role-play in a scenario. Simulations enable the learner to practice skills or behaviours in a risk-free environment.

>> Storyboard: (noun) An outline of a multimedia project in which each page represents a screen to be designed and developed; (verb) To create a storyboard.

>> Synchronous learning: A real-time, instructor-led online learning event in which all participants are logged on at the same time and communicate directly with each other. In this virtual classroom setting, the instructor maintains control of the class, with the ability to “call on” participants. In most platforms, students and teachers can use a whiteboard to see work in progress and share knowledge. Interaction may also occur via audio- or videoconferencing, Internet telephony, or two-way live broadcasts.

>> Videoconferencing: Using video and audio signals to link participants at different and remote locations.

>> Virtual: Not concrete or physical. For instance, a completely virtual university does not have actual buildings but instead holds classes over the Internet.

>> Virtual classroom: The online learning space where students and instructors interact.

>> Web 2.0: The use of Internet technology and web design to enhance information sharing and, most notably, collaboration among users. These concepts have led to the development and evolution of web-based communities and hosted services, such as social-networking sites, wikis, blogs.

>> Web conference: (noun) A meeting of participants from disparate geographic locations that's held in a virtual environment on the World Wide Web, with communication taking place via text, audio, video, or a combination of those methods; (verb) To participate in a Web conference.

>> Webinar: The term is a short version for Web-based seminar. A presentation, lecture, workshop or seminar that is transmitted over the Web. Can be video, audio or chat-based.

>> Web site: A set of files stored on the World Wide Web and viewed with a browser such as Internet Explorer or Netscape Navigator. A Web site may consist of one or more web pages.

>> Wiki: A collection of web pages designed to enable anyone who accesses it to contribute or modify content, using a simplified markup language. Wikis are often used to create collaborative Web sites and to power community Web sites.

3. Build the learning storyboard

Analysis guide for distance learning courses quality

About the three-way accordance:

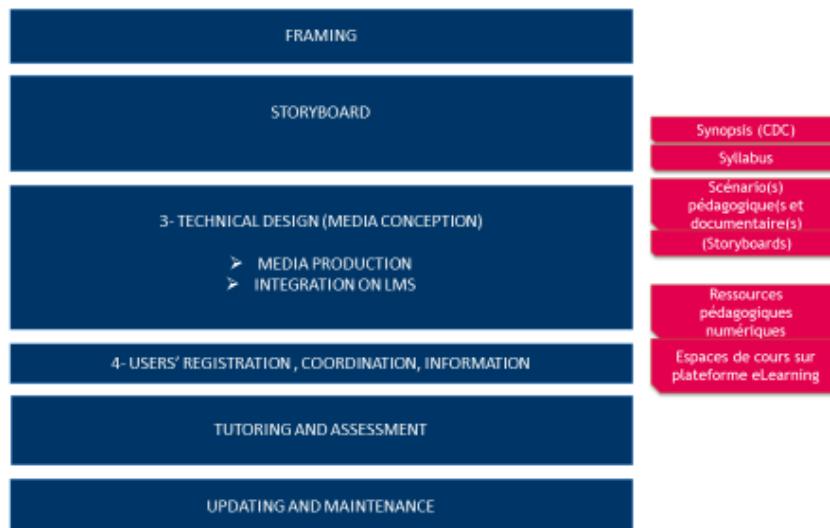
- Who is this training dedicated to? Is it considered?
- What are the training objectives, are they clearly explained?
 - Are they adapted to the public and to the training objectives?*
 - What are the training activities?
 - Which kind of medias are used?

