

DEVELOPING WEB-BASED INTERACTIVE LEARNING MEDIA ON PUBLIC RELATIONS FOR VOCATIONAL STUDENTS

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Abstract

This research aimed to develop a web-based interactive learning media for the Public Relations (PR) course in vocational education, specifically designed for students of the English for Business and Professional Communication program at the State Polytechnic of Bengkalis. Using a Research and Development (R&D) method with the ADDIE model—Analyze, Design, Develop, Implement, and Evaluate—the product was developed in English and integrated core PR competencies, professional ethics, and case-based learning to enhance communication skills, ethical awareness, and workplace readiness. The needs analysis through questionnaires, interviews, and documentation review revealed that existing PR learning methods were still conventional and lacked interactive features. The developed platform included modules, animated videos, quizzes, simulations, and discussion forums, supported by an intuitive user interface. Expert validation indicated good feasibility in content relevance, design quality, and usability, while user trials with vocational students showed positive responses, such as higher engagement, better understanding of PR concepts, and improved ability to apply professional ethics. The study concluded that this web-based interactive learning media can bridge the gap between theory and practice in vocational PR education and support students in meeting professional and technological demands in the global industry.

Keywords: Public Relations, interactive learning media, vocational education, web-based learning, ADDIE model

1. INTRODUCTION

Public Relations (PR) is an essential, rapidly growing part of the communication field that plays a vital role in ensuring organizational sustainability. PR functions to build effective communication, create a positive image, establish credibility, and prevent risks or issues. In the context of vocational education, particularly the English for Business and Professional Communication Study Program at the State Polytechnic of Bengkalis, competency in PR is strongly emphasized to prepare graduates who are job-ready and globally competitive. This necessity requires learning media that are not only theoretically sound but also applicable and up-to-date with technological developments and industry demands.

Based on the results of a needs analysis conducted through interviews with the PR course lecturer in the vocational study program, it was found that the current learning methods are still conventional. Instruction is dominated by static presentations and traditional discussions, and the potential of web-based interactive technology is not fully utilized. This lack of interactive media is a significant gap because vocational students tend to have a practical, visual, and field-practice-based learning style. They require media that can simulate real-world PR situations and enhance their English for Specific Purposes (ESP) skills simultaneously. The shortage of interactive learning media potentially reduces student engagement, limits contextual learning

experiences, and hinders their preparation for meeting the demands of the PR profession in the current digital era.

Web-based interactive learning media offers an effective solution by providing flexibility, accessibility, and supporting features such as quizzes, case simulations, animated videos, and discussion forums. These features allow for a learning experience that is more engaging, contextual, and relevant to the global industry. Therefore, this research aims to bridge this gap by developing web-based interactive learning media in English for the PR course. The product is designed to enhance students' communication skills, professional ethics awareness, and workplace readiness.

This development research adopts the Research and Development (R&D) method using the ADDIE model framework (*Analyze, Design, Develop, Implement, and Evaluate*). The development is conducted through systematic stages. The final results of this study are expected to: 1) Describe the process of developing web-based interactive learning media for vocational students. 2) Determine user response (students) to the developed interactive learning media in enhancing their PR and English competencies. Practically, this research makes a significant contribution by providing an innovative learning resource for vocational students, particularly in the communication field, to sharpen the skills needed in a professional PR role, and offers guidance for other vocational education institutions in designing digital learning materials.

2. REVIEW OF LITERATURE

The Review of Literature section establishes the theoretical foundation and contextual relevance for developing web-based interactive learning media for Public Relations (PR) in vocational education. This review synthesizes previous research findings and essential concepts related to interactive multimedia, PR roles and ethics, and educational technology theories, validating the necessity for the research product.

2.1 Related Study

One study relevant to this research is the review conducted by Ostiyani (2020), titled "Review of Interactive Multimedia-Based Learning Media." This study discusses interactive multimedia as an approach that actively involves users in the learning process through multimedia technology. Interactive multimedia integrates elements like graphics, audio, video, and animation to make abstract material more visual and aligned with real-world conditions. The development process for interactive multimedia often follows the IDI model, which involves three main stages: defining, developing, and evaluating. The noted advantages of using interactive multimedia include the facilitation of an interactive learning process, ease in determining topics, and systematic control over the process. Nevertheless, challenges exist, such as high development costs and difficulties in designing computer-based learning programs. In conclusion, despite the disadvantages, interactive multimedia is regarded as an effective learning approach that can enhance students' skills, support independent learning, and improve critical thinking capabilities.

