

# Exploring the use of a non-linear learning module with interactive video

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EdMedia 2012, Denver: Fri, June 29th



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# Context

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- ▶ **Personal context**

- ▶ Master thesis in educational technology
- ▶ Interested in doing something that is useful

- ▶ **Main stakeholder: Swissexology (academic sexology)**

*« ...défend la sexologie en tant que discipline scientifique de niveau universitaire, visant les plus hauts standards de soins en ce qui concerne la pratique clinique, la recherche, la prévention et l'éducation »*

Source: Site Swissexology

- ▶ **Continuous training in sexology:  
Certificate of Advanced Studies, Université de Genève:**

- ▶ Interdisciplinary approach  
psychology, medical, legal, sociologic, cultural and ethical



# Objectives

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## ▶ Pedagogical

- ▶ Learners should understand the mechanism of the sexology interview and its five dimensions:  
Psychology/mental troubles – Toxicology/drugs –  
Relational/transgenerational – Sexologic – Somatic

## ▶ Interest in technical design elements

- ▶ Explore non-linear designs
- ▶ Integration of video

## ▶ Evaluation

- ▶ Usability (cognitive and surface)
- ▶ Learning experience

## ▶ Identify design rules for similar contexts

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# Conjecture map identifying the most important elements in this research (Sandoval)

## Theoretical conjectures

Adult learning

Constructivism

Social learning

Multimedia learning

## Embodiment

Non linear structure

Interactivity with the video

Content that is close to reality

Immediately available references

Watching 2 perspectives of the video

Exercise question with immediate FB

Captions related to themes appearing during the video

## Intermediate outcomes

Adaptation to the learner's level and learning style

Feeling of ability and freedom to work with the video

Learning by observation

Taking notes like in a real patient interview

Motivation to learn

Focusing the learning process on objectives

## Objective outcomes

Learning to conduct a systematic interview

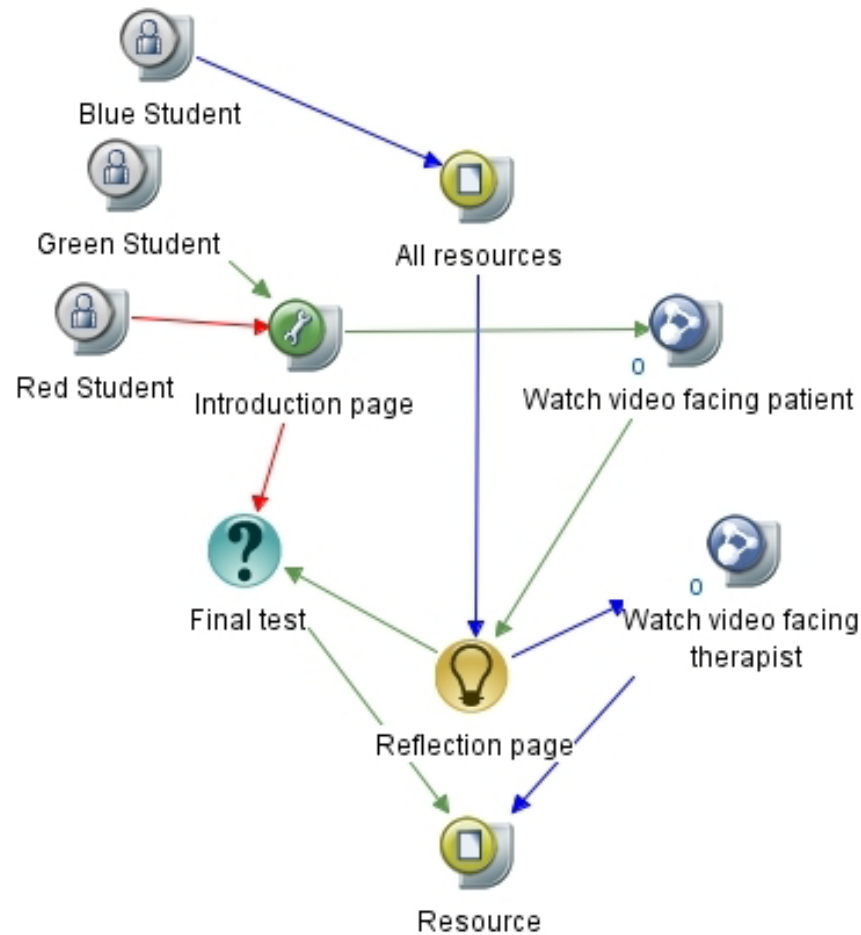
Learning situation close to real experience of patient interview

Observation and reflection on communication during a sexology interview

Content learning

# Workflow map (non-linear design)

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# Approach and methods

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## ▶ Design Based Research

- Iterative approach: Design Evaluation 
- Real contexts
- Look at all important dimensions

## ▶ Instruments

- Usability testing (observation + note taking)
- SUS scale (for the final version)
- Questionnaires
  - Usability surveys (Bastien et Scapin / SUS for the last version)
  - Learning quiz