About the training design:

- Identify the interactions with the instructor and with the other trainees
- Identify tutoring and supervision device
- Check for assessment device

→ **Which strengths and weaknesses?**

The major steps of e-learning courses conception

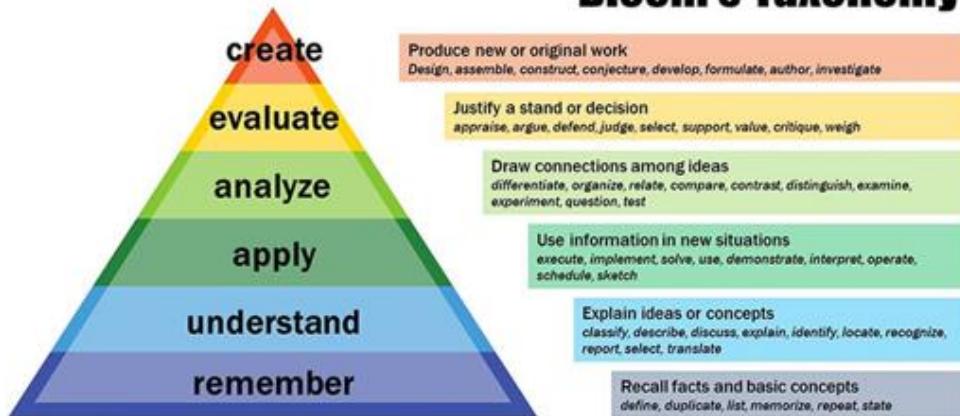


FRAMING: Public, context, learning objectives

Main factors to be taken into consideration
Where do the trainees live (language, accessibility...)?
Trainees' age and type of career
Prior knowledge
Availability for learning, place of learning
Network bandwidths and computer capacity

FRAMING: Public, context, learning objectives

Bloom's Taxonomy



SCENARIO CONCEPTION :

Provide a three-way accordance between learning objective, methods, and assessment

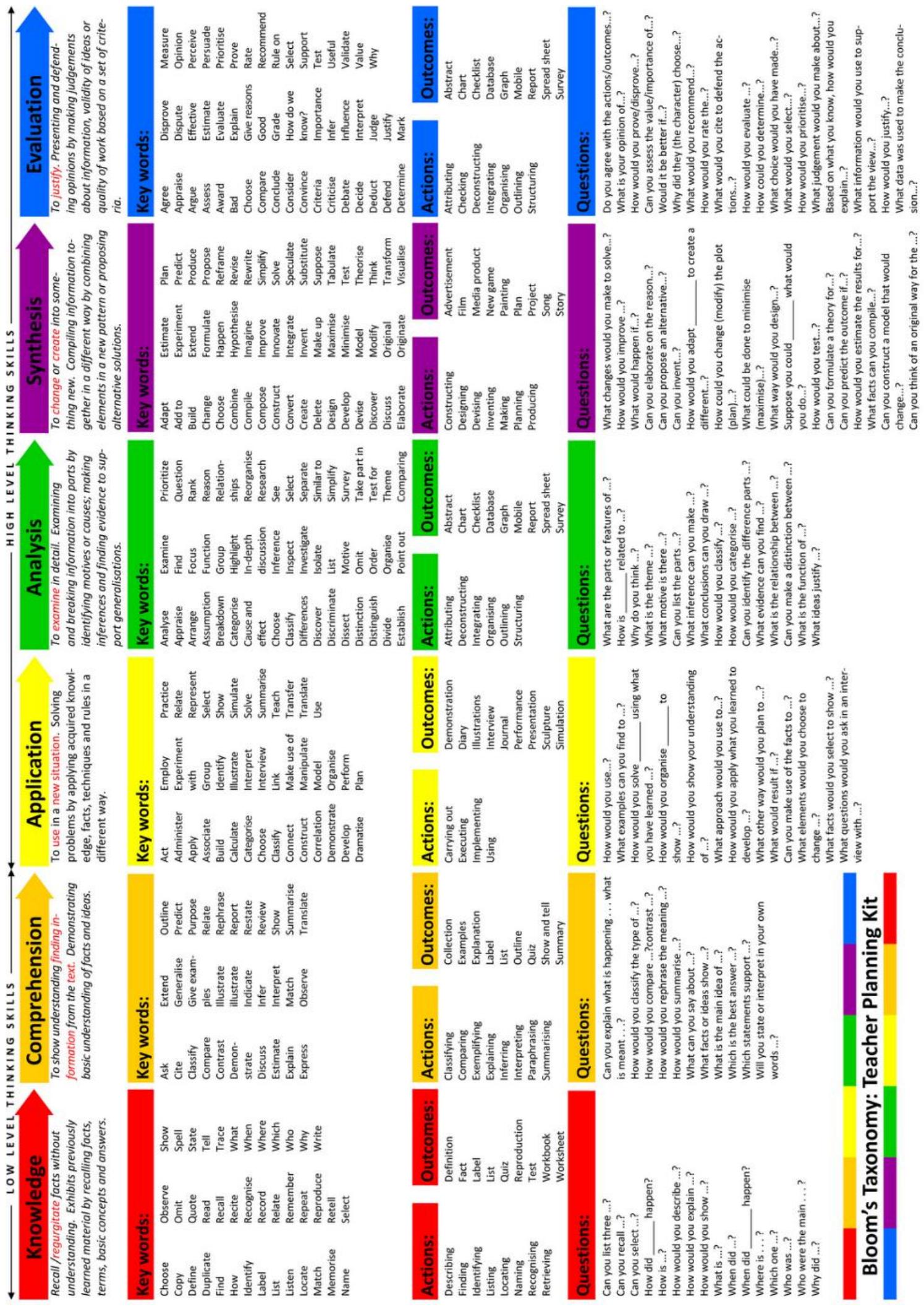
For example, if the learning objective is to “understand the main components of a food security information system (FSIS),” the course designer should adequately illustrate the FSIS concept and develop tests to assess the learners’ understanding (not only the memorization) of that concept, as shown in the table below:

