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They Swallow our Precious Time, But
Who Are They And Can We Trust Them?

Educational Channels on YouTube Under Scrutiny

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Agenda

- 1 Theoretical Background
- 2 Method
- 3 The **A**nalysis Grid for **E**ducational Video Channels on **Y**ouTube (AEY)
- 4 Selected Results
- 5 Discussion

01

Theoretical Background





Theoretical Background

Educational Channels on YouTube

What we know...

- **immense importance** of (explainer) videos in everyday life of (German) students, especially on the online video platform **YouTube** (mpfs, 2018; mpfs 2019; Rat für Kulturelle Bildung e. V. 2019)
- existent **research on the quality** of explainer videos (e.g. Dorgerloh & Wolf, 2020; Findeisen et al., 2019) and their **users** (e.g. Rat für Kulturelle Bildung e. V., 2019)
- highly **diverse** explanatory videos (Dorgerloh & Wolf, 2020)
- internet as an **unregulated prosumer space** (Fey, 2015; Siegel & Heiland, 2019)

What we don't know...

- hardly any focus on the **people/companies behind the videos** (Valentin, 2020)
- no information about the **quality of the videos** or the **correctness of the information on YouTube** (Dorgerloh & Wolf, 2020)
- **no instrument to assess** educational channels

Theoretical Background: Research Questions

Who are they?

RQ1: Who is responsible for educational videos on YouTube that are used in (German) school contexts?

RQ2: To what extent do the underlying educational video channels differ from each other?

RQ3: Can we trust them?

02

Method

Sampling



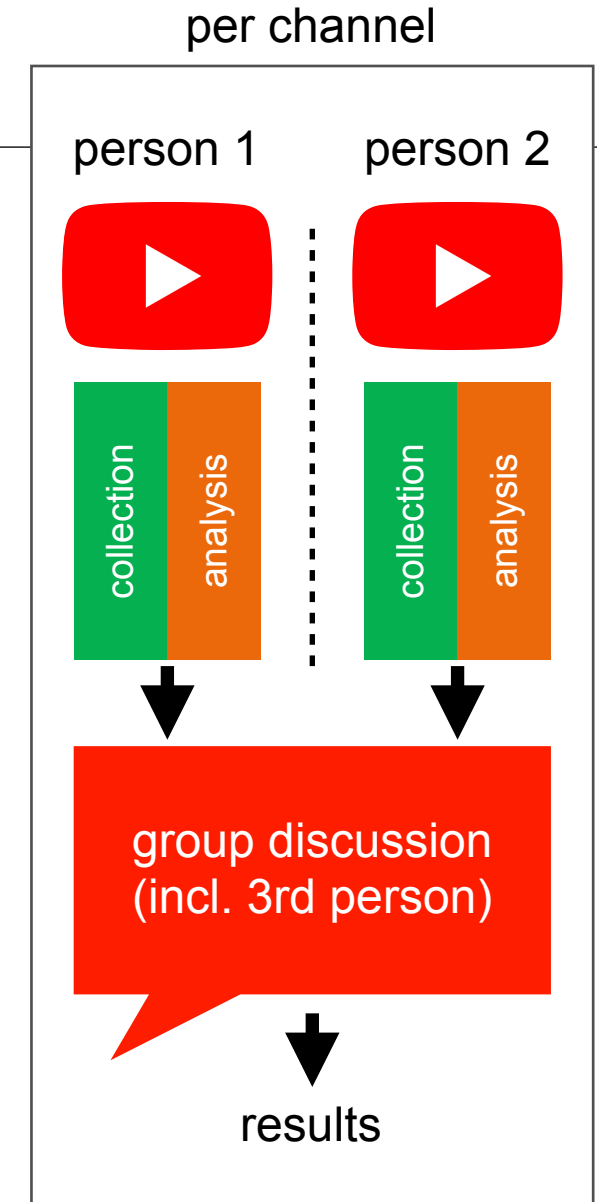
systematic internet search
+
e-mail survey
($N = 24$ teachers)
+
criteria-based sampling



→ sampled channels for further analysis ($N = 11$)

