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BACKGROUND

Metrics literacies are the ability to recognize, interpret, critically assess, and effectively and ethically use scholarly metrics (Dorsch et al., 2021; Maggio et al., 2022). Few educational efforts concerned with scholarly metrics have leveraged mediums other than text, resulting in a gap in resources and, by extension, a lack of knowledge about the effectiveness of various educational formats.

Online videos have been identified as a promising format for teaching (including complex topics such as scholarly metrics) as they can be more efficient, effective, and engaging than text (Maggio et al., 2022).

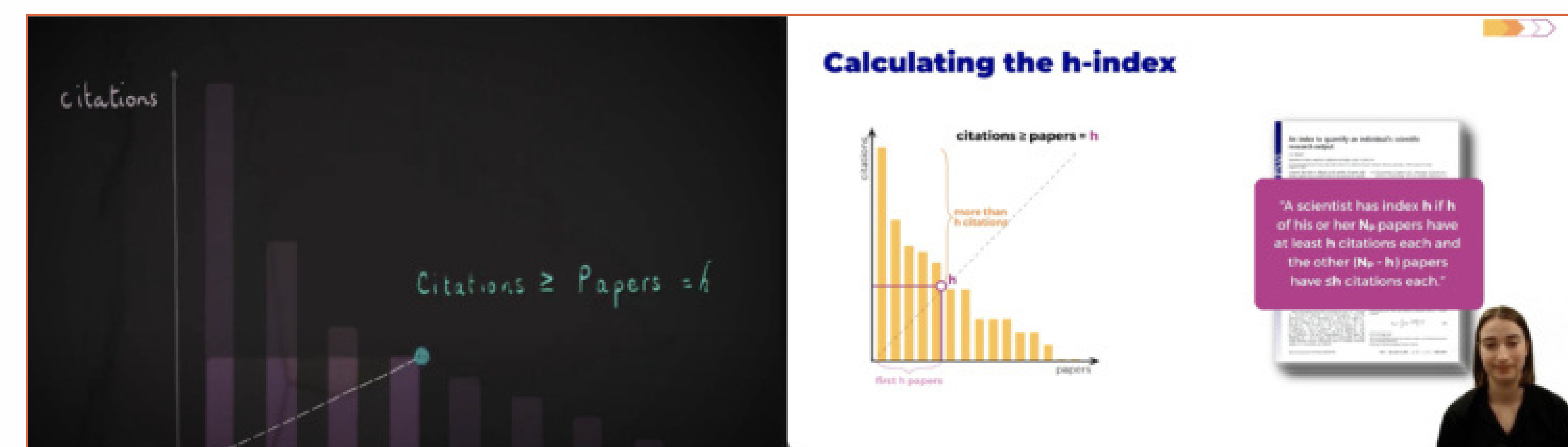
STUDY DESIGN

The study was designed as a Randomized Controlled Trial with one h-index briefing note serving as the control and two educational videos (one animated, one talking head) as treatments. Their content was identical and designed to meet four specific learning objectives (LOs):

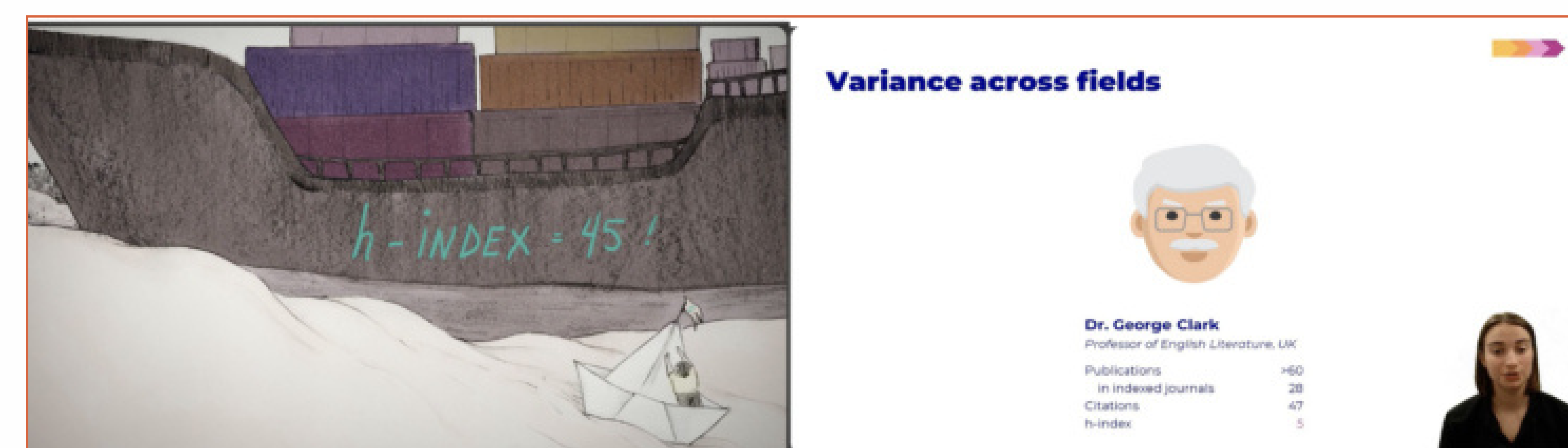
1. Definition and computation,
2. Inability to assess early career researchers,
3. Lack of field normalization, and
4. Which h-index?

