



Research Article

# Evaluating Climate Change Fake News in German Primary Education: The Role of Students' Conceptions

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## Supplementary Material

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**Section A**

**Table A1.** Interview Guide: Children’s Conceptions about Fake News and Evaluation Skills in Primary School

Thematic block	Question	Prompts
<b>Introduction</b>		
<i>Greeting and introduction</i>	“Hello! I’m glad that you are talking with me today.” “What’s your name?”	<b>Individual interviews with drawings</b>
<b>START OF AUDIO RECORDING</b>		
	„How old are you?“	
<i>Explanation of the research objective in simple language</i>	“Today we’re going to talk about climate change and news that you can read on the internet, and what you think about that.”	
	“There are no wrong answers. If you don’t know something or you’re unsure, that is completely fine. You can just say: ‘I don’t know’.”	
<b>Main Part</b>		
<b>Information sources on climate change</b>		
	“Can you go online at home or in other places?” <b>If YES:</b> ‘What do you use the internet for?’ “Is there a particular app, TV show, or website that you often use?” “Do you have your own smartphone or tablet?” <b>If NO:</b> “Are you allowed to use a family member’s phone?” “Do you know social media platforms?” <b>If YES:</b> “Which ones?” “Do you have your own account?” “What do you use the internet for?” For entertainment? For information?” “Now I’d like to know whether you sometimes get news about things happening in the world. Where do you see, hear, or read about such things?” “Have you ever read anything about climate change on the internet?” <b>If YES:</b> What / where?”	Examples: Social media platforms
<b>Conceptions about fake news</b>		
<b>Transition to the topic of fake news</b>	“Sometimes there are news items that are not true / are false. These are called ‘fake news’. Have you heard of that before?” <b>If YES:</b> “Can you explain to me what fake news are?” <b>If NO:</b> “Fake news means false news. These are pieces of information that are false on purpose. We’ll look at an example in a moment.”	
<b>Reason</b>	“Why do you think some people spread fake news? What do you think they want to achieve?”	
<b>Purpose &amp; Intention</b>	“Some people deliberately say untrue things, for example to spread a certain opinion or to make someone else look bad. Many people believe the fake news and pass it on. If we learn to recognise fake news, we can protect ourselves and others.”	
<b>Ad-hoc question</b>	Reflecting back: “Have I understood correctly that...?”	
<b>Evaluation of Fake News</b>		
	<b>Evaluation skills</b> (according to Gelerstein et al. 2016)	
<b>Reading the digital fake news</b>	“I’ll show you a few pieces of news from the internet. Some fake news have been hidden in them. Imagine you are a detective!”	Fake News about climate change (Tablet)
<b>Assess Claims:</b>	“Look closely at this news item and decide: Is it true or made up? Click the correct field – ‘Fact’ or ‘Fake’. Tell me why you made that decision.” “Do you think this information is true? Why or why not? How could someone check that?” “Do you have a guess as to whether the information is correct?” “What clues are there?” “How did you recognise that?” “Is this news item from a trustworthy source or not?” “Would you share or pass on this news? Why?”	No. 1 No. 2 No. 3 No. 4

Assess Arguments:	<i>"Why did the person write this? Do you think the reasons are good?" "What reasons might there be for it being right or wrong?" "Is there good evidence that it is true?"</i>	No. 5 No. 6 No. 7 No. 8
Assess Alternatives:	<i>"How could you find out whether this is true?" "What do you base that on?" "Which of these two pieces of information makes more sense? Why?" "Which of the two sounds more correct to you? Why?"</i>	No. 9 No. 10
Open questions for reflection and description	<i>"Can you tell me how you find out whether something on the internet is true or not?"</i>	
Situational or concrete everyday-related questions	<i>"Can you remember whether you have ever seen fake news on the internet?" If YES: "On what topic?" "How did you know it was false?" "What would you do if you saw information on your (or someone's) phone that sounded strange or wrong?"</i>	
	<b>Fact-Checking</b> <i>"How can people protect themselves from falling for fake news?" "There is a trick to find out whether something is true or not. It's called a fact-check! You ask clever questions starting with 'W', for example: Who said it? Where does the information come from? When was it written? That way you can find out whether something is true or maybe wrong!"</i>	Fact-Check checklist
	<b>Conclusion</b> <i>"How did you like our conversation? Was there anything that surprised you?" "Do you have any questions for me or anything else you'd like to say?" "Thank you very much for taking part!"</i>	
Opportunity for pupils to add something or ask questions, Thanks		

The guideline was translated into English while preserving its meaning.

## Section B

[d]= deductive; [i]=inductive

Main Category	Subcategory	Code
Students	Information	Tablet [i]
		Smartphone [i]
		Media use: place/device [i]
		Media use for climate change information – yes [i]
		Media use for climate change information – no [i]
		Digital media use – yes [i]
		Digital media use – no [i]
		Media use – news [i]
		Age [d]
		Interview duration [d]
Fake News	Conceptions about Fake News	Definition of Fake News [d]
		Examples of Fake News [d]
		Perception of intention – yes [d]
		Perception of intention – no [d]
		No definition of Fake News [i]
	Dealing with Fake News	Checked Fake News [d]
	Sharing Fake News [d]	
Fake News Tasks	FN1	FN1 recognised [d]
	FN1	FN1 not recognised [d]
	FN2	FN2 recognised [d]
	FN2	FN2 not recognised [d]
	FN3	FN3 recognised [d]
	FN3	FN3 not recognised [d]
	FN4	FN4 recognised [d]
	FN4	FN4 not recognised [d]
	FN5	FN5 recognised [d]
	FN5	FN5 not recognised [d]
	FN6	FN6 recognised [d]

	FN6	FN6 not recognised [d]
	FN7	FN7 recognised [d]
	FN7	FN7 not recognised [d]
	FN8	FN8 recognised [d]
	FN8	FN8 not recognised [d]
	FN9	FN9 recognised [d]
	FN9	FN9 not recognised [d]
	FN10	FN10 recognised [d]
	FN10	FN10 not recognised [d]
Decision Criteria	Language & Content	Spelling errors [d] Exaggeration [d] Unknown content [d] Simplifications [d] Logical errors [d] Enemy images [d] Panic mongering [d]
Decision Criteria	Source & Author	Missing imprint [d]
Decision Criteria	Source & Author	Fake logo [d] No sources [d] Untrustworthy sources [d]
	Media Design	Manipulated images [d] AI-generated content [d] Highlighting of words [d] Advertising [d] Hyperlinks [d] GIFs [d]
Verification Strategies	Verification strategies	Use of prior conceptions [d] Source check [d] Consulting trusted persons [d] Logical-analytical check [d] Intuition/heuristic check [d] No strategy applied [d] Uncertainty [i] Cross Check [i] Assess Claims [d] Assess Arguments [d] Assess Alternatives [d]
Types (Type-Building Analysis)	Evaluation Types	Uncritical acceptors Intuitive evaluators Emerging reflective evaluators Strategic evaluators Conceptions-based evaluators

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