	LEARNING OBJECTIVE:	LEARNING ACTIVITY:	TEST:
	Learners will understand the main components of an FSIS.	After reading the definition of FSIS, learners will look at two examples of an FSIS and will identify their main components.	Learners will describe the main components of their own country's FSIS.
REMEMBER			
UNDERSTAND	X	X	X
APPLY			
ANALYSE			
EVALUATE			
CREATE			

Scenario: choose the learning activities



- Formal presentation/lecture
- Readings
- Individual path
- Plenary discussion
- Simulations, rôle-playing games
- Student presentations
- Problem-based learning
- Sub-groups collaboration
- Range of exercices
- Case study
- Real-life working situation
- Project learning
- Individual research
- etc.



4. Choose your media

MAIN ASYNCHRONOUS MEDIA

PDF	Interactivity / no interactivity
SOUND	Only media / multimedia
VIDEO	Streaming/ download / with effects / without effects
FORM	Printed / online ...

MAIN INTERACTIVITY TOOLS :

WEBINARS – WEBCONFERENCES – VISIOCONFERENCES – FORUMS – EMAIL – WIKI – COMMUNITY PAGE...

Table 4: Bloom's Revised Taxonomy Mapped to Instructional Media

Learning Environment	Instructional Media	Bloom's Revised Taxonomy ²³	Level of Interactivity
Synchronous	<ul style="list-style-type: none"> ⇒ Web Conferencing ⇒ Audiographics ⇒ Satellite e-Learning ⇒ Audio/video teleconferencing ⇒ Virtual Worlds 	<ul style="list-style-type: none"> Creating evaluation Evaluating synthesis Analyzing analysis Applying application Understanding comprehension Remembering knowledge 	Dialectic 
Asynchronous	<ul style="list-style-type: none"> ⇒ Computer/Web-based Training (CBT/WBT) ⇒ Instructional TV (ITV) ⇒ Pre-recorded audio/video (CDs/DVDs, video/audio tapes/iPods) ⇒ Correspondence 		Didactic 

Strengths and Weaknesses of Instructional Delivery Media

The aforementioned instructional media can support the delivery of instructional content as stand-alone media, or integrated to create a blended learning solution...any combination of these media could be used to compliment the traditional classroom environment for a blended learning solution.

Some instructional media, however, may be more appropriate than others depending upon their strengths in supporting either a synchronous or asynchronous learning environment. No single medium is inherently better or worse than any other medium, just as a truck is not inherently better or worse than a sedan—they are all vehicles that simply deliver content. As discussed later in this guide, the selection of the most appropriate media is not based solely on the attributes of each specific medium, but on other considerations as well.

