

DEVELOPING POSTER-BASED JOURNALISM LEARNING MEDIA USING QR-FACT LEARNING TO STRENGTHEN FACT VERIFICATION COMPETENCE IN THE POST-TRUTH ERA

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Abstract: *The post-truth era presents serious challenges for journalism education, particularly in equipping students with fact-verification skills as a core component of news literacy. This study aims to develop poster-based journalism learning media integrated with QR-Fact Learning as a supplementary learning resource for verifying information in the post-truth era. The media combine educational posters with QR codes linked to educational videos, fact-checking websites, and news analysis to encourage interactive, contextual, and adaptive learning in response to digital information challenges. This study employs the ADDIE development model, which consists of the analysis, design, development, implementation, and evaluation stages. The research subjects were Indonesian university students enrolled in journalism courses. Product validation was conducted by journalism content experts, visual and animation media design experts, and curriculum and learning experts. The research instruments included expert validation sheets and student response questionnaires. The results indicate that the developed learning media fall within the feasible to highly feasible categories. Students provided positive responses regarding the clarity of the material, visual quality, ease of QR code access, and relevance in enhancing fact-verification skills. This media is considered effective as an innovative learning alternative in fostering critical thinking, resistance to manipulation, and a truth-oriented mindset.*

Keywords: *Post-truth, Verification, Facts, QR-Fact, Students*

Introduction

The rapid development of digital technology and social media has fundamentally transformed the patterns of information production, distribution, and consumption in modern society (Castells, 2023). While this transformation has accelerated the flow of information, it has simultaneously generated significant challenges in the form of information overload that is difficult to verify quickly and accurately. Within this context, the phenomenon of post-truth has emerged, referring to a condition in which objective facts lose their influence compared to emotions, personal opinions, and ideological beliefs in shaping public perception (McIntyre, 2023).

The post-truth era is characterized by the massive dissemination of hoaxes, misinformation, and disinformation through participatory and algorithm-driven digital platforms. Social media enables individuals to act as information producers; however, this is not always accompanied by adequate levels of literacy and journalistic ethics. Consequently, the boundaries between facts, opinions, and propaganda become increasingly blurred, making it difficult for the public to distinguish between valid and manipulative information.

This condition poses a serious challenge to the field of education, particularly journalism education, which bears both moral and academic responsibility for upholding the value of truth in information. Journalism education can no longer focus solely on developing news-writing skills; it must also instill critical thinking abilities, digital literacy, and systematic fact-verification competencies. Digital literacy is widely recognized as a key 21st-century competence that determines the quality of individual participation in the digital public sphere.

Journalism students are positioned as future public communicators who play a strategic role in shaping public opinion and social awareness. Therefore, mastery of fact-checking skills constitutes an essential element of journalism learning in higher education.

Based on preliminary observations within journalism learning environments among Indonesian students, it was found that instructional practices remain predominantly theoretical and discussion-based. Fact-verification practices have not yet become a central component of students' learning experiences. The learning media commonly used include PowerPoint presentations, focused group discussions, and classroom presentations, which are insufficient to address students' needs in navigating the fast-paced and complex digital information landscape. As a result, students tend to rely on intuition or personal opinion when assessing information credibility rather than applying systematic journalistic procedures.

These conditions indicate a gap between the competency demands of journalism in the post-truth era and the realities of student learning practices. Therefore, innovation in learning media is required to integrate visual, digital, and contextual fact-verification practices. One strategic alternative solution is the development of poster-based journalism learning media integrated with QR-Fact Learning. Posters function as concise and persuasive visual media, while QR-Fact Learning extends instructional content into interactive digital spaces. This combination is expected to enhance students' learning motivation while strengthening fact-verification skills in the post-truth era.

