

Development of Homepage and Materials coping with Multimedia and Networking Technologies

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Paradigm Shift in Education (1/2)

- Shift in Education Philosophy :Educational Objectives
 - Presentation, decision making skill, thinking skill, Explorable Learning, Investigation Learning/Looking-up Learning, Integrated/Comprehensive/Project Learning, Analysis, Synthesis, Evaluation with special emphasis on the utilization of information technologies

(Note: [computer distribution.com](http://www.computerdistribution.com))

Paradigm Shift in Education (2/2)

- Complex/Varied of Learning and Information
 - Difference of information collected and reorganized based on learner's value
 - Increasing of ability on Audio-visual literacy/Promoting the Motivation and its continuity of interests to visual and communication technologies/information
 - Based on learner's experience and knowledge customization and re-organization of information collected and expresses is allowed as his/her original idea

Definition of Multimedia

- “Media with which several kinds of symbol system such as Text, Graphic, Sound, Video images and Animation are controlled and coordinated in digital manner, so that the users interact with them by not only passive observation but also active participation in searching, reconstructing and expressing/presenting the information by their own interests.”

Outstanding Features of Multimedia

- Integration of several types of media/message
- Interaction between media and learner
- Non-structured information from the learner's point of view
- Expanding information concerned

The Educational Meaning of Multimedia

- Convenience way for accumulating and utilizing information
- An instrument for delivering thoughts and for promoting divergent thinking skill
- Applicability of individualized or personalized lessons
- Clarifying the approach to the educational process

Japanese Education Now and the Future

- Improvement of education for the mind
- Emphasis on the basics and fundamentals and encouragement of personalized education
- Development of self-education capability
- Fostering of respect for culture and tradition and of international understanding

[Trends of New Curriculum](#)

Fundamental Features of Japanese Education

Promoting :-

Thinking skills

Decision making skills

Presentation skills

Two Major Theories of the Development of Multimedia

- Follow the traditional design of instruction to create **CAI** with several symbol systems
 - > Courseware
- Follow the outstanding features of multimedia
 - > **Objectives** should be less specified
 - > **Start with image**:-Comprehensive

[New Trends of Software Development](#)

Software supporting Multimedia Material Development and Utilization in Schools in Japan now on-going

- Authoring Software
 - CAI :
 - Tutorial mode – Explanation/Problems->response->Evaluation->Branching/Control
 - Author control/teachers oriented
 - Simulation mode
 - Information retrieval mode
- Authoring Tools
 - Presentation:
 - Learner's control based on audio-visual information designed, layout and organized
- Homepage creation Software

Objectives of Homepage Creation

Disparity

- Geographical development
- Economic development
- Technological development
- Educational development
- Teachers competencies
- Policy environment

Diversity

- Culture
- Languages
- Religion
- Races
- Social systems
- Educational systems

Identity

[Globalization and Localization](#)

Fundamental Features of Software

- Drag and Drop
 - Click, Double click, Drag, Point, Highlight, Cut and Paste, Copy and Paste
 - Task bar, Scroll bar, Scroll button
- Button-link Fashion
 - Hyperlink to related/associated information

Storing Media

- Optical Disks
 - MO, CD, CD-ROM, LD, PD, DVD-RAM, DVD-ROM, DVD-R/RW
- Others
 - HD, Floppy disk, Super disk, jaz, zip, Click, thumb drive
 - Flash ATA card, Compact flash card
 - Smart media, Memory stick, Multimedia disk, Multimedia card

Input/Output Devices

- Networking
- Still images
 - Scanner, Digital cameras, CD-ROMs
 - Keyboard, Mouse, Pad
- Movies
 - Video-capturing board
 - Digital/Analogue video cameras, VTRs, CD-ROMs, DVD-ROMs
 - TV tuner
 - TV Programmes
- Sound
 - Sound board
 - Microphones, CDs, CD-ROMs, Audio players
- In Summary:-

Instructional Design for Courseware

- Instructional Design Models
- Nature of Learner Interaction
- Adaptation of Instruction to the Learner or the Content
- Level of Intelligence Exhibited by the Courseware
- Motivational Aspects of the Design

=> Interactive Designs and Adaptive Designs

Three Phases of Developing Courseware

- Analysis Phase of Instructional Development Process
- Development/Synthesis Phase
- Evaluation Phase

General Characteristics of a Practical Design Model (1/3)

- Phase I: Design
 - Step 1: State Instructional Goal
 - Problem Analysis
 - Identification of student characteristics
 - Development of goal statements
 - Definition of instructional setting
 - Step 2: Perform Instructional Analysis
 - Development of learning map
 - Determination of prerequisite skills
 - Determination of skill types/attributes
 - Step 3: Develop Performance Objectives
 - Step 4: Develop Testing Strategies
 - Step 5: Design Instructional Strategies

General Characteristics of a Practical Design Model (2/3)

- Phase II: Programming Development
 - Step 1: Develop Flowcharts and Storyboards
 - Step 2: Develop Support Materials
 - Step 3: Review and Revision Before programming

General Characteristics of a Practical Design Model (3/3)

- Phase III: Programme Development and Evaluation
 - Step 1: Programme First-draft Materials
 - Step 2: Perform Formative Evaluation

Techniques of Production

- **Development of Scenario**
 - Utilize Visual images
- **Start with visual image preferably awarded**
 - Collection of resource/related materials - > Digitalize - > Edit and modify with software - > Layout and design with Authoring tools
 - (note) Software for editing/modifying will be bundled in the hardware packaged, but a few capabilities will be limited.

(Note1: [Production and evaluation table for authors](#)
2: [Some tips at the beginning](#))

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