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

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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
Content
Design

Germaine Load
Relatability
Intrinsic Load
Difficulty subject
Extraneous Load
Unnecessary / distraction

Example
G-forces

Example

3. Methodology

Interviews (n=17)
Children 10-12 years
2 videos

Topics
Difficulty subject
Presentation
Relatability
Entertainment
Improvements

4. Results

Context
Content
Design

Viewing behaviour
Difficulty subject (GL)
Entertainment

Integration into classrooms
Concise explanation (EL)
Animations

Relatability

Intrinsic Load

Extraneous Load

Difficulties subject

Example

5. Discussion

Main findings
Animated explanation
±15 seconds

2 – 4 minutes
Calm, slow presenting

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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Children 10-12 years
2 videos