Data Collection and Analysis

- **non-reactive** (Lütters, 2004) **data collection within 24 hours** (13/08/2020) on the YouTube educational video channels by at least 2 people per channel → group discussion with **consensual decisions** in mind (Bortz & Döring, 2002)
- parallel to collection: data was **analysed descriptively** in terms of content and evaluated according to pre-defined criteria (Fey, 2015), similar to a **qualitatively-oriented content analysis** using a **deductive coding system** (Kuckartz, 2018) [coding system = analysis grid]
- goal of the coding system/analysis grid: make it possible **for teachers to use** in the school context even without specific training (**practice-oriented**) → mostly-low inference and close-ended questions → thus “the degree of conclusion by the observer is kept as low as possible” (Lotz et al., 2013)



03

The Analysis Grid
for Educational
Video Channels
on YouTube
(AEY)

Analysis Grid for Educational Video Channels on YouTube (AEY)

- 31 analysis questions which are grouped in the following 5 main categories:
 - Channel performance**: 6 questions, e.g. How many videos are uploaded onto this channel?
 - Channel structure and didactic contextualisation**: 12 questions, e.g. Which school subjects are covered in the videos of this channel?
 - Channel responsibility**: 4 questions, e.g. Is there information on the persons responsible for the channel?
 - Economic framework**: 4 questions, e.g. Is there advertising on the channel or its videos? If so, in what form?
 - Quality check**: 5 questions, e.g. Do those responsible for the channel indicate that they check the quality of their content?

(e.g. Findeisen et al., 2019; Kulgemeyer, 2020; Rat für Kulturelle Bildung e. V., 2019; Schmidt-Borcherding, 2020; Schön & Ebner, 2020; Wolf & Dorgerloh, 2020)



Analysis Grid for Educational Video Channels on YouTube (AEY)

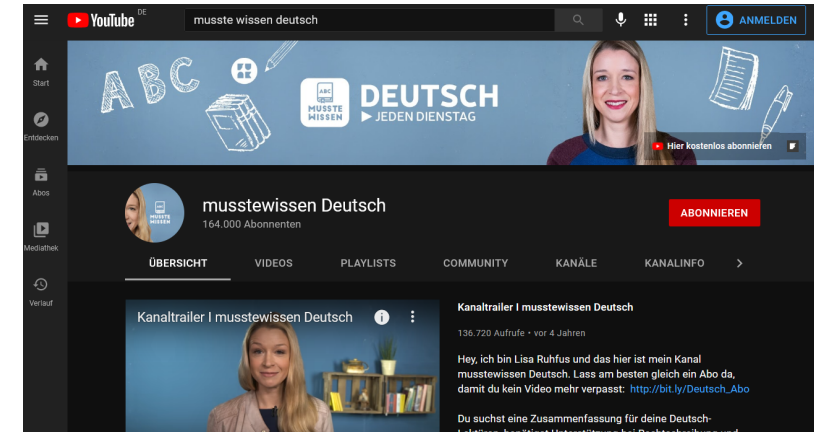
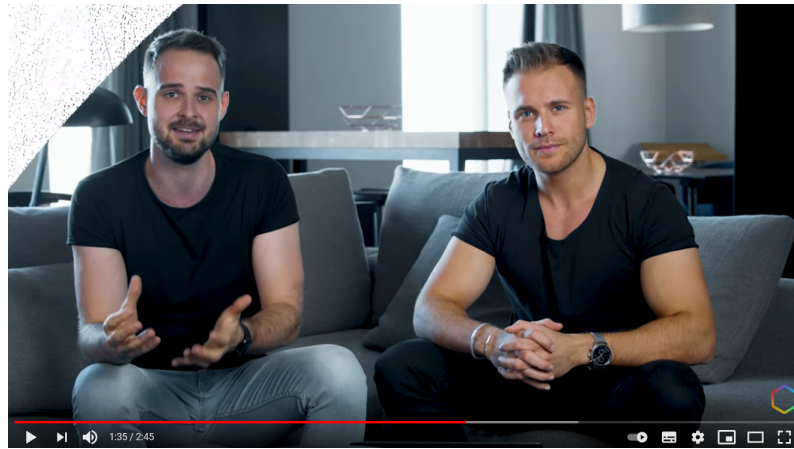
question code definition coding rules

