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BAIS WEB PROTOTYPE: WEBSITE-BASED LEARNING MEDIA TO IMPROVE INTERPERSONAL INTELLIGENCE OF ELEMENTARY SCHOOL STUDENTS

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Abstract

This study developed Bais Web, a website-based learning media designed to enhance interpersonal intelligence in social interaction learning for elementary school students in Bandung, Indonesia. The purpose was to address the lack of interactive digital tools that support social skills development. A design-based research (DBR) approach was applied through analysis, design, development, and evaluation phases. Expert validation rated Bais Web as feasible across content, presentation, language, visuals, and interpersonal intelligence components. A limited trial involving 23 fourth-grade students showed improvement in interpersonal intelligence, with student scores increasing from 54.13 to 67.57 and an N-Gain of 0.29 (moderate). This improvement occurred because Bais Web provided an interactive and engaging platform that encouraged active participation and student-centred learning. The study offers a scalable model for integrating technology into social interaction learning, supporting 21st-century skills development in elementary education.

Keywords: Bais web, Interpersonal intelligence, learning media, Social interaction, Technology, Website.

1. Introduction

The integration of website-based learning media is increasingly essential for enhancing student engagement and learning effectiveness in elementary education [1-3]. However, social interaction learning is often delivered through conventional methods, which lack contextual relevance and fail to foster essential social skills [4]. This gap highlights the need for interactive digital tools that align with students' learning preferences.

Interpersonal intelligence plays a critical role in shaping students' ability to build relationships, empathize, and communicate effectively, which are key components in social interaction learning [4, 5]. Without proper support, students may struggle to develop these skills, impacting their social adaptability and collaboration.

Table 1 explains previous studies on website-based learning media, demonstrating that digital technology enhances learning engagement, student activities, and can be adapted to various subjects [1, 6-14]. These findings support the development of Bais Web, a website-based platform designed to improve interpersonal intelligence in social interaction learning.

This study aims to develop Bais Web through a Design-Based Research (DBR) approach, including analysis, design, development, and evaluation phases. The novelties of this research are: (i) integrating interpersonal intelligence into web-based social interaction learning; (ii) creating a student-friendly website specifically for elementary students; and (iii) applying a DBR framework for systematic development and validation.

Table 1. Review of previous research on the development of website-based learning media.

No.	Title	Ref.
1	The influence of website-based learning media on science learning outcomes in elementary school students in the era of society 5.0	[1]
2	Effectiveness of e-learning media to improve learning outcomes natural science in primary schools	[6]
3	Website-based learning media on reading and numeracy content for third grade elementary schools	[7]
4	Elementary school teachers' needs for the website providing science instructional materials	[8]
5	Development of an educational web site and e-learning system for elementary school students to reduce sugar, natrium and fat intakes	[9]
6	The effectiveness of using word wall website in improving science learning motivation in elementary school	[10]
7	Development of computer-based interactive multimedia: study on learning in elementary education	[11]
8	Web-based magasing media to improve students' mathematical problem-solving skills at the elementary school level	[12]
9	Designing a sciences learning media based on website and integrated with YouTube videos	[13]
10	Development of animation learning media based on local wisdom to improve student learning outcomes in elementary schools	[14]

2. Literature Review

Figure 1 explains the communication flow in a web system, where a user sends an HTTP request through a browser to a web server, which then processes and returns the HTTP response containing the requested data [15, 16]. This process enables real-time interaction between users and servers. A website functions like a digital house with interconnected pages (rooms), accessible through a homepage as the main entry point [17-18]. Websites serve various purposes, including education, by providing text, images, videos, and interactive content. The use of web-based learning media offers flexibility, allowing teachers and students to access materials anytime and anywhere, fostering digital literacy and engagement [19-20]. This approach aligns with the needs of 21st-century education. Interpersonal intelligence, crucial for elementary students, enhances their ability to understand, communicate, and collaborate with others [21-26]. Integrating this into web-based media supports social interaction learning, which is the focus of Bais Web.

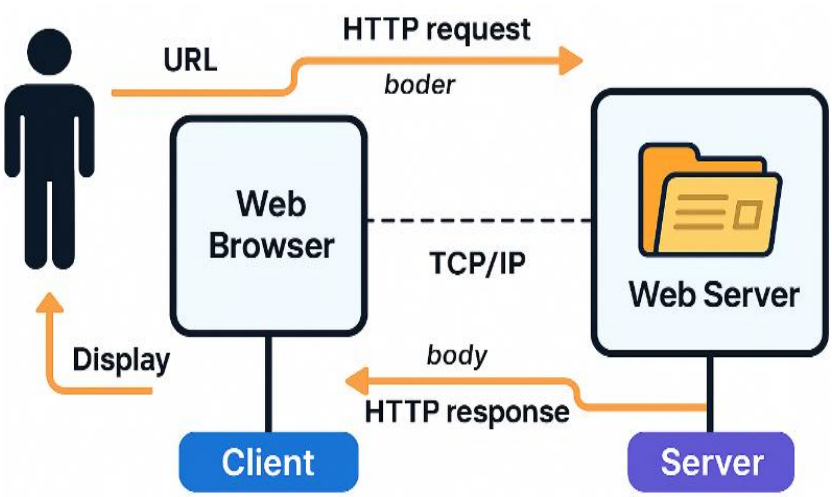

Fig. 1. Website working flow.

