Video in Multimedia: cognition, entertainment & art

Teresa Chambel @HCIM

1. Video in Multimedia
2. Projects & Colabs
cognition . entert . art
3. Conclusions & Future
video in multimedia

the vision

“The theatre of education will be … where power can be found to project a motion picture on a screen”

Walt Disney

in fact, film and video provide

context & motivation for learning

meaning-rich scenarios rapidly & efficiently

‘replace’ real experience

visualize dynamic processes

combine diverse symbol systems

also in collaborative scenarios
the vision

“I believe that the motion picture is destined to revolutionise our educational system and that in a few years it will supplant largely, if not entirely, the use of textbooks”

Thomas Edison, 1922

why not?

Tecnological . Cognitive & Use Restrictions

but

Social & Economic Need for Education Tech
Technological Advances
Video becoming a Dominant Medium
Trends for Media Convergence

=> New Ways to Support Learning... Entertainment...
### Technological

- Transmission | Storage | Processing: Becoming easier media convergence

=> HW, models, languages, tools

### Cognitive

- Cognitive modes: Experiential | Reflective
- Learning styles: Cognitive and perceptive preferences: e.g. Kolb, VAK ...

=> Support all with flexibility

=> Methodological issues + Tech. support

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<table>
<thead>
<tr>
<th>Hypermedia</th>
<th>Hypervideo</th>
</tr>
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<tbody>
<tr>
<td>Powerful to structure, integrate and interact with information</td>
<td></td>
</tr>
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<td>True integration of video in hypermedia</td>
<td></td>
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<td>Spatial and temporal links</td>
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<td>New concepts of navigation</td>
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=> Interactive Video + Media Integration
examples

exercises: index, video and text

annotations

audio transcripts, etc.
examples

spatio-temporal link from video to video

navigation history

spatio-temporal link from video to text

video timeline

Current Position

Links to any position

Discrete access to video

Continuous access to video
Examples

Link + context awareness

"visited"

Examples

Link awareness
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projects & colabs

<table>
<thead>
<tr>
<th>hypervideo &amp; cognition</th>
<th>PhD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unibase . Save</td>
</tr>
<tr>
<td></td>
<td>mathematics</td>
</tr>
<tr>
<td></td>
<td>individ. colab. learning</td>
</tr>
<tr>
<td>DTB accessibility</td>
<td>IPSOM . RiCoBA</td>
</tr>
<tr>
<td></td>
<td>hci blind students</td>
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<tr>
<td></td>
<td>edutainment...</td>
</tr>
<tr>
<td>ITV</td>
<td>creative video</td>
</tr>
<tr>
<td></td>
<td>editing &amp; art</td>
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<td>creativity &amp; art</td>
<td></td>
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individual & collaborative learning

with ZGDV & KMRC

hypervideo design & tools vs cognitive load & orientation

with ZGDV & KMRC
The Story of Pi in hypervideo

published march 2007

distributed to undergrad. schools in Portugal

with CMAF & caltech

tools design usability production crossmedia

Pedro Santos Francisco Cabrita
e-iTV

crossmedia personalized learning environments via interactive TV

Alcina Prata
Sharks are unpredictable, and any time you are in waist-deep ocean waters you are in shark country. Sharks rarely attack people, but a few simple precautions can help you reduce the already slight risk.

When in shark waters but no shark is in sight, look out for fins. If you see one fin cutting through the water, that is likely a dolphin. Two fins—one behind the other—are more likely to be a shark, with its back and tail fins above the surface.
e-iTV

crossmedia personalized learning environments via interactive TV

TV program broadcast: a starting point to build **personalized learning spaces**

system features & interaction models take into account:

- cognitive, affective & interaction aspects
- users preferences and interests

**entertainment | edutainment | crossmedia**

t-learn . e-learn . m-learn . b-learn

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movieGene

creative video editing & art with evolutionary algorithms

with Labmag . fct/unl UCampinas
movieGene
creative
video editing & art
objective
original

Portugal – Brazil
explore architectonic, historical & cultural relations
emergent narratives and aesthetics in ways that inspire creativity and learning
about their culture | similarities | contrasts

Genetic operators & criteria + user interaction
influence flow of exploration

9 Nov 2007 meeting
movieGene
creative
video editing & art

música
close-ups
Portugal.Brasil

with
Labmag . fct/unl
UCampinas
art is often associated with creativity

creative evolutionary system using genetic algorithms
genesis as video annotations

to generate new videos or help user in doing so by defining criteria or interactive selections

can reflect editing | artistic styles

movieGene
creative video editing & art

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animals tartarugas azul

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### Contents

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### Conclusions & Future

- hypervideo > video in multimedia
- weblectures . ebooks . iTV …
- cognitive and emotional aspects in crossmedia
- info creation & sharing
- learning, entertainment, art …