IV Economic Framework	2 Advertisement			
	Does the channel place commercial advertisements? If so, how? (multiple choice)	Commercial advertisements on YouTube are one of the most important sources of revenue for YouTube content creators (cf. Döring 2014, p. 25–26). Young people, who frequently watch explanatory videos, are a target group worth protecting. Thus, a channel's use of advertising should be examined critically (cf. Deutscher Werberat 2017).	☐ deactivate adblock ☐ videos / sort by <i>Date added (newest)</i> / "Examine videos in 1st, 2nd and 3rd position incl. video description and comments" ☐ videos / sort by <i>Most popular</i> / "Examine videos in 1st, 2nd and 3rd position incl. video description and comments"	
	☐ yes – by use of affiliate links in the video description	☐ yes – by use of adverts before, during or after video	☐ yes – by use of product placements	☐ no

values / answer options

04

Selected Results



screenshots from analysed channels (see slide 24)

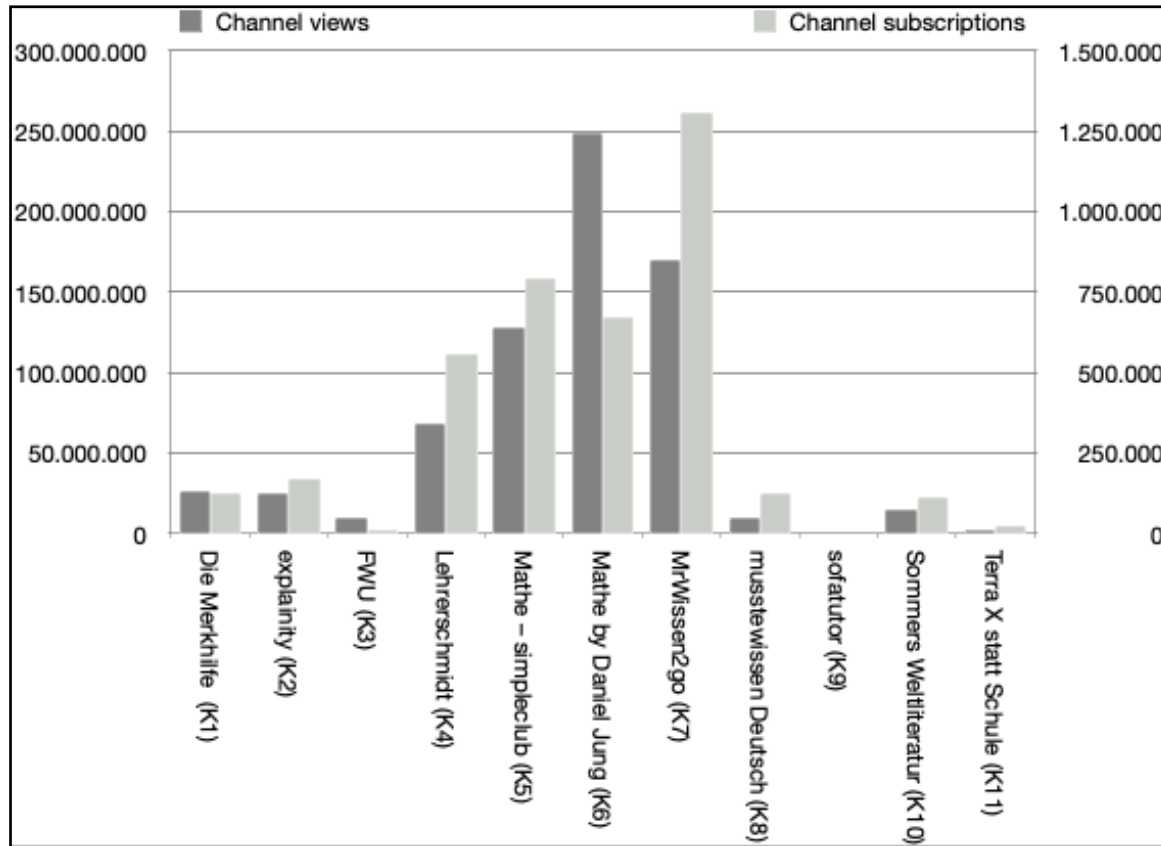
RQ1: Who is responsible for educational videos on YouTube that are used in (German) school contexts?