"The best current evidence is that media are mere vehicles that deliver instruction but do not influence student achievement any more than the truck that delivers our groceries causes changes in nutrition... only the content of the vehicle can influence achievement".

Richard Clark, "Reconsidering Research on Learning from Media". Review of Educational Research, Winter, Vol. 53, No. 4, 1983, pp. 445-459

Asynchronous Web-Based Instruction (WBI)

Strengths: WBI can provide consistent delivery to widely dispersed and large audiences using the Internet or an existing WAN/LAN infrastructure. The student's computer monitor becomes the primary display device, but unlike CBI, the content does not reside on the student's computer but is stored remotely and accessed online.

WBI can incorporate many of the features of CBI such as self-paced instruction, drill and practice, remediation and intervention. Although it is best suited for content that does not require continuous and frequent revision, WBI does allow content to be updated more easily than CBI because the content resides on a remote storage device such as a server.

Additionally, content and testing can be integrated with a Learning Management Systems (LMS) and "modularized" into small units of instruction suitable for assembly and reassembly into a variety of courses. Also, WBI can incorporate synchronous interactive technologies such as live chat rooms and instructor-originated audio that can provide instructor facilitation and feedback. Since WBI is an asynchronous technology, the student is not limited to a set time and, to a limited degree, is not restricted to accessing the content from a set place. All a student needs is a computer terminal with Internet access.

Weaknesses: WBI is technology dependent, requiring Internet connectivity and a degree of computer literacy beyond basic computer knowledge. Also, bandwidth limitations can affect the design of the content. For example, dialup Internet access (narrowband) may preclude the use of video and high-resolution graphics, resulting in a predominately text-based learning module. Alternatively, courses designed with high-impact visuals or video that require broadband access could potentially reduce the number of students who could access the module, thereby increasing costs. And, as with CBI,

reading large amounts of text on a computer screen results in a reduction of comprehension and speed when compared to print. Finally, design and development, as well as annual recurring maintenance, could be significant cost factors.

Appropriate Instructional Strategies	
❖ Narration/Description (Lecture) ❖ Demonstration ❖ Simulation ❖ Illustration ❖ Drill and Practice	❖ Tutorial ❖ Case Study ❖ Modeling ❖ Role Playing

Audio Conferencing

Strengths: Audio-conferencing can be a valuable support technology if students need to receive modification or updates to course content quickly, or have the need to interact with instructors and fellow students. It is often most effective when accompanied with other media, such as printed text & graphics, or online collaboration tools; can be integrated with ITV or satellite tools-learning to provide for two-way voice communication.

Weaknesses: Learners may have difficulty remaining engaged in course material delivered entirely via this medium. Limited to oral interaction only, does not support visuals. Consequently, cannot use the full spectrum of instructional strategies.

Appropriate Instructional Strategies	
❖ Narration/Description (Lecture) ❖ Discussion ❖ Brainstorming	

Audiographics (Electronic White Boards)

Strengths: By combining audio conferencing with text and graphics, audiographics can transmit both voice and data (text) to remote sites. This distributed technology provides for synchronous communication to the remote student, thereby supporting a dialectic learning environment.

Weaknesses: Limited to oral interaction only and, due to potential bandwidth restrictions, limited to still images only. Though resolution and quality of visuals may be limited, it is a very cost effective instructional medium

Appropriate Instructional Strategies	
❖ Narration/Description (Lecture) ❖ Discussion ❖ Brainstorming ❖ Illustration	

Computer-Based Instruction (CBI)

Strengths: In CBI, instruction is not affected by bandwidth as much as other distance learning media. It can display large amounts of visual and aural information. CBI allows the use of full-motion video and high resolution graphics, and when supplemented with audio, allows users to employ the full spectrum of instructional strategies. Students can control the pace of instruction and receive immediate feedback to reinforce learning outcomes. Additionally, intervention strategies and remedial instruction can be designed into a CBI course.

Because CBI is an asynchronous medium, it can promote drill and practice, which is sometimes a key strategy for increasing retention. Activation and exploratory learning strategies can also be designed into the instruction to further enhance retention. CBI is best suited to content that does not often change or require revisions. Costs of design and production can be spread across large student populations.

