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Strategies for Modular Builds in E-Learning

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Strategies for Modular Builds

in E-Learning

Objectives

- Consider rationales for using modules as an organizational construct for e-learning
- Introduce the practice of modular delivery of e-learning contents
- Describe the core features and elements of modules
- Describe the contexts in which modules are delivered

Why Go Modular?

- Save on costs in the creation of digital contents that may be reusable in different contexts
- Extend the flexible application of the "packaged" e-learning (e.g. from the academic into the commercial)
- Have a clear strategy for "chunking" data in manageable learning units
- Is a fashionable and practical concept

Practices of Modular Delivery

- Augmentation of human-facilitated learning
- Full academic courses
- Self-discovery learning
- Automated computer-based training (CBT); boxed courses
- Short-courses
- Standards certification (particularly for large global workforces)
- Continuing workforce training and skills updating

Core Features of a Module

- Portable
- Interchangeable
- Reusable
- Playable
- Stand-alone regarding the topic
- Comprehensive
- Focused
- Assessable
- Context-independent

- Culturally neutral (or tailored or sensitive)
- Clear learning path or learner trajectory
- Multimedia-based
- Accessible (508 compliance)
- Clean intellectual property (IP)
- Template-designed

Core Elements of a Module Template

- Learning objectives (measurable and expressed as verb phrases)
- Slideshows, audios, videos, and simulations
- Opt-in practices
- Self-assessment
- Pre- and post- tests

- Social learning elements like discussions, interactivity
- Assignments
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- Case studies
- Problem-based learning
- Simulations

Modular Stylebook Contents

- Development team, contact information, and work distribution
- Curricular contents
- Learning outcomes
- Course and modular standards
- Work timeline Templating and range limits for all modular contents (granularity)

- Branding and design standards, color schemes
- IP guidelines
- Accessibility guidelines
- Technological standards for all file types
- E-learning standards (rubrics, lists)

Organizational Rationales of Modules

- Topic- or subject-based
- Problem-based
- Project-based
- Practice-based
- Simulation- or model- based
- Theory- or principle-based
- Value-based

Modularizing a Curriculum

- Defining the learning objectives, learning audience (and needs), context, and learning outcomes
- Dividing and organizing a curriculum into chunks based on a consistent principle or structure
- Identifying available information and digital contents with clean intellectual property
- Organizing the modules into developmental phases of learning

Modularizing a Curriculum (cont.)

- Creating the digital contents with full accessibility (alt text, transcriptions, table design, and scripting, etc.)
- Creating assessments
- Conducting alpha testing
- Conducting beta (user) testing
- Revision of modules
- Documentation of work throughout

The Granularity of Digital Learning Objects

- How long should each slideshow be? (a range) Or how much time should be spent on each slideshow in terms of learning value?
- How long should the audios and videos be? Or much learning time should be involved?
- How much learning should go into each digital learning object? Each module? Each simulation?

Modular Segues and Connectors

- How will the various modules connect to each other?
- How will learners be primed for the learning in each module? What "antecedent learning" will be included?
- How will learners be strengthened at the completion of each module for future (related) learning?

Modular Versioning

- Versioning for learner groups
- Versioning for languages
- Versioning for cultural differences
- Versioning for different levels of learning
- Versioning for technological platforms
- Versioning for delivery methods (online or off-line)

Some Reference Models

- Cisco Systems™ Reusable Learning Object Model and strategies
- SCORM (sharable content object reference model) and LETSI (Learning, Education, Training Systems Interoperability)
- Advanced Distributed Learning Overview of SCORM
- IMS Global Learning Consortium

Some Applicable Pedagogical Theories

- Kolb's Experiential Learning Cycle
- Lave and Wenger's Situated Cognition
- Paivio's Dual Coding Theory
- Clark & Mayer's Multimedia Theory (with Moreno, Sweller, and others)

Conclusion and Contact Information

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