

Developing an Information Credibility Scale for Social Media and AI-generated Content: Insights from Expert and User Reviews

Wonchan Choi (wchoi@uwm.edu), Liya Zhu (liyazhu@uwm.edu), Hyun Seung Lee (lee649@uwm.edu)

School of Information Studies, University of Wisconsin-Milwaukee, WI, USA



INTRODUCTION

- Limitations of existing scales:
 - Inadequate consideration of the multidimensional nature of credibility
 - Unclear distinction between formative and reflective indicators
 - Insufficient empirical validation reflecting the current and emerging web environments
- Aim to develop a new scale** for measuring information credibility on the web, in which content is often created and circulated by anonymous users and AI-powered agents

Step 1: Defining Construct

- Information credibility:** The degree of confidence or weight assigned to an information object based on its perceived **trustworthiness** and **expertise**
- Trustworthiness:** the extent to which information is perceived as unbiased and free from intentional manipulation, fabrication, or hallucination
- Expertise:** the extent to which information is perceived as accurate, in-depth, and reflective of domain-specific knowledge

Step 2: Generating an Item Pool

- Identified a pool of reflective and formative indicators from the literature
- Classified 15 relevant reflective items the two underlying dimensions of credibility:
 - 6 trustworthiness items:** (1) genuine, (2) unbiased, (3) fair, (4) sincere, (5) benevolent, and (6) objective
 - 9 Expertise items:** (1) accurate, (2) convincing, (3) correct, (4) valid, (5) pertinent, (6) justified, (7) informative, (8) intelligent, and (9) insightful

Step 3: Determining the Format for Measurement

- Phrased items as **descriptive statements** to rate agreement
- Selected an **odd-numbered scale** to include a neutral midpoint

Steps 4 & 5: Testing and Refining (Current Poster)

METHOD

Recruited **experts** and **users** to review the initial pool of items:



- Two iSchool faculty members who published peer-reviewed papers on information credibility
- Rated the relevance of the items (Figure 1) and suggested improvements through an **online survey**



- Nine students from diverse disciplines with prior experience using social media or AI tools to seek information
- Provided feedback on the relevance and clarity of the items (Figure 1) through **one-on-one interviews**

Please indicate your level of agreement with the following statements regarding the [information object] (e.g., social media post or AI chatbot response) on a 5-point Likert scale.

1 = *strongly disagree*, 2 = *disagree*, 3 = *neither disagree nor agree*, 4 = *agree*, 5 = *strongly agree*

Trustworthiness	Expertise
T1. I find the [information object] genuine .	E1. The [information object] provides accurate information.
T2. The [information object] presents information without bias .	E2. The [information object] presents a convincing argument.
T3. The [information object] fairly represents multiple perspectives.	E3. The information in the [information object] is correct .
T4. The [information object] appears sincere .	E4. The claims made in the [information object] are valid .
T5. The [information object] seems intended to be helpful .	E5. The [information object] contains pertinent information related to the topic.
T6. The [information object] objectively presents information.	E6. The arguments in the [information object] are well justified .
	E7. The [information object] is informative .
	E8. The [information object] reflects an intelligent understanding of the topic.
	E9. The [information object] provides insightful perspectives.

Figure 1. Initial Scale Tested

FINDINGS

- Strong support from expert group:
 - All six trustworthiness items as highly relevant (4).
 - T5 received one 4 and one 2.
 - All nine expertise items were considered acceptable
- Suggestions for improvement:
 - Add “consistency” for trustworthiness
 - Add “depth” and “clarity” for expertise
- User group perceived items as relevant
 - Had difficulty understanding “pertinent”
 - Confusion on the distinction between “accurate” and “correct”
 - Concerned with subjectivity of “unbiased,” “sincere,” and “convincing”
- Highlight the need to clarify item definitions and specify that the scale measures users’ perceptions of information

Steps 6–9 (Future Directions)

- Refine items based on the feedback from experts and users
- Administer the refined items to a development sample
- Evaluate the items
- Optimize the scale