Weaknesses: CBI does not provide for an unstructured, dialectic environment. Students cannot interact with the instructor by asking questions, so facilitation by the instructor is not available. Development costs may be extremely high due to numerous variables: level of interactivity, amount of visual & aural information, design of graphics and other visuals, etc. Significant annual maintenance costs can be incurred if the content changes often. Distribution efforts may require additional resources to track distribution and ensure all students have the latest version. Media content cannot be modified or updated easily and may require an upgrade of hardware (sound card, speakers, memory, graphics card). Research has shown that reading large amounts of text on a computer screen results in a reduction of comprehension and speed when compared to print. Often used as a self-study medium, students may feel isolated and unmotivated to complete training.

Appropriate Instructional Strategies	
❖ Narration/Description	❖ Illustration
❖ Case Study	❖ Simulation
❖ Role Playing	❖ Drill and Practice
❖ Demonstration	❖ Tutorial

Print

Strengths: Printed materials, or textbooks, often referred to as *correspondence*, they are the epitome of anytime, anywhere learning media because they do not rely on any technological infrastructure to deliver or to view content. Printed materials are often complimented by multimedia (DVD, CD-ROM, videotape, audiotape) to enhance the learning event. Print has the ability to reach students who are widely dispersed and do not have Internet access. Print can provide inexpensive representation of static visuals such as charts, graphics, images, etc.

Weaknesses: This asynchronous medium can significantly limit the number of instructional strategies that can be employed. It also requires a logistical infrastructure to write, assemble,

package, and deliver the printed materials. If the content changes, course update can be cumbersome and slow.

Appropriate Instructional Strategies

- ❖ Narration/Description
- ❖ Drill and Practice
- ❖ Case Study

Instructional Television (ITV)

Strengths: ITV has the ability to emulate a live classroom environment when coupled with audio conferencing or a key-pad response system. ITV can be a highly interactive (dialectic) learning environment. Because satellite is not constrained by bandwidth, it does not limit the instructor in the use of any medium used in a traditional classroom environment; it can ensure consistent delivery of content across geographical boundaries to a very large audience in a short period of time. Optional equipment such as DVRs, video scan converters, document cameras, etc., allow instructors to include video illustrations, display PC application screens, and “zoom in” on objects for classroom discussion. It can also provide high levels of synchronous oral interaction and immediate feedback to questions despite the distance between instructor and students. Thanks to the broadcast nature of satellite, the number of sites receiving the broadcast is technically unlimited, and is constrained only by the total class size. Satellite e-learning, therefore, is a very efficient instructional medium. Additionally, with the advancements of Internet Protocol (IP) for satellite, satellite broadcasts have the capability to be delivered throughout a LAN/WAN environment to the students’ computer.

Weaknesses: ITV requires the availability of a satellite broadcast infrastructure that includes the satellite receive sites (satellite downlinks) and some form of studio-classroom used to originate the class for broadcasting. Satellite equipment requires a significant capital outlay and annual recurring costs for satellite transmission and equipment maintenance. Because it is predominately a live classroom transmission, learners are constrained by time and space requirements. Special training of the instructor is necessary, as is a staff to manage the studio and broadcast equipment.

Appropriate Instructional Strategies

- | | |
|---|--|
| <ul style="list-style-type: none">❖ Narration/Description (Lecture)❖ Guided Discussion❖ Brainstorming❖ Case Study❖ Role Playing | <ul style="list-style-type: none">❖ Panel Discussion❖ Simulation❖ Demonstration❖ Drill and Practice |
|---|--|

Recorded Audio (Tape, CD ROM, or Podcast)

Strengths: Recorded audio provides for a large amount of aural content and can be continually reviewed by the learner. Whether by tape or podcast, it is a very inexpensive distribution medium that can reach widely dispersed students.

Weaknesses: Lack of graphics or video limit its use for many instructional strategies.

Appropriate Instructional Strategies
❖ Narration/Description (Lecture)
❖ Case Study

Recorded Video (Tape, DVD, Vodcast)

Strengths: Videotape, DVD, and (to a lesser extent) vodcasting can provide large amounts of full-motion video and high-impact visuals, self-pacing, and continual review of the content.