2.2 Theoretical Basis

The Role of Public Relations (PR). PR is an essential element in the rapidly growing field of communication, vital for ensuring the sustainability of organizations. PR functions to establish effective communication, create a positive image, build credibility, and prevent risks or issues. PR is required across various organizational types, including large corporations, government institutions, and non-profit organizations. Beyond conveying information, the PR role involves building long-term relationships with stakeholders and supporting the achievement of the organization's vision and mission. To fulfill these functions, modern PR practitioners must utilize technology such as websites, social media, and other digital platforms. Additionally, PR practitioners must strictly uphold professional ethics, which regulate morally responsible professional behavior.

Learning Media and Educational Technology. Learning media plays a pivotal role in education by serving as an intermediary tool between teaching materials and students. Effective use of learning media is often guided by relevant educational theories, such as the **Cognitive Load Theory (CLT)**. CLT, as emphasized by Sweller (1988), focuses on reducing working memory load to enhance learning retention, thereby highlighting the critical role of visual and auditory elements in effective instructional design. As technology continues to evolve, educators must continuously explore innovative ways to integrate media into teaching strategies to create more engaging, efficient, and accessible learning environments.

Website as a Learning Platform. A website serves as a collection of digital pages that contain various types of information, including text, animations, images, audio, and video. These pages can be readily accessed via the internet. The website platform is utilized in this study to host the learning media, offering flexibility, accessibility, and interactive features like quizzes and discussion forums.

3. METHOD

This research employed the Research and Development (R&D) method, with the core focus being the development of a specific product, namely interactive learning media. The R&D method, as stated by Sugiyono (2019), is designed to develop specific products and evaluate their effectiveness, requiring both needs analysis and effectiveness testing. The goal of this research was to evaluate the effectiveness of the developed interactive learning media for vocational Public Relations professionals.

3.1 Research Design and Procedure

The product development procedure referred to the ADDIE model, which stands for Analyze, Design, Develop, Implement, and Evaluate. This model was used as a framework to build a systematic and structured foundation for the learning product in a vocational context.

- **Analyze (Analysis):** This initial stage involved conducting a **needs analysis** to ensure the developed media was relevant to user requirements. Data was collected from students in the English for Business and Professional Communication study program and lecturers teaching the Public Relations course. The analysis focused on current learning outcomes, challenges, and preferences for interactive tools.

- **Design (Design):** In this stage, the design of the web-based interactive learning platform was conceptualized. The platform was designed to include a login system, a homepage dashboard, PR competency modules, learning materials (PDF and video formats), a section on the PR code of ethics, and interactive case studies.
- **Develop (Development):** The interactive web-based media was created based on the prepared design. Content, including PR skills, ethics, video tutorials, and case studies, was prepared. Interactive features and a user-friendly interface were integrated¹⁴. An internal trial was performed to ensure technical functionality.
- **Implement (Implementation):** The PR interactive web learning media was deployed to vocational students as a learning tool. Active monitoring of usage and feedback was conducted, and user guides were prepared to ensure effective use.
- **Evaluate (Evaluation):** The learning media was analyzed using usage data, responses, and feedback gathered during the implementation period. The goal was to measure how well the media met user needs and improved skills, with the results guiding further improvements to the content and features.

3.2 Location, Subjects, and Research Instrument

The research was conducted at State Polytechnic of Bengkalis, located in Bengkalis Regency, Riau Province, Indonesia. The research subjects were vocational students in the English for Business and Professional Communication study program, specifically those in semesters 4, 6, and 8 who had taken or were taking the Public Relations course. The research object was the interactive learning media developed for the Public Relations course. The main research instrument used was a questionnaire with a Likert scale.

3.3 Data Collection and Analysis Technique

Data collection involved three techniques:

1. **Questionnaire:** Used to gather data for the design validation stage and the final user trial, employing a **Likert scale** to measure the level of acceptance and perceived effectiveness. Responses were converted to numerical scores (1 to 4) for quantitative analysis.
2. **Interview:** Conducted with the Public Relations course lecturer to analyze needs and gather insights into expected learning outcomes and challenges.
3. **Documentation:** Used to complement data from observations and interviews, providing additional context and support for findings, such as academic papers and existing art.