Selected Results

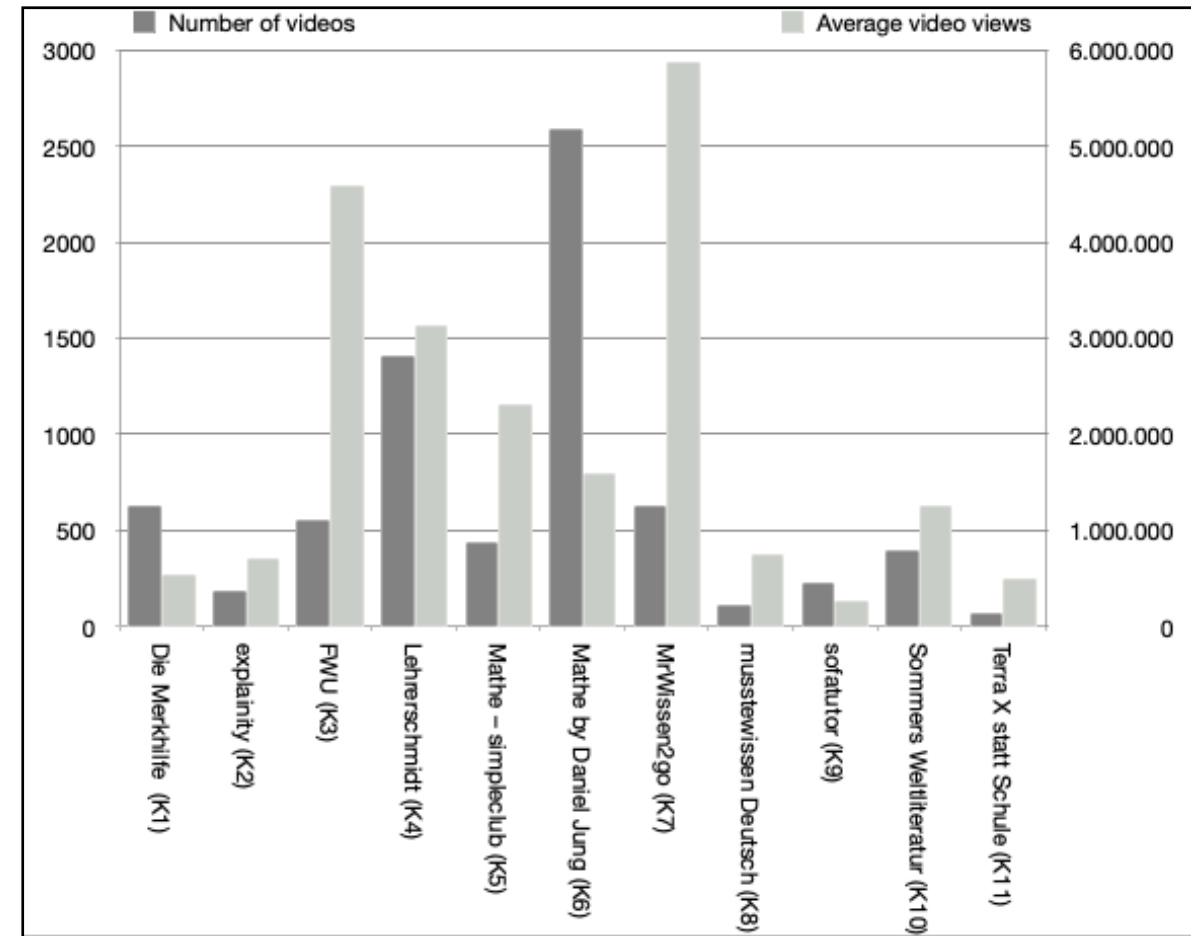
RQ2: To what extent do the underlying educational video channels differ from each other?