Literature Review

The Post-Truth Era and Its Challenges for Journalism

The post-truth era refers to a social condition in which objective facts exert less influence in shaping public opinion than emotions and personal beliefs (McIntyre, 2023). This phenomenon is reinforced by the algorithmic and participatory nature of social media, which accelerates the spread of hoaxes and disinformation (Vosoughi et al., 2018). Flew (2024) emphasizes that weak media literacy makes it difficult for the public to distinguish between facts, opinions, and propaganda.

The impact of the post-truth era on journalism is substantial, including declining public trust in the media and increasing pressure on journalists to produce news rapidly without thorough verification. These conditions necessitate the strengthening of fact-verification competencies within journalism education.

Digital Literacy and Fact-Checking Skills

Digital literacy is understood as an individual's ability to access, analyze, evaluate, and produce information critically and ethically in digital environments (UNESCO, 2023; OECD, 2024). Pennycook and Rand (2023) found that fact-verification ability is positively correlated with levels of digital literacy and individual resilience to hoaxes.

However, various studies indicate that journalism students continue to face difficulties in practicing fact-checking. Yuliani (2024) revealed that although students are familiar with the concept of digital literacy, their ability to independently verify facts remains low due to the limited availability of contextual learning media. Similar findings were reported by Haliq et al.

(2024), who stated that students struggle to assess source credibility and to distinguish between facts, opinions, and disinformation as a result of insufficient case-based learning exercises.

Journalism Education and Innovation in Learning Media

A number of studies reveal that journalism education in higher education institutions remains predominantly theoretical and insufficiently integrated with digital-based information verification practices (Zulmawati, 2025). The learning media commonly employed are often not contextualized to the dynamics of social media that students encounter in their daily lives (Putri & Ardoni, 2025).

Research in media education emphasizes that technology-based learning media innovations can enhance student engagement, conceptual understanding, and critical thinking skills (Mayer, 2023). Visual media combined with interactive digital access have been shown to be more effective than conventional methods in improving information literacy (Hobbs, 2024).

One technology considered practical and adaptive is the use of QR codes as a bridge between printed media and digital resources (Rahayu et al., 2024). Panuayan and Baguio (2025) highlight the importance of integrating interactive digital media in journalism education to improve fact-checking competencies; however, their study focuses primarily on measuring student abilities rather than on the specific development of learning media.

Based on a review of previous studies, it can be concluded that most research still positions students as objects of evaluation regarding digital literacy and fact-checking abilities, without providing integrated learning experiences for fact verification through innovative learning media. Furthermore, research that specifically develops and evaluates poster-based journalism learning media integrated with QR-Fact Learning as a supplementary learning resource to address the challenges of the post-truth era remains limited.

Method

This study employed a Research and Development (R&D) approach. Research and development is a method used to produce a specific product and to test its feasibility and effectiveness, particularly in the field of education. In this study, the product developed was poster-based journalism learning media integrated with QR-Fact Learning as a supplementary learning resource for verifying information in the post-truth era. The research model adopted was the ADDIE model, which consists of five stages: Analyze, Design, Develop, Implementation, and Evaluation.

Result and Discussion

The first stage involved an analysis of journalism learning needs in the post-truth era. At this stage, the researchers found that the rapid flow of digital information has generated serious challenges for journalism, particularly the widespread presence of misinformation, disinformation, and news manipulation. Journalism students are required not only to master news-writing skills but also to possess fact-verification competencies as an essential component of news literacy.

The results of observations and preliminary studies indicate that journalism learning in higher education remains predominantly focused on the technical aspects of news writing, while fact-verification materials are not yet presented in a contextual and practical manner aligned with the realities of digital media. In addition, there is a lack of concise, accessible visual learning media integrated with digital fact-checking resources. Based on these conditions, the development of innovative learning media is necessary to assist students in understanding fact-

verification processes in a more applicative, interactive, and relevant way in response to the challenges of the post-truth era.

The second stage was the design of the learning media. At this stage, the researchers developed the concept of educational posters integrated with QR-Fact Learning. The posters were designed as the primary visual medium containing concise summaries of fact-verification materials, principles of news literacy, and indicators of problematic news content.