The data analysis involved two techniques:

1. **Quantitative Descriptive Analysis:** Used to evaluate the feasibility and response scores from the validation and user trial questionnaires. The percentage of expert validation was calculated using the formula: $SP = (\Sigma x / N) \times 100\%$. The average validation score (P) was used to determine the qualification based on established criteria (e.g., a score of 3.26–4.00 is "Very Good, no revision needed").

2. **Descriptive Data Analysis (Qualitative):** Used to process data from the reviews of expert lecturers, media experts, and students. This involved grouping qualitative information (input, criticism, and suggestions) from the questionnaire and interview results, with the results used to revise and evaluate the learning media product.

4. RESULT & DISCUSSION

This chapter presents the findings derived from the development and subsequent evaluation of the web-based interactive learning media on Public Relations (PR) for vocational students, followed by a discussion of the results. The research employed the **Research and Development (R&D)** method, adhering to the systematic **ADDIE model** (Analysis, Design, Development, Implementation, and Evaluation) framework¹.

4.1 Result

4.1.1 Development Process

The process began with a needs analysis, which revealed that while students possess a high awareness of the importance of PR competencies, digital literacy, and professional ethics, they face challenges in understanding core PR concepts, public speaking, and linking theory with practice. The PR lecturer confirmed that the current learning process, dominated by conventional methods, required supplementation with more interactive media, such as instructional videos, quizzes, and case studies, to support practical competency development.

The Design and Development phases resulted in the creation of the web-based platform, "Public Relations Vocademy," which features a login system, a homepage dashboard, PR competency modules, learning materials (PDF and video formats), a section on the PR Code of Ethics, and interactive case studies. The content was guided by core PR references and adapted to vocational needs. Key technical steps included using Adobe Premiere Pro for editing and Google AI Studio for professional voice-over production. The final product is accessible via the web, ensuring accessibility and flexibility for vocational students.

The initial display of the media, following successful user login, is the main dashboard, as shown in Figure 1.

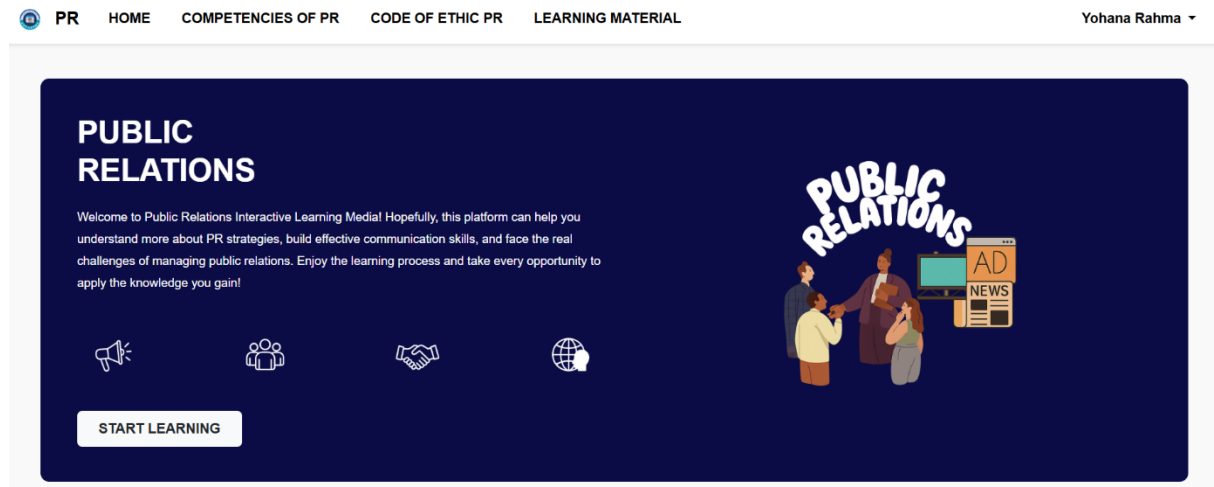


Fig. 1 Homepage Display of the 'Public Relations Vocademy' Learning Media

One of the key features is the interactive module delivery. For instance, the content regarding the PR Code of Ethics is presented in a structured and easy-to-read format, essential for developing the ethical awareness of future PR professionals (See Figure 2).