Weaknesses: Production and distribution costs can be high (especially for tape and DVD), and if content is revised frequently, recurring maintenance costs can also be significant. Additionally, since recorded video does not provide interaction between the instructor and learners, recorded video is often not updated frequently, leading to content becoming outdated, depending on the volatility of the subject matter.

Appropriate Instructional Strategies
❖ Narration/Description (Lecture)
❖ Case Study
❖ Illustration

Satellite e-Learning

Strengths: Because satellite e-learning is not constrained by bandwidth, it can transmit large data files (CBI or WBI)—rich in multimedia—to the user's end-point, thereby bypassing the WAN and the Internet. It does not limit the instructor in the use of media that support a traditional classroom environment, and it can ensure a consistent delivery of content across geographical boundaries to a large audience in a short period of time. It can also provide high levels of synchronous oral interaction and immediate feedback to questions despite the distance between instructor and students. Due to the broadcast nature of satellite, the number of sites receiving the broadcast is technically unlimited, and is only constrained by the total class size.

Weaknesses: Satellite e-learning requires the availability of a satellite broadcast infrastructure that includes the satellite receive sites (satellite downlinks) and some form of studio-classroom used to originate the class to be broadcast. Satellite equipment requires a significant capital outlay, and annual recurring costs for satellite transmission and maintenance must be programmed. When used

for a live classroom transmission, learners are confined to a specific time and space requirement. Special training of the instructor is necessary, as is a staff to manage the studio and broadcast equipment. It also is subject to “last-mile” constraints as the signal must pass through segments of the LAN to reach the desktop.

Appropriate Instructional Strategies	
❖ Narration/Description (Lecture) ❖ Guided Discussion ❖ Brainstorming ❖ Case Study	❖ Role Playing ❖ Panel Discussion ❖ Simulation ❖ Demonstration ❖ Drill and Practice

Synchronous Web-Based Instruction (WBI)

Strengths: Synchronous WBI provides the same advantages as asynchronous WBI but, due to its real-time nature, can also accommodate live interaction with the instructor, experts, and other students. In addition to supporting synchronous learning environments, WBI also makes it possible to archive the live content for later viewing. It also allows for flexible access from any computer connected to the Internet.

Weaknesses: As with its asynchronous version, WBI, it requires some level of computer experience and student familiarity with application software. Additionally, bandwidth restrictions can constrain the use of video, images, and graphics. Also, firewall issues may prevent student access from certain locations, and the use of synchronous communications may restrict the number of students accessing the module at any given time. And, as with all types of computer screen displays, reading large amounts of text results in a reduction of comprehension and speed when compared to print.

Appropriate Instructional Strategies	
❖ Narration/Description (Lecture) ❖ Guided Discussion ❖ Simulation	❖ Case Study ❖ Demonstration ❖ Illustration

Video Teleconferencing (VTC)

Strengths: VTC incorporates many of the advantages of ITV including emulating the live classroom environment. Perhaps its strongest attribute and advantage over other distributed instructional media, however, is that it allows the instructor to view the students at the remote site. This significant advantage allows for the student to demonstrate an event, task, or procedure, which can then be observed and evaluated by the instructor. Since VTC operates in a synchronous environment, it can be highly interactive by providing immediate feedback, both aural and visual. Because the VTC infrastructure supports instructional origination from any connected site on the network, remote presenters, guests, and subject matter experts (SMEs) have the ability to be

integrated into the live session. Optional equipment such as DVRs, video scan converters, document cameras, etc., allow instructors to include video illustrations, display PC application screens, and “zoom in” on objects for classroom discussion. VTC can operate over existing LAN/WAN infrastructures and, with the emergence of video-based IP, can be distributed to and displayed by a computer monitor.