The QR codes embedded in the posters were directly linked to various supporting resources, including journalism educational videos, fact-checking websites, and examples of analyses of current news. This design aimed to create a multimodal learning experience by combining visual text, audiovisual content, and digital exploration.

Based on the needs analysis, the researchers formulated several learning objectives to be achieved through this media, namely: enhancing students' understanding of news literacy concepts in the post-truth era, training independent fact-verification skills, fostering critical attitudes toward digital information, and cultivating journalistic awareness oriented toward truth and resistance to manipulation.

The third stage was the development of the learning media. At this stage, the researchers realized the design into a tangible product in the form of poster-based journalism learning media integrated with QR-Fact Learning. The development process included the preparation of fact-verification materials, visual poster design, selection of colors and typography, and layout arrangement to ensure clarity and readability of information.

Subsequently, QR codes linked to supporting content such as educational videos, fact-checking websites, and examples of news analysis were integrated into the media. The developed media were then validated by experts, including journalism content experts, visual and animation media design experts, and curriculum and learning experts. The validation results indicated that the learning media fell within the feasible to highly feasible categories. Expert feedback was used to revise the product, including simplifying language, strengthening visual messages, and adjusting content to better align with journalism course learning outcomes.

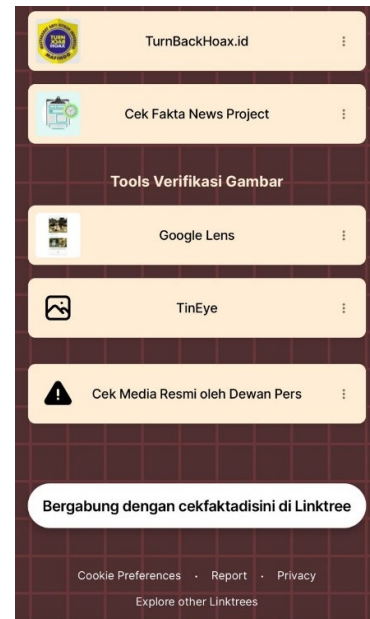
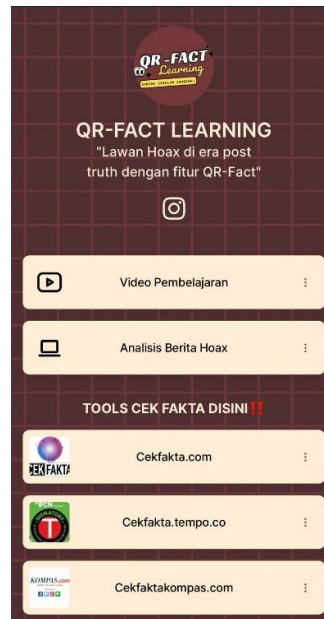
The fourth stage was the implementation of the learning media. At this stage, the QR-Fact Learning posters were tested with 33 Indonesian students who had completed a Journalism course. Students were given the opportunity to study the material through the posters and subsequently access the QR codes to watch educational videos, visit fact-checking websites, and analyze news examples. This process encouraged independent, active, and exploratory learning in accordance with the characteristics of digital learning environments.

The final stage was evaluation. At this stage, data were collected through student response questionnaires to examine perceptions of the developed learning media. The data were analyzed using a quantitative percentage-based method. The evaluation results showed that students provided positive responses regarding the clarity of the material, the visual quality of the posters, the ease of QR code access, and the relevance of the media in enhancing fact-verification skills. Students reported that the media helped them become more critical in responding to information and increased their understanding of the importance of fact-checking processes in journalistic practice.

Visual Presentation of the QR-Fact Learning Based Poster Media



Figure 1: Smart Poster



Figures 2–3: QR-Fact Learning Content Display

Table 1. Validators

Subject	Expert of
Material Experts	1. Head of the TvOne Sumatera Utara
	2. Assistant Producer of DAAI TV
	3. Journalism Lecturer and Staff Member of <i>Koran SINDO</i>
Media Experts	1. Graphic Design Lecturer
Students	1. Journalism students (33 student)

Source: primary data.