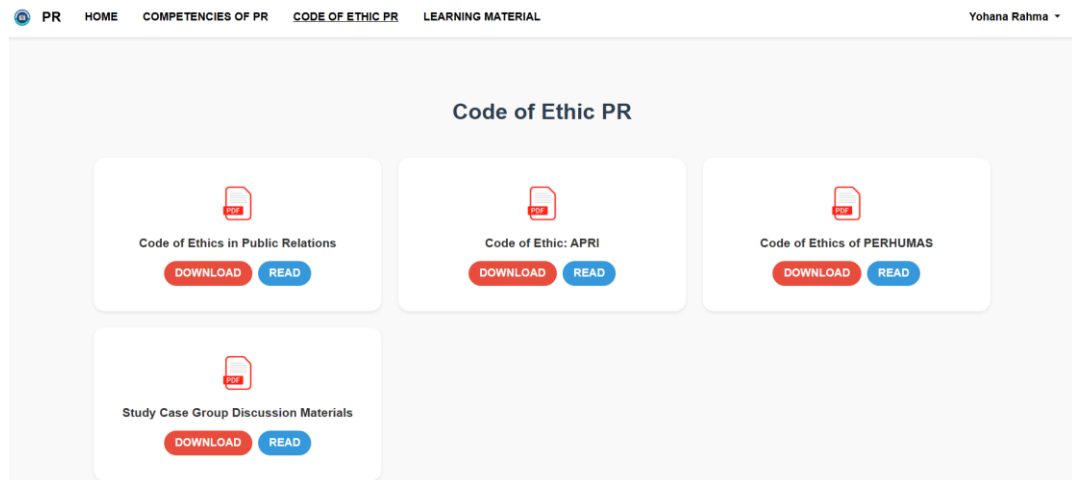


Fig. 2 Code of Ethics Module Page

Furthermore, the platform integrates practical assessment through case studies and quizzes. Figure 3 illustrates the interactive *interface* designed for quizzes, which allows students to test their understanding of PR concepts immediately after completing a module.

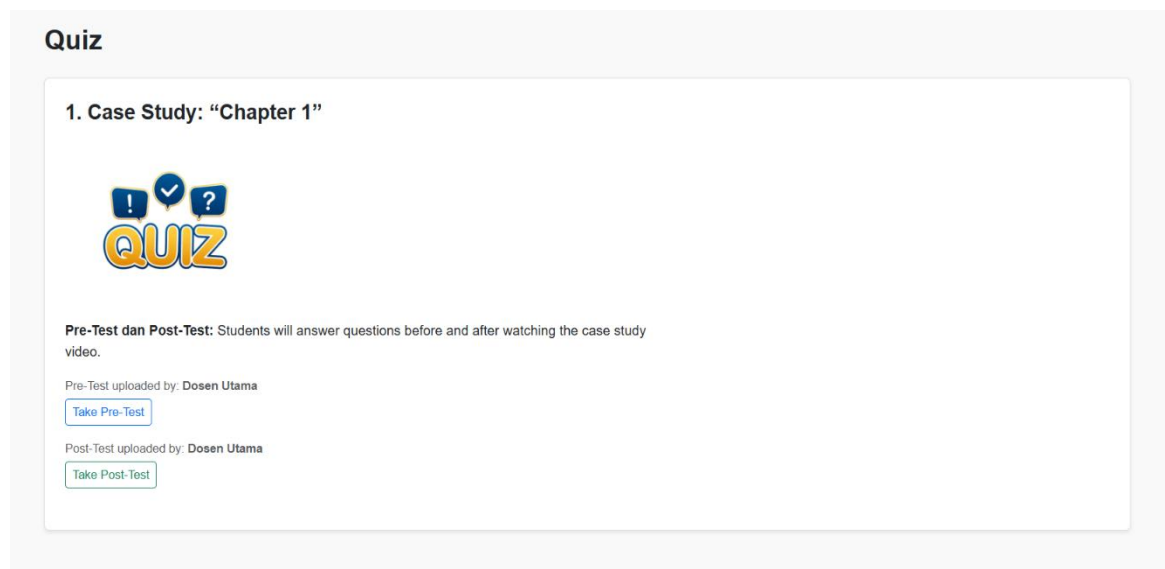


Fig. 3 Quiz Page Layout

4.1.2 Expert Assessment

The media underwent validation by two experts, ensuring both content quality and technical functionality.