## ▶ Participants

- N=8 from the target population



# Three development cycles

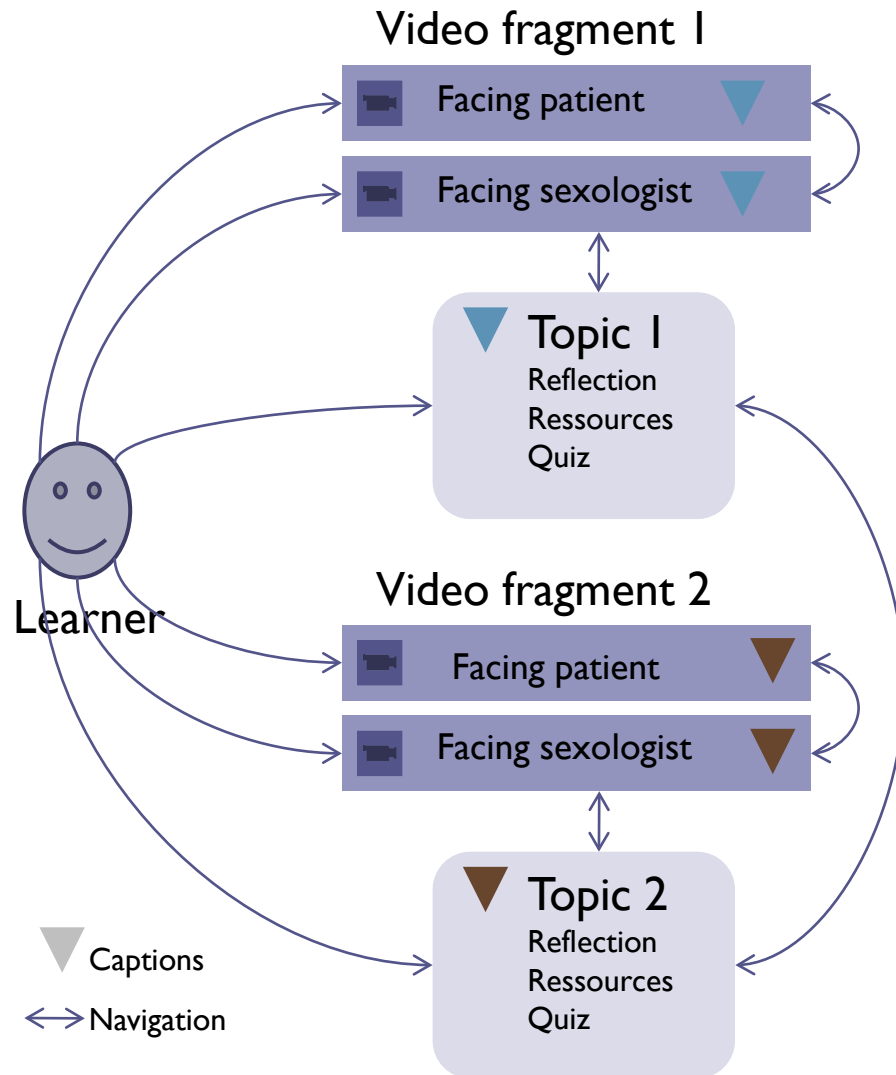
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Cycle 1	Cycle 2	Cycle 3
Mockup	Prototype with complete video	Prototype with complete video
Protoshare®	Captivate 4®	Captivate 5®
	Only one dimension of the sexology interview: Identification of the problem	2nd dimension: Depression





# The learning design summarized



# The interface

**SWISS SOCIETY of SEXOLOGY**  
SWISSSEXOLOGY

## Vidéo face à la patiente

- Page d'accueil
- Introduction
- Vidéo face à la patiente**
- Vidéo face au thérapeute
- Tous les thèmes
- Facteurs psychologiques/psychiatri...
- Evaluation du trouble
- Test final

### Thèmes

- Aspects relationnels Situation familiale
- Facteurs psychologiques/psychiatriques**
- Evaluation du trouble
- Fonctionnement psychosexuel
- Santé habituelle et consommation

Cliquez sur les thèmes pour aller à la page de réflexion correspondante!

