

## **Development of a Multicultural Magazine Based on the ADDIE Model as a Learning Medium for Social Tolerance**

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**Abstract:** Multicultural education is an important aspect in fostering social tolerance in a pluralistic society. This research aims to develop an ADDIE model-based multicultural magazine as a learning medium for social tolerance, particularly in the context of culinary cultural diversity in West Kalimantan. The ADDIE model (Analyze, Design, Development, Implementation, and Evaluation) was chosen for its systematic and structured approach capable of producing quality learning products. The research method employs a Research and Development (R&D) approach with five ADDIE stages. The analysis stage includes identifying learning needs and learner characteristics. The design stage encompasses conceptualizing a magazine with multicultural content depicting three major ethnic groups in West Kalimantan: Malay, Chinese, and Dayak. The development stage produces a magazine prototype with attractive visualization and educational content. The implementation stage involves limited trials with students, and the evaluation stage measures the magazine's effectiveness in enhancing multicultural understanding. The expected outcome is an innovative learning medium capable of increasing awareness and tolerance toward cultural diversity through a culinary approach that is relevant to daily life. This magazine is expected to serve as a reference for educators in integrating multicultural values into learning.

**Keyword:** multicultural magazine, ADDIE model, social tolerance, multicultural education, learning media

## **Introduction**

Indonesia, as a multicultural nation, is characterized by a highly complex diversity encompassing ethnicity, culture, religion, and language. This diversity constitutes both a valuable national asset and a significant challenge in cultivating social cohesion and intergroup harmony (Mahfud, 2021). West Kalimantan represents one of the provinces distinguished by substantial ethnic heterogeneity, predominantly comprising three major ethnic groups—Malay, Dayak, and Chinese—who have maintained peaceful coexistence for centuries (Syarif & Rahman, 2020). Nevertheless, the potential for horizontal conflict arising from divergent cultural backgrounds persists as a considerable threat that necessitates proactive intervention through multicultural education.

Multicultural education plays a strategic role in cultivating attitudes of tolerance, mutual respect, and intercultural understanding (Banks, 2019; Gorski, 2020). However, the implementation of multicultural education in Indonesia continues to encounter various obstacles, particularly concerning the availability of learning media that are contextual, engaging, and accessible to learners (Tilaar, 2021). Existing educational media tend to be predominantly theoretical in nature and inadequately address the realities of local diversity experienced by students in their daily lives.

One viable pedagogical approach for introducing cultural diversity is through the exploration of culinary traditions and food culture. Culinary practices not only manifest the cultural identity of specific ethnic groups but also function as an effective medium for intercultural interaction and exchange (Ray, 2022). In West Kalimantan, each ethnic community possesses distinctive culinary traditions that embody their philosophical worldview, environmental adaptation strategies, and ancestral heritage. The Malay are characterized by fish-based cuisine incorporating coconut milk, the Chinese by sophisticated and diverse culinary techniques, and the Dayak by the utilization of locally sourced forest ingredients (Hidayat, 2020). The introduction of such culinary diversity can serve as a compelling entry point for learners to develop understanding and appreciation of cultural differences.

The selection of magazine-format instructional media is predicated on its inherent characteristics of flexibility, visual appeal, and capacity for diverse content development (Smaldino et al., 2019). Magazines facilitate the integration of textual information, imagery, illustrations, and content presented in an engaging manner, thereby enhancing students' learning motivation (Arsyad, 2021). Furthermore, well-designed magazines can function as autonomous learning resources that remain accessible to learners at their convenience.

In the development of instructional media, the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation) represents a widely adopted framework due to its systematic and iterative nature (Branch, 2021; Dick et al., 2020). This model ensures that each developmental phase is executed in a structured manner, progressing from needs analysis through to final product evaluation, thereby

yielding instructional media that are both pedagogically effective and aligned with predetermined learning objectives.

Based on the aforementioned rationale, this study aims to develop a multicultural magazine employing the ADDIE model framework, which features the culinary diversity of three ethnic groups in West Kalimantan as its principal content. This magazine is anticipated to serve as an innovative and effective instructional medium for enhancing students' comprehension and social tolerance toward cultural diversity within their immediate environment.