Channel Performance

for more information: <https://osf.io/ym7d5/>



Siegel et al., 2021



Siegel et al., 2021

Subject	Channels						
Art	FWU	Terra X statt Schule					
Biology	Die Merkhilfe	explainity	FWU	sofatutor	Terra X statt Schule		
Chemistry	Die Merkhilfe	FWU	sofatutor	Terra X statt Schule			
Economy	Die Merkhilfe	explainity	FWU	MrWissen2go			
English	Die Merkhilfe	explainity	FWU	sofatutor	Sommers Weltliteratur		
Ethics	Die Merkhilfe	FWU	Terra X statt Schule				
Geography	Die Merkhilfe	explainity	FWU	MrWissen2go	sofatutor	Terra X statt Schule	
German	Die Merkhilfe	FWU	Lehrerschmidt	musstewissen Deutsch	sofatutor	Sommers Weltliteratur	Terra X statt Schule
History	Die Merkhilfe	explainity	FWU	MrWissen2go	sofatutor	Terra X statt Schule	
IT	Die Merkhilfe						
Mathematics	Die Merkhilfe	FWU	Lehrerschmidt	Mathe – simpleclub	Mathe by Daniel Jung	sofatutor	Terra X statt Schule
Music	FWU	Terra X statt Schule					
PE	Die Merkhilfe						
Physics	Die Merkhilfe	FWU	Lehrerschmidt	sofatutor	Terra X statt Schule		
Politics	Die Merkhilfe	explainity	FWU	MrWissen2go	Terra X statt Schule		
Religion	Die Merkhilfe	FWU	MrWissen2go	Terra X statt Schule			
Sachunterricht	Die Merkhilfe	FWU	sofatutor				
Social Studies	Die Merkhilfe	explainity	FWU	MrWissen2go	Terra X statt Schule		
	1	2	3	4	5	6	7

for more information:
<https://osf.io/ym7d5/>

Siegel et al., 2021

Selected Results

Economic Framework

reminder: 4 questions, e.g. Is there advertising on the channel or its videos? If so, in what form?

- large **differences** in terms of the **type** and **frequency** of advertising placed
- more frequent forms of advertising: use of advertising **clips** (6 out of 11), **affiliate links** (5) and **product placements** (3)
- use of **hidden advertising** – as represented by product placements for non-adults – very **questionable**: YouTubers are often considered to be highly trusted persons for this target group (Araújo et al., 2017)
- for further results and discussion, see Siegel, Streitberger, and Heiland (2021)



Selected Results

Economic Framework – Example

Werbung
DIE NEUE SIMPLECLUB APP IST DA! 🎁 (+ Geschenk, bi...
Gepostet von simpleclub
10.799 Aufrufe

Was du bekommst...



- **Individuelle Lernpläne für jede Klausur** (erstellt in maximal 30 Sekunden)
- **Über 3.000 Lernvideos** (auch Deutsch, Englisch & bald Latein, nicht auf Youtube verfügbar)
- **Interaktive Übungsaufgaben** (mit ausführlichen Lösungswegen für 100% Verständnis)
- **Fertige Zusammenfassungen** (erstellt von den Studenten der Besten Unis Deutschlands)



~~bisher
12,41€/Monat
(149€ pro Jahr)~~

Normalpreis ab jetzt
7,49€/Monat
(89,99€ pro Jahr)

39% REDUZIERT





Bekannt aus

screenshot from the analysed channel *simpleclub* (see slide 24)



05

Discussion

Discussion

RQ1: Highly different providers are responsible for (German) educational video channels on YouTube (e.g. one-person providers, public organisations, profit-oriented corporations)

RQ2: Providers differ esp. according to size, channel structure and didactic contextualisation and funding (e.g. advertising)

RQ3: Can we trust them?