Participants were asked to fill out attitude surveys (one pre- and two post-test) and a knowledge test (post-test) to test the LOs. To compare the effect of the video formats vs. text, participants were randomly assigned to the talking head, animation video, or h-index briefing note. Attitude surveys were administered before and after the participants were exposed to control or treatment to measure change in attitude and understanding. A knowledge test was administered only after the intervention to avoid a priming effect in participants.

VIDEOS



Defining and calculating the h-index in animation (left) and talking head (right) format



Lack of field normalization of the h-index in animation (left) and talking head (right) format



Animated video

32
1.2K views 2 months ago

Talking head video

9
303 views 2 months ago



OBJECTIVES

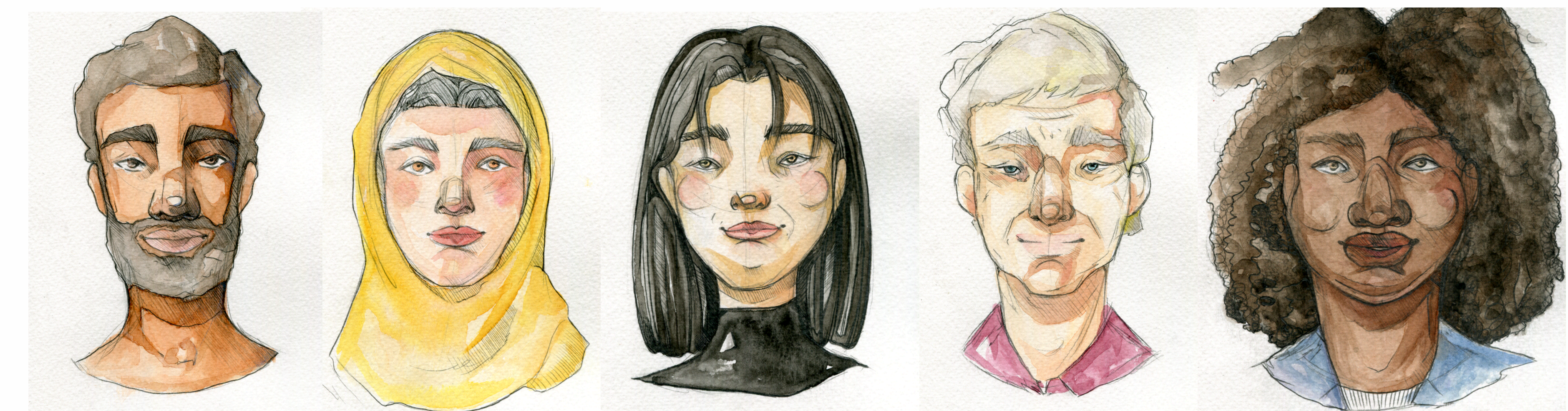
This study aims to determine the effectiveness of different educational video formats at improving metrics literacies, using the h-index as a case study. Our study is guided by the research question:

How do video formats (talking head, animation) distinctly affect an individual's knowledge about and attitudes toward the h-index?

While a low response rate did not allow us to draw generalizable insights from the data, we aim to share our methods and results so they might be of use to others.

Personas

Personas were developed to reflect real-world academic scenarios (Dorsch et al., 2020). Two were selected for use in the educational videos: **Dr. Maryam Hashemi** is a postdoctoral researcher and is debating whether or not she should include the h-index in her CV when applying for a faculty position. **Dr. George Clark** is a full professor at the Department of English Literature and is applying for a Researcher of the Year award. The application package asks for his number of publications and his h-index.



Personas Paulo Barbosa, Maryam Hashemi, Ying Wang, George Clark, and Rashida Khumalo (sketches by Isabelle Dorsch)

Format

A video taxonomy literature review was conducted (Haustein et al., 2025d). **Talking head** and **animation** formats were selected for their effectiveness in educational settings and human elements that engage audiences. Talking head videos leverage the presence of a narrator who delivers a lecture-style presentation, accompanied by slides. The narrator guides learners, emphasizing gestures, tone, and facial expressions to foster social connection and authenticity. Animation leans on storytelling and multimodal visual and audio, a combination proven to enhance viewers' retention of information.

OUTLOOK

Videos are a **fun and engaging** educational resource alternative to text. Creative audio-visual ways to present complex issues such as quantitative scholarly metrics may be **more accessible** for researchers and decisions makers. We hope that the videos help to increase awareness and **critical use of scholarly metrics** in the academic community. We argue that open and community-driven educational resources facilitate learning and **improve metrics literacies**.

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