21:09 / 132:17 Minutes

▶ ◀ ⏪ ⏩ 🔊 ✕

# Learner activities

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- ▶ **Proposed learner activities include:**
  - ▶ Observing the interactions of sexologist and patient during the interview
  - ▶ Becoming aware of the five main dimensions of a sexology interview (linked to further reading)
  - ▶ Reflecting on the specificity of the sexology interview and on his own experience
- ▶ Each video fragment includes “captions” identifying an important concept being addressed during the interview.
- ▶ Interactivity with the video allows to
  - ▶ Choose any fragment to work with (control of sequence)
  - ▶ See each video fragment either facing the patient or the sexologist
- ▶ Each video fragment is related to activities and resources (reflection page, resources, and exercises).
- ▶ Non-linear navigation allows to
  - ▶ Navigate from any one topic to the other
  - ▶ Go back to the video (both perspectives)



# Observation and testing results

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## ▶ UX / usability

- No major problems. However, the three cycles were necessary
- Cycle 3: Good SUS score of 86.6 (System Usability Scale)
- Navigation (usability testing): good
- Control of video should be improved

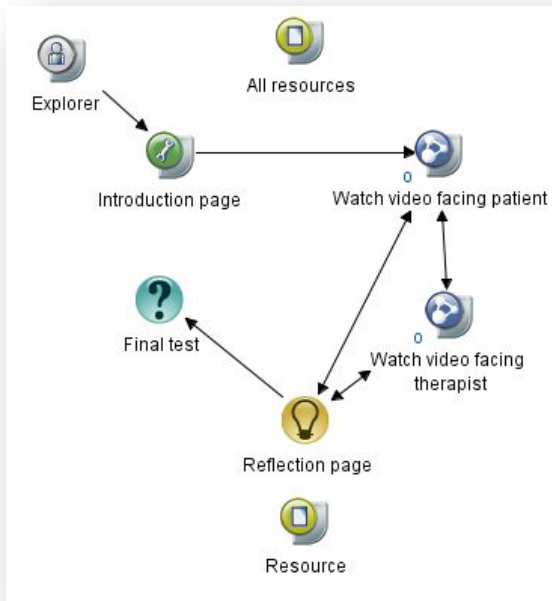
## ▶ Learning outcome

- Not enough content  not conclusive
- Positive subjective appreciation (in particular for non-MDs)

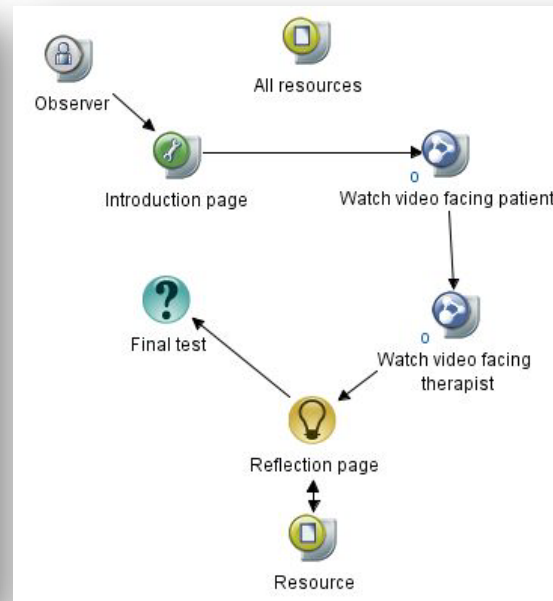


# Three emerging user profiles

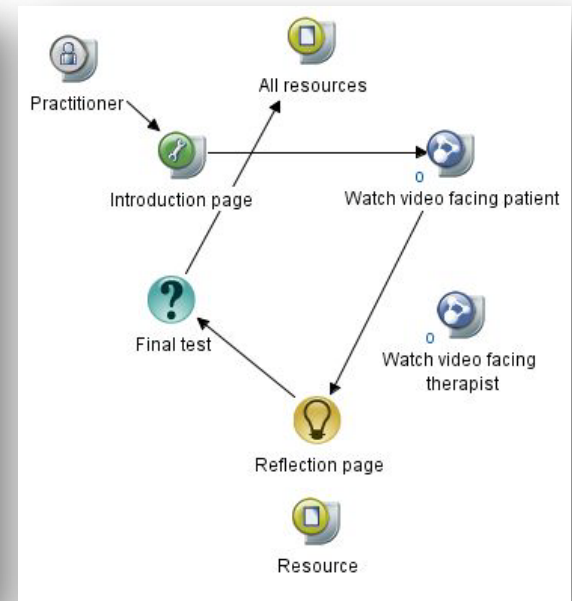
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Explorer



Observer



Practical



# Summary of the design rules

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## ▶ Structure & navigation

- Make it clear that there is no « next page »
- Navigation must be simple and tell where the user lands

## ▶ Topic-related activities

- Spell out learning objectives for each
- No open questions, but interactive exercises that a learner should perform

## ▶ References (extra reading)

- Must be well chosen: Language, specialization, size (needs experimenting)
- Encourage users to consult references during an activity

## ▶ Video Captions

- Should last about 8 seconds



# Conclusions

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- ▶ **The design works**
  - ▶ technical design ok (no problems)
  - ▶ efficiency (in terms of UX)
  - ▶ acceptance
- ▶ **Difficulties**
  - ▶ Not enough content to evaluate learning
  - ▶ Contradiction:  
Testing non-linear navigation vs. testing the learning outcome
- ▶ **Perspectives / remaining work**
  - ▶ Add more contents
  - ▶ Learning evaluation needs more users
  - ▶ Learning activities must be further developed
  - ▶ Deployment