3. Method

This study employed a DBR approach, consisting of four stages: analysis, design, development, and evaluation. Detailed information for this method is explained elsewhere [27]. The analysis phase identified student needs in social interaction learning. The design phase focused on creating a website-based learning media prototype. During development and evaluation, the prototype underwent expert validation involving specialists in learning media and technology to assess content, presentation, language, visuals, and interpersonal intelligence components. A limited trial was conducted with 23 fourth-grade elementary school students to evaluate the website's usability and effectiveness in enhancing interpersonal intelligence, using pre-test and post-test scores.

4. Results and Discussion

Figure 2 explains the development flow of Bais Web, starting from needs analysis, followed by website design, layout creation, multimedia integration, and feasibility testing. This process ensured alignment with student learning needs in social interaction [28, 31]. Figure 3 explains the Bais Web interface, featuring a home menu, teaching materials (roles, social interaction, conflict resolution), student worksheets, discussion forums, and evaluation tools. This structure supported comprehensive and interactive learning [30].

A feasibility test validated by learning media and technology experts rated Bais Web as feasible across content, presentation, language, visuals, and interpersonal intelligence development. The website was accessible via laptops and smartphones, supporting flexible use [13, 14].

Trial results showed an increase in interpersonal intelligence. Student scores improved from 54.13 to 67.57, with an N-Gain of 0.29 (moderate category). Detailed information regarding the statistical analysis is reported elsewhere [32-34]. This occurred because the website's interactive features encouraged active participation and enhanced social interaction skills [29].

These findings align with previous studies emphasizing the role of digital learning media in enhancing student engagement and learning outcomes [1, 4, 5]. The integration of interactive website features not only supports academic content delivery but also fosters social-emotional skills such as interpersonal intelligence [24, 25]. This suggests that Bais Web contributes to 21st-century learning goals by promoting technology integration and social development in elementary education [18, 19]. This study also adds new information regarding web-based teaching and learning process, as reported elsewhere [35-39].

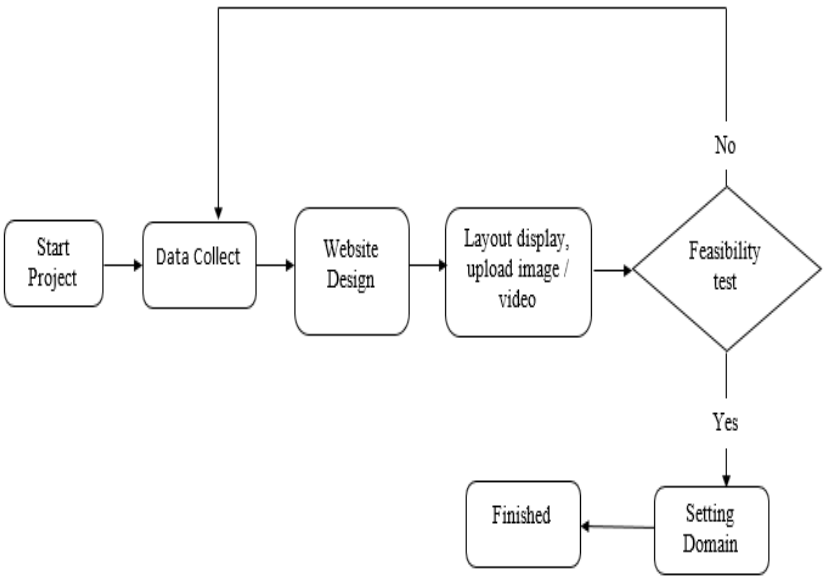

Fig. 2. Flowchart of base web development.

Fig. 3. Display of the results of the base web development: (a) Main Page, (b-e) Teaching Materials, (f) student worksheet, (g) discussion, (h) evaluation.

5. Conclusions

This study successfully developed Bais Web; a website-based learning media designed to enhance interpersonal intelligence in elementary school students. Expert validation confirmed its feasibility across content, presentation, language, visuals, and interpersonal development. Trial results demonstrated improved student scores and social interaction skills because the website offered interactive, engaging features that supported student-centred learning. This research provides a scalable model for integrating digital media into social interaction learning, enhancing both student engagement and 21st-century skills development.

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