Trustworthiness of providers difficult to assess → multi-criterial analysis of each channel necessary (e.g. by using the AEY)

Yet: providers under public law have certain advantages, esp. regarding unwanted (hidden) advertisement, language style and influencing opinions

Discussion

Limitations:

- selective and exclusively German-language sample
- snapshot at the time of the survey in a very dynamic market

Strengths:

- advancing an important field of research from the point of view of media education
- stimulation for a critical and reflective examination of explanatory video channels and their contents
- AEY as a tool for educators

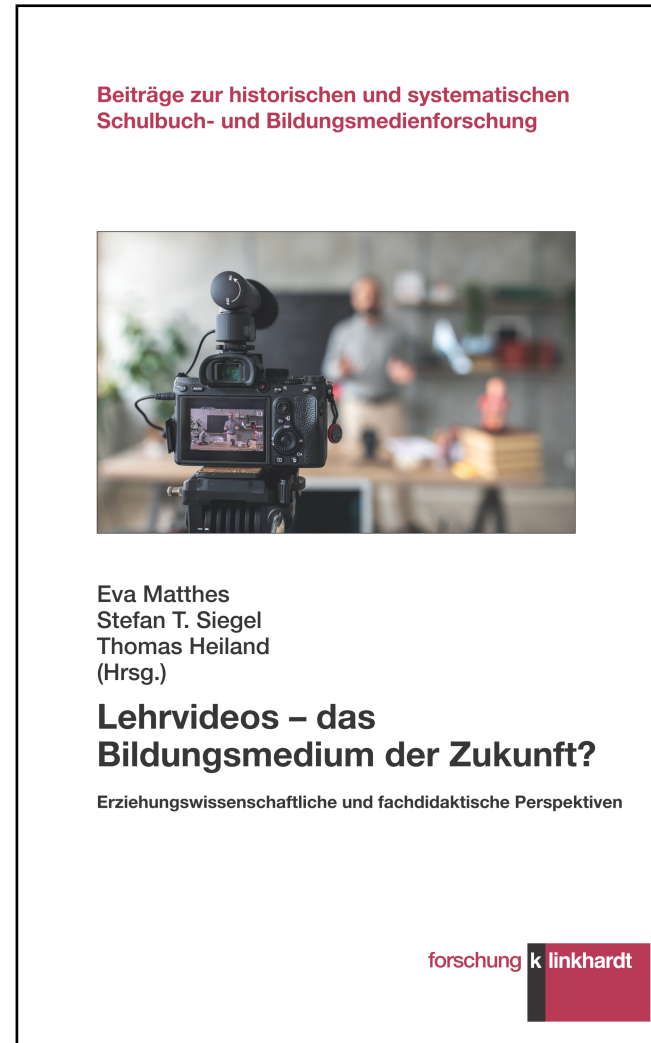
Future Research:

- subject-specific extensions of the grid in preparation (e.g. in geography)
- application of the grid by users (e.g. teachers, teacher students), e.g. in the context of teacher training and education

More Information and materials:



<https://osf.io/ym7d5/>





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Analysed Channels

Die Merkhilfe: Nachhilfe & Allgemeinwissen. https://www.youtube.com/channel/UC_cCxd8yUwlu1-rt5dpBdw

explainity ® Erklärvideos. <https://www.youtube.com/c/explainity-erklaert/featured>

FWU – Bildungsmedien. <https://www.youtube.com/user/Bildungsmedien>

Lehrerschmidt: Einfach Lernen! <https://www.youtube.com/channel/UCy0FxFmgGUIRnkcCoNZUNRQQ>

Mathe - simpleclub. <https://www.youtube.com/user/TheSimpleMaths>

Mathe by Daniel Jung. <https://www.youtube.com/user/beckuplearning>

MrWissen2go. <https://www.youtube.com/c/MrWissen2go/featured>

musstewissen Deutsch. <https://www.youtube.com/c/musstewissenDeutsch/featured>

sofatutor. https://www.youtube.com/channel/UCE3vUBi72Mvy1TpPAPoq_9g

Sommers Weltliteratur to go. <https://www.youtube.com/user/mwstubes>

Terra X statt Schule. <https://www.youtube.com/channel/UCP8e6wK18jJNdJpKkeQDIa>

(13/08/2020)

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