Science Communication on YouTube: How to Design Educational and Entertaining Science Videos?

S.B Barendse, BSc.
Dr. Ir. M.G. van der Meij, Athena Institute

1. Introduction

Online Science Videos
Short videos that focus on the communication of scientific contents for a broad public on the internet

Potential
- accessibility
- lowered threshold
- interaction

Previous research
- effective educational videos
- popularity of science videos

RQ
What is the perceived educational value of popular (Dutch-spoken) science videos among children 10-12 years?

2. Background

Context
- Germane Load
- relatability

Content
- Intrinsic Load
- difficulty subject

Design
- Extraneous Load
- unnecessary / distraction

Example
- presenter
- duration

Example
- G-forces

3. Methodology

Interviews (n=17)

children 10-12 years 2 videos

Topics
- difficulty subject
- presentation
- relatability
- entertainment
- improvements

4. Results

Context
- viewing behaviour

Content
- difficulty subject (GL)
- integration into classrooms
- concise explanation (EL)

Design
- entertainment
- ANIMATIONS
- DURATION
- special effects
- experiments & attributes

Example
- settings

Main findings
- animated explanation ±15 seconds
- 2 – 4 minutes
- calm, slow presenting

5. Discussion

Strengths / Weaknesses
- Multiple videos covering multiple elements
- "Vragenbord" for in-depth insights
- Non-representative sample
- Self-assessment

Future research
- (1) Integration of science videos in the classroom
- (2) More research into YouTube viewing behaviour

6. Conclusion

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