Weaknesses: VTC may present access problems if the necessary equipment is not available locally or is incompatible. Delays due to compression and decompression rates of video may result in video and audio that are out of synchronization, distracting learners. System bridging limits may constrain the number of sites that can participate in a single session. Due to availability and cost of bandwidth, the instructor may be constrained in the use of some media that require high bandwidth applications such as detailed graphics. Additionally, due to the amount of aural and visual sensory input confronted by the instructor originating from the remote sites, there may be some limitation to number of remote sites participating in the class. VTC is typically best for organizations with a small to moderate number of participating locations.

Appropriate Instructional Strategies	
❖ Narration/Description (Lecture) ❖ Guided Discussion ❖ Brainstorming ❖ Case Study	❖ Role Playing ❖ Panel Discussion ❖ Demonstration ❖ Drill and Practice

Virtual Worlds

Strengths: Virtual worlds have many of the same benefits of games and simulations. However, virtual worlds offer additional significant affordances as well.

Virtual worlds offer multiple users the benefit of synchronously testing concepts and ideas in the simulated environment without the constraints of the real world. Physics, physical limitations and risks disappear in virtual worlds, affording users the opportunity to observe, participate, and co-create with peers with only the boundaries that may have intentionally or inadvertently been built into the virtual world. This strength makes virtual worlds ideal for exploring complex, abstract concepts; potentially dangerous activities; and other experiences that are otherwise not possible in the real world. An equally important strength, virtual worlds enable the user to experience enhanced immersion through a graphically rich interface or environment, providing a space and place ‘to go’. The sense of being someplace with other people diminishes the sense of distance often encountered in other types of collaborative media, such as teleconferences, webinars, and video teleconferences. Most importantly, however, meaningful immersion occurs through the navigational and representational avatar. Avatars are representations of the users and are used to navigate through the environment. Users develop attachments to their avatars with time invested in customizing the avatar’s look, continued use of the avatar, and social interactions with other avatars. Many virtual worlds have powerful content creation tools that avatars can use for building things with other avatars. Since the virtual world and its contents remain “live,” activities and effects of activities

continue to persist even after users have logged off. In this sense, the virtual world is similar to the real world and can be useful in providing users the opportunity to identify and solve problems that may have resulted while they were logged off. Finally, some virtual worlds are interoperable with Learning Management Systems which enable some degree of performance tracking. Virtual world experiences can, then, be integrated within an existing training curriculum.

Weaknesses: Virtual worlds are not a panacea. They are not the answer for every learning, training, or collaborative challenge. It is critical to conduct a thorough needs analysis to understand if virtual worlds are a suitable medium for the identified requirements. As a tool, virtual worlds are currently not built upon a common set of design standards and are not interoperable with other virtual world platforms; therefore, the act of navigating will differ from world to world and interactions cannot be shared across worlds. Since there is no ‘one size fits all’ virtual world, this is problematic for many reasons, not the least of which is the potential requirement to invest in more than one virtual world. Another downside is learners having to setup their accounts, customize their avatars, and learn to navigate each world separately. These can be time consuming activities—time that most would rather not repeat doing the same tasks again and would rather spend on actual content learning or other such tasks. Tracking performance in virtual worlds is in its early stages. Meaningful performance metrics are needed to begin to study the efficacy of a virtual world as a learning medium; however, the industry is struggling with how to capture performance in meaningful, useful ways. Solving this issue is crucial to the future of virtual worlds.

Appropriate Instructional Strategies	
❖ Narration/Description (Lecture)	❖ Simulation
❖ Guided Discussion	❖ Demonstration
❖ Brainstorming	❖ Drill and Practice
❖ Role Playing	

- https://www.usdla.org/wp-content/uploads/2015/05/AIMSGDL_2nd_Ed_styled_010311.pdf

5. Tutoring

Tutoring goals	Tasks
Social-emotionnal	<ul style="list-style-type: none">- establish and maintain a favorable relational atmosphere for individual work and team work- Encourage trainee's team cohesion- Support trainee/student's attempts- Highline the individual and group productions
Organisational	<ul style="list-style-type: none">- Assist the collective works organisation (planning, division of tasks...)- Remind the deadlines- Stimulate reflexion concerning work organisation
Pedagogical	<ul style="list-style-type: none">- Explain learning objectives and assessment criteria- Highline some contents elements- Help with the learning methodology- Stimulate reflexivity- Prevent and help difficulties

