

COMPSCI 708S1C

Multimedia and Hypermedia Systems

A Model for the Design and Development of Multimedia Projects

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Outline

- Motivation for using a Model
- The Four Phases: DDD-E
- Phase 1: Decide

Motivation for using a Model

- Bring structure to the development process
- Provide a plan that outlines the analysis, design, implementation and evaluation of a project
- Document decisions and effort spent
- Help improve current development practices

HM/MM Team members

- Project manager
 - Organise the team members
 - Set the schedules
 - Track the progress
- Designers
 - Determine the screen layout
 - Create the flowcharts
 - Specify the project design in the storyboards
- Graphic artists
 - Create the graphics
 - Create the animations
- Production specialists
 - Record and edit the audio
 - Record and edit the video
- Application authors
 - Produce the application
 - Debug and test the application

The Four Phases: DDD-E

- The model to be presented has been proposed by Ivers and Barron (2002).
- DDD-E stand for Decide, Design, Develop and Evaluate.
- This model is intended to serve as a general outline for projects.

DDD-E Model Activities

If more than one person is cooking the meal, it is also important to decide who will be responsible for cooking each dish

Recipes provide the structure for the dishes, as they detail the required ingredients.

But the final evaluation is given by the guests, after the meal has been served

This can be influenced by who is coming for the meal, and the types of

The overall meal must be considered while preparing each dish. For example, starters are prepared and served before the main course.

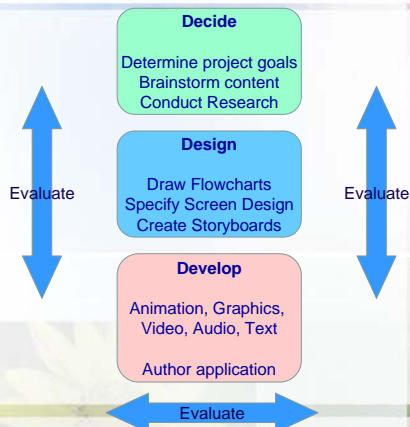
what dishes (at).

the meal, which involves researching the instructions.

by gathering all the ingredients, mixing them in the correct order, and arranging them into the final dishes.

- Evaluate throughout the entire process; e.g. making sure ingredients are fresh, checking the seasoning.

DDD-E Model Overview



DDD-E Model Activities

- **Decide**
 - Brainstorm content
 - Conduct Research
- **Design**
 - Outline Content
 - Create flowcharts
 - Specify screen design and layout
 - Write scripts or storyboards
- **Develop**
 - Create graphics
 - Construct animations
 - Produce audio
 - Produce video
 - Author application
 - Debug/test application and media
- **Evaluate**
 - Evaluate peers
 - Conduct self-evaluations
 - Evaluate the application with users

DDD-E: Cognitive skills developed

- **Decide**
 - Formulate questions
 - Design search strategies
 - Select and interpret information
 - Analyse and combine information
- **Design**
 - Organise and structure content
 - Allocate information to nodes/chunks
 - Chunk information into logical patterns
 - Sequence tasks into a timeline
 - Write meaningful scripts
 - Convey information through appropriate media
 - Demonstrate creativity
- **Develop**
 - Translate storyboard information into media elements
 - Select appropriate media formats
 - Construct media elements
 - Produce and verify application
- **Evaluate**
 - Analyse application's effectiveness
 - Engage in self-reflection

DDD-E: Working as a team

- DDD-E alone does not guarantee a project's success.
- There are factors that are essential. One of them is teamwork.
- Possible working relationship skills (Vermette 1998):
 - Acknowledging contributions
 - Checking for agreement
 - Disagreeing in an agreeable way
 - Encouraging others
 - Expressing support
 - Inviting others to talk
 - Keeping things calm and reducing tension
 - Mediating
 - Responding to ideas
 - Sharing feelings
 - Showing appreciation

DDD-E: Other factors that help

- DDD-E is a proposed process model on how to develop a Hypermedia/Multimedia project.
- Other project management issues are also important:
 - Estimate amount of time for each phase/activity (minimum, maximum)
 - Track progress, check actuals against estimates

Phase 1: Decide

- This phase sets the stage for the entire project.
- First thing to do is to decide on a project.
- Possible topics for your project:
- **Science and Health**
 - Space exploration; pollution; animals; plant growth; weather; insects; nutrition; inventions and inventors; body systems; simple machines; chemical properties; ocean life; diseases; light and colours; drugs; alcohol, or smoking; home remedies; exercise; senses; technology; volcanoes; plate tectonics; natural disasters; diet
- **Fine arts**
 - Famous artists or musicians; film history; cinematography; music history; musical instruments; film or music genre; history of dance; music, movie or play reviews; opera; music notation; song writing; animation; special effects; music and culture; famous paintings; art styles; famous entertainers

Phase 1: Decide

- Assigning different roles
 - First group of roles (rotated on a daily basis)
 - Turn-taking monitor (ensures that everyone gets a chance to speak)
 - Record keeper (records the group's activities)
 - Noise monitor (ensures the noise levels are kept to a minimum)
 - Task master (responsible for keeping the group on task)

Phase 1: Decide

- Assigning different roles
 - Second group of roles
 - A subject matter expert (ranked high in linguistics)
 - Graphics artists and storyboard designers (ranked high in spatial skills)
 - Project's flowchart and programming needs (ranked high in logic-mathematics)
- Choose a name for your team

Phase 1: Decide

- Brainstorm
 - Once a topic has been chosen, now is the time to discuss what are the related ideas to the main idea (topic)
 - If the main idea was 'New Zealand', what would be its related ideas?
- Research
 - Look for sources of information on the chosen topic using e.g. Voyager, Google, magazines.
 - Organise and combine gathered information.
 - Assign further research responsibilities and tasks.