- **Content Expert (PR Lecturer):** The expert confirmed the material was well-aligned with PR learning objectives, emphasizing the engaging format used for ethical content and case studies⁸. The main recommendation was to clarify the **quiz instructions**, rewriting them in clearer and more detailed English to enhance usability for students engaging in self-directed learning.
- **Media Expert (Informatics Lecturer):** The expert assessed the visual and technical aspects, rating the components as well-designed, visually appealing, and functionally

effective¹⁰. Suggestions included improving user flow, such as providing more direct access from the "**Start Learning**" button and refining the layout of the Code of Ethics section.

4.1.3 User Response and Feasibility

The student trial results, collected via a questionnaire, indicated a highly positive user response.

- **Engagement:** A high percentage of respondents (**90.9%** combined) reported feeling **actively engaged** and involved while using the media.
- **Content and Usability:** Students gave high average scores for the clarity of platform **navigation** (3.38) and the usefulness of learning **materials** (3.34). The presentation of PR ethics and codes of conduct content was also highly rated (3.31).
- **Overall Feasibility:** The quantitative analysis calculated an **Overall Average Score of 3.31**, resulting in an **overall feasibility percentage of 81.21%**. This score is categorized as "**Very Good, no revision needed**" based on the achievement level qualification criteria.

Table. 1 User Response Trial Results Summary

No.	Questionnaire Statement	Total Score Obtained (Σx)	Number of Respondents (n)	Average Score (P)	Validation Criteria
1	The media was easy to access and use.	116	33	3.52	Very good, no revision needed
2	The navigation within the platform was clear and intuitive.	108	32	3.38	Very good, no revision needed
3	The design and layout of the media were visually appealing.	102	32	3.19	Feasible, no revision needed
4	The loading speed and technical performance of the media were satisfactory.	100	32	3.13	Feasible, no revision needed

6	The learning materials helped me better understand the subject.	107	32	3.34	Very good, no revision needed
7	The media successfully integrated theory and real-world practice.	105	32	3.28	Very good, no revision needed
9	The content about Public Relations ethics and codes of conduct was clearly presented.	106	32	3.31	Very good, no revision needed
11	I felt engaged and actively involved while using the media.	110	33	3.33	Very good, no revision needed
12	Overall, I am satisfied with the quality of this web-based learning media.	110	33	3.33	Very good, no revision needed
13	I would recommend this learning media to other students.	108	33	3.27	Very good, no revision needed
TOTAL	Overall Average	1072	324	3.31	Very good, no revision needed

Now, by applying the formula:

$$P = \frac{1,072}{1,320} \times 100\%$$

$$P \approx 0.8121 \times 100\%$$

$$P \approx 81.21\%$$

Thus, the overall feasibility percentage of the web-based learning media, based on student responses, is approximately **81.21%**.

4.2 Discussion

The successful development, evidenced by the high "Very Good" feasibility rating, affirms the effectiveness of the ADDIE model in creating relevant learning tools for vocational education¹⁸¹⁸¹⁸¹⁸. The study successfully addressed the identified gap that conventional methods were inadequate for vocational PR students who require practical, interactive, and technology-driven learning tools.

The platform's design, which integrates case-based scenarios, professional ethics, and video tutorials developed under the English for Specific Purposes (ESP) approach, successfully links theoretical knowledge with practical skills, a major need highlighted by the analysis. This positive outcome is supported by the high student engagement rate (90.9%), which aligns with research suggesting that technology-integrated interactive media significantly enhances participation and understanding compared to traditional methods.

The final product, following the critical revisions based on expert feedback (e.g., clarifying quiz instructions and improving navigation), demonstrates that this web-based interactive media is a highly effective and acceptable resource. It is proven capable of bridging the theory-practice gap and supporting vocational students in meeting the professional, technological, and linguistic demands of the modern PR industry.