<http://www.learn-on-line.be/le-tutorat-en-ligne>

Examples of tutoring deliveries in UN e-SEA program

- Welcome page
- Welcome book
- Tutorials
- Instructions
- News feed
- Forum
- Chat
- Virtual class, webinars
- Videoconferences

6. Do's and don't

Tips for a quality e-learning program	Warning
<ol style="list-style-type: none"> 1. Define the public first ☺ 2. Evaluate the cohesion between learning objective, methods, and assessment 3. Consider the learning process before considering the training contents. As far as sources are accessible, the training quality is mainly based on the training design. 4. Write information, instructions and contents on the e-plateform precisely, and simply. 5. Clarify the training rythm, use many ways to catch your student's attention. Pay attention to active methods, and reflexivity 6. Revise content's mediation processes 7. Revise interaction's mediation processes 8. Help your student to build its own timeschedule 9. Help your student to understand the training process and the expected results. Check his/her capacity to use the platform 10. Keep in mind that the learning chronology is likely to change. 11. Adopt project approach to implement your program, especially pay attention to the project executive, project board, and project team. 12. Give deliveries a chance to be reused. 	<p>1. Do not choose the media before figuring out the learning objectives</p> <p>2. Do not underestimate the time required to prepare contents and technical production</p> <p>3. Do not copy online the contents and activities provided in classroom, unless</p> <ul style="list-style-type: none"> ➤ contents and activities are naturally adapted to distance learning ➤ contents are precisely and clearly written, already built through horizontal organization, referring to online ressources <p>4. Measure the complexity of technology in coherence with the training duration, the students background, and the learning environement</p> <p>5. Do not forget to include the organization of course's update and maintenance</p>

7. Project management



→ HOW ? HOW MUCH ?

Project planning



<http://blog.zilicus.com/project-management-guide-basics-of-project-planning/>

Organizational structure

- The executive is the person or group of persons who allocates funding to the project. He is the key decision-maker and is ultimately responsible for the success of the project.
- The project board (often referred to as Steering Committee) represents the executive and, as the highest-level body, is responsible for providing guidance on the overall strategic direction of the project. It makes the most important decisions with regard to the goal and the scope of the project.
- The project manager is responsible for the operational management of the project.
- The project team is in charge of the technical project work.

→ https://wiki.en.it-processmaps.com/index.php/Project_Management_Checklist_-_Project_Organization

 Particulary pay attention to : project scope - people involved - delivery schedule – budget plan – deliverables

E-learning course's project delivery Schedule :

- Analysis
- Objectives
- Scenario
- Technical production
- Diffusion
- Update and maintenance
- Evaluation
- Quality reinforcement

E-learning course's business model guidelines :

Type of expenses	Types of benefits
Minimum expenses :	Minimum benefits :
Teachers' salaries or bonus payment	Salaries and bonus payments already included in university's budget
Designers and/or technicians's salaries	
Operating costs	<i>Operating costs already included in university's budget</i>
Communication (events, mobility, printing...)	
Administrative management of distant students and community management	
Additional expenses (increasing quality) :	Additional benefits (increasing quality) :
Ressources acquisition	Grant
Ressources, rights and authorizations acquisition	Training fees
Translation, subtitles...	Partner contributions
Technical additionnal modules	Other contributions
Animation	
Infographics	

Keys for a successful project

- Ensure a tight coordination of people involved
- Subdivide the project contents into meaningful units to ensure clarity and ease of handling
- Define tasks clearly, simply and precisely
- Define goals in as many subgoals as possible
- Accept revising the schedule or objective if needed



Use the Gantt chart https://en.wikipedia.org/wiki/Gantt_chart

Deliverables : Examples from UN e-SEA project

- Position profiles (project manager, instruction designer production assistant)
- Website and LMS platform
- Training documents for teachers
- Courses contents
- Tutorials for students
- Exams process
- Procedure and contracts for e-learning international partnerships setting
- Procedure for teachers' involvement and payment
- Modularization diagram
- Guide for intellectual property and online resources uses