The results of student evaluations and expert validations (media and content experts) are presented below.

Table 2. The material experts' validation

No Aspect	Number of items	Total Score	Max Score	%	Criteria
Usability	2	29	30	96,67	Eligible
Learning Objectives	2	27	30	90,00	Eligible
Technical Quality	5	71	75	94,67	Eligible
Benefits	1	14	15	93,33	Eligible
Total	10	141	150	94.00	Eligible

Table 2 shows that the media expert evaluation was conducted based on four assessment aspects: usability, learning objectives, technical quality, and benefits. The results indicate that the usability aspect achieved a percentage score of 96.67%, learning objectives 90.00%,

technical quality 94.67%, and benefits 93.33%, with an overall percentage of 94.00%.

These findings indicate that the experts recommend the developed product for use in the learning process.

Table 3. The media expert’s validation

No Aspect	Number of items	Total Score	Max. Score	%	Criteria
Media	6	25	30	83.00	Eligible
Learning Design	4	19	20	95.00	Eligible
Total	10	44	50	88.00	Eligible

The results of the media expert evaluation are presented in Table 3. The assessment was conducted based on two aspects, namely media aspects and instructional design. The findings show that the media aspect achieved a percentage score of 83.00%, while the instructional design aspect reached 95.00%, resulting in an overall percentage of 88.00%.

Table 4. Students assessment

No Aspect	Number of items	Total Score	Max. Score	%	Criteria
Learning Objectives	6	718	792	91.00	Eligible
Benefits	3	353	396	90.00	Eligible
Total	9	1071	1188	91.00	Eligible

Furthermore, Table 4 presents the results of student response evaluations based on two aspects: learning objectives and benefits. The results show that student responses to the learning objectives aspect achieved a percentage score of 91.00%, while the benefits aspect obtained 90.00%, resulting in an overall percentage of 91.00%.

In general, respondents stated that the material related to facts, hoaxes, and opinions became easier to understand through the use of QR-Fact media. This media enables the delivery of learning content in a more concrete and contextual manner, thereby assisting respondents in distinguishing the characteristics of each type of information. Accordingly, QR-Fact media is not only visually engaging but also effective in enhancing respondents’ conceptual understanding. The integration of media attractiveness, ease of material comprehension, and the improvement of critical attitudes is also reflected in the product feasibility assessment results. A total of 66.67% of respondents strongly agreed and 30.30% agreed that the QR-Fact media is suitable for use in journalism courses. These findings indicate that, overall, the developed media meets learning feasibility criteria in terms of content, objectives, and benefits for students. The validation and evaluation of the QR-Fact Learning based poster as a journalism learning medium for Indonesian university students were conducted by experts based on several criteria, including usability, learning objectives, technical quality, and benefits. The evaluation was carried out through user testing, with the following percentage results.

Table 5. Percentage Validation and Assessment Result

No	Subject testing	Validity result	Percentage qualification
1	Material Experts	94.00%	very good
2	Media Experts	88.00%	very good
3	Students	91.00%	very good

Conclusion

This study employed a development research approach using the ADDIE model to produce poster-based journalism learning media integrated with QR-Fact Learning as an effort to strengthen students' fact-verification skills in the post-truth era. The findings indicate that the developed media were rated as feasible to highly feasible based on validations by subject-matter experts, media experts, and student responses. The media effectively integrate visual and digital learning in an interactive manner through QR codes linked to fact-checking resources and supporting materials. Students provided positive feedback regarding the clarity of the content, visual quality, ease of access, and its benefits in enhancing critical attitudes and caution toward information. Therefore, the QR-Fact Learning-based poster media can be effectively utilized as an innovative learning alternative to support news literacy and fact-verification competencies in the post-truth era.

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