5. CONCLUSION

This research successfully developed a web-based interactive learning media for the Public Relations (PR) course in the English for Business and Professional Communication Study Program at the State Polytechnic of Bengkalis, utilizing the systematic framework of the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model. The developed product, "Public Relations Vocabedemy," was designed based on identified needs, integrating PR core competencies, professional ethics, and practical case-based learning through interactive features such as animated videos, quizzes, and discussion forums, all delivered in English.

The results from the expert validation and user trials confirm the product's high feasibility and effectiveness. Expert assessments yielded an overall average score of 3.31 (out of 4.00), categorized as "Very Good, no revision needed." Similarly, the student user response trial yielded an Overall Average Score of 3.31, corresponding to an 81.21% feasibility rate, also placing it in the "Very Good" category. This high acceptance and overwhelmingly positive response, particularly the 90.9% combined agreement on enhanced engagement, indicate that the media successfully meets the practical and technological learning preferences of vocational students and effectively bridges the gap between PR theory and real-world application.

In conclusion, the web-based interactive learning media on Public Relations is eligible for use in vocational education, having received excellent responses from both experts and users, and successfully fulfilling the need for a practical, engaging, and technologically relevant learning resource.

6. REFERENCES

- Abdurrahman, H., Kusumaningrum, I., Susanti, E., & Abidin, Z. (2024). Digital technology practices for vocational teachers in the industrial revolution 4.0: Mediating technology self-efficacy. *Journal of Pedagogical Research*, 8(1), 37–51.
- Aedi, N. (2010). Instrumen Penelitian dan Pengumpulan Data. Indonesia: Sarjana Skripsi Universitas Pendidikan Indonesia.
- Arief, M., & Saputra, A. (2019). Kompetensi baru public relations (PR) pada era artificial intelligence. *Jurnal Sistem Cerdas*, 2(1), 41–52. <https://doi.org/10.37396/jsc.v2i1.19>
- Ayunda, Y. S., & Fitria, Y. (2022). Desain multimedia interaktif berbantu Macromedia Flash 8 untuk siswa kelas IV sekolah dasar. *Jurnal Basicedu*, 6(2), 3086–3092. <https://doi.org/10.31004/basicedu.v6i2.1635>
- Dewi, A. P., & Qamariah, I. (2023). Needs analysis in English for specific purposes: Identifying learners' language requirements and challenges. *Jurnal Pendidikan Bahasa Inggris*, 14(1), 45–56.
- Ekayani, N. P. (2017, Maret). Pentingnya Penggunaan Media Pembelajaran Untuk Meningkatkan Prestasi Belajar Siswa. Universitas Pendidikan Ganesha.
- Hartati, N. (2013). Public Relations Kelas X Semester 2.
- Jalinus, N., & Ambiyar. (2016). *Media dan sumber pembelajaran*. Kencana.
- Karsidi, R. (2018). *Media pembelajaran inovatif dan pengembangannya*. PT. Remaja Rosdakarya.
- Kaukab, M. E. (2020). Public Relations. Jawa Tengah, Indonesia: Universitas Sains Al-Qur'an.
- Kelleher, T. (2021). Public Relations. New York, United States of America: Oxford University Press.
- Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi Republik Indonesia. (2020). *Pedoman pelatihan kompetensi SDM pendidikan tinggi vokasi dan profesi*. <https://repositori.kemendikdasmen.go.id/19046/>

- Khakim, M. Z. (2022, Desember). Peran Public Relations Dalam Perusahaan. *Research Gate*. Retrieved from https://www.researchgate.net/publication/366091323_Peran_Public_Relations_Dalam_Perusahaan
- Kurniawati, I. D., & Nita, S. (2018, Februari). Media Pembelajaran Berbasis Multimedia Interaktif untuk Meningkatkan Pemahaman Konsep Mahasiswa. *Journal of Computer and Information Technology*, 1(2). doi:10.25273/doubleclick.v1i2.1540
- Runyke, M. (2013). Peran Public Relations dalam Manajemen Event (Studi Terhadap Peran Public Relations Galeria Mall dan Plaza Ambarrukmo dalam Pengelolaan Event Tahun 2013). *Jurnal Komunikasi*, 8(1), 3.
- Muharram, N. M. (2023). Dasar-dasar Public Relations, Eureka Media Aksara.
- Ostiyani, N. R. (2020, Mei). Review Media Pembelajaran Berbasis Multimedia Interakt. Retrieved from https://www.researchgate.net/publication/341219220_Review_Media_Pembelajaran_Berbasis_Multimedia_Interaktif
- Paas, F., Renkl, A., & Sweller, J. (2019). Cognitive load theory and instructional design: Recent developments. *Educational Psychology Review*, 31(2), 261–292. <https://doi.org/10.1007/s10648-019-09467-5>
- Permatasari, A. N., Soelistiyowati, E., Suastami, I. A., & Johan, R. A. (2021). Digital Public Relations: Trend and Required Skills. *ASPIKOM*, 6(2), 10-12.
- Pinariya, J. M., & Yulianti, W. (2023). Kompetensi public relations (PR) dan kepemimpinan. Dalam *Prosiding Seminar Nasional Komunikasi dan Bisnis*. LSPR Publishing. <https://omp.lspr.edu/omp/catalog>
- Putra, G. N. (2020). *Perkembangan teori public relations dan implikasinya terhadap penelitian dan pendidikan public relations di Indonesia*.
- Putri, I. D. A. H., & Ratmini, N. K. S. (2017). Etika profesi dan profesionalisme public relations. *Pariwisata Budaya: Jurnal Ilmiah Pariwisata Agama dan Budaya Fakultas Dharma Duta*, 2(2), 44–69. <https://doi.org/10.25078/pb.v2i2.200>

- Rahmadiani, D., Sukmawati, R., & Fajriah, N. (2022). Pengembangan Media Pembelajaran Interaktif Berbasis Web Pada Materi Bahasa Inggris Kelas XI Paket C dengan Metode Drill and Practice. *Computer Science Education Journal (CSEJ)*, 2(2).
- Ronaldo, O. (2016). *Teaching material for English subject in Vocational High School*. Proceedings of ISELT FBS Universitas Negeri Padang. Retrieved from <https://ejournal.unp.ac.id/index.php/selt/article/view/6974>
- Sansini, S. O. (2020). *Analisis pengelolaan e-government melalui aplikasi pusat informasi dan koordinasi Covid-19 Provinsi Jawa Barat (Pikobar)* (Skripsi Sarjana, Universitas Komputer Indonesia). Universitas Komputer Indonesia
- Sari,, A. O., Abdilah, A., & Sunarti. (2019). *Web Programing*. Universitas Bina Sarana Informatika.
- Satira, A. U., & Hidriani, R. (2021). Peran penting public relations di era digital. *Sadida: Islamic Communications and Media Studies*, 1(2), 179–202.
- Sekaran, U., & Bougie, R. (2018). *Research methods for business: A skill-building approach* (7th ed.). Wiley.
- Sinduwiatmo, K. (2018). *Buku Ajar Manajemen Public Relations* Umsida Press.
- Sugiyono, (2019). *Metode Penelitian Kuantitatif, Kualitatif Dan R & D* . Bandung: Alfabeta.
- Tench, R., & Yeomans, L. (2017). *Exploring public relations and management communication* (4th ed.). Pearson.
- Watri, Gimin, & Suarman. (2023). *Desain Pengembangan Media Pembelajaran Interaktif Berbasis Android, Indonesia :Taman Karya*.
- Yani, I., Ratnamulyani, I., & Kusumadinata, A. (2018). Effect of Foreign Language Competency Aand Organization in Supporting Career in Public Relations. *Komunikatio*, 4(1).
- Zamsiswaya, S., Syawaluddin, & Syahrizul. (2024). Pengembangan model ADDIE (Analysis, Design, Development, Implementation, Evaluation). *Jurnal Pendidikan Tambusai*, 8(3), 46363–46369. <https://doi.org/10.29303/jptam.v8i3.22709>

Zhang, L., & Cheng, X. (2018). An empirical study on the effectiveness of component display theory in e-learning. *International Journal of Emerging Technologies in Learning*, 13(11), 123–134. <https://doi.org/10.3991/ijet.v13i11.9111>

Zuhri, S. (2007). *Etika profesi public relations*. Surabaya: UPN “Veteran” Jawa Timur.