## **Methods**

This study employs a Research and Development (R&D) methodology utilizing the ADDIE model framework, which comprises five sequential phases: Analysis, Design, Development, Implementation, and Evaluation (Branch, 2021). The R&D approach was selected due to its congruence with the research objective of generating a multicultural magazine that is both pedagogically valid and effective as an instructional medium.

### **Analyze Phase**

The analysis phase was designed to identify learning needs and learner characteristics. The activities conducted encompassed: (1) curriculum analysis to determine competencies associated with multicultural education; (2) a literature review examining cultural diversity in West Kalimantan, with particular emphasis on culinary aspects; (3) a needs assessment administered through questionnaires and interviews with faculty members and students from the Social Studies Education Study Program, Faculty of Teacher Training and Education, Tanjungpura University; and (4) an examination of existing instructional media to identify their respective strengths and limitations (Borg & Gall, 2021)

### **Design Phase**

The design phase encompassed the comprehensive conceptualization of the magazine. The activities undertaken included: (1) the development of the magazine framework comprising sections such as cultural profiles, distinctive cuisine, culinary philosophy, and preparation processes; (2) the creation of storyboards for each page; (3) the determination of visual style, typography, and color schemes that reflect diversity; (4) the design of user-friendly and visually appealing layouts; and (5) the formulation of validation and product evaluation instruments (Piskurich, 2021).

### **Development Phase**

The development phase culminated in the production of a magazine prototype. The activities undertaken included: (1) content collection through field research, documentation, and interviews with cultural representatives from the three ethnic groups; (2) article composition employing communicative and pedagogically sound language; (3) photographic documentation and editing of culinary items and cultural activities; (4) graphic design utilizing Adobe InDesign and Canva software; (5) content validation by multicultural education specialists; (6) media validation by educational

technology experts; and (7) prototype revision based on validator feedback (Branch, 2021; Dick et al., 2020)

### ***Implementation Phase***

The implementation phase entailed empirical product trials with target users. The activities executed comprised: (1) a preliminary pilot study conducted with 10-15 students enrolled in the Social Studies Education Study Program to elicit initial feedback; (2) an extended field trial encompassing 30-40 students to evaluate the magazine's readability, pedagogical appeal, and instructional effectiveness; (3) systematic collection of user response data through structured questionnaires and semi-structured interviews; and (4) direct observation of the magazine's application within authentic learning environments (Morrison et al., 2022)

### ***Evaluation Phase***

The evaluation phase was designed to assess the product's effectiveness and pedagogical validity. The activities undertaken comprised: (1) analysis of expert validation data employing Likert scale metrics; (2) examination of user response data to ascertain levels of readability and instructional appeal; (3) assessment of the magazine's effectiveness in enhancing multicultural understanding through pre-test and post-test instruments; (4) final product revision informed by evaluation outcomes; and (5) development of an instructional guide for educators regarding magazine utilization (Branch, 2021).

### ***Data Collection and Analysis Techniques***

Data were collected through: (1) questionnaires for expert validation and user responses; (2) interviews with cultural representatives, validators, and users; (3) tests to measure multicultural understanding; and (4) observations of magazine utilization. Data analysis employed descriptive quantitative techniques for questionnaire and test data, and descriptive qualitative analysis for interview and observation data (Sugiyono, 2022). Product validity criteria were adapted from Akbar (2020) with the following categories: highly valid (81-100%), valid (61-80%), moderately valid (41-60%), less valid (21-40%), and invalid (0-20%).

## **Results And Discussion**

### ***Findings from Needs Analysis***

The analysis revealed that 87% of students identified a need for more contextual and engaging instructional media to facilitate comprehension of local cultural diversity. Furthermore, 72% of students acknowledged limited understanding of ethnic cultures beyond their own, particularly concerning culinary traditions and their underlying philosophical foundations. This finding underscores the critical importance of developing instructional media capable of bridging intercultural understanding gaps (Aziz & Suwignyo, 2021). Curriculum analysis demonstrated that multicultural content is integrated across several courses within the Social Studies Education Study Program; however, available instructional media remain

predominantly confined to textbooks and conventional presentations. Culinary traditions were selected as the central thematic focus due to their universal nature, observational accessibility, and potential to serve as an entry point for exploring deeper cultural values (Nugroho & Wijayanti, 2020).

### *Magazine Design and Development*

The magazine is designed under the title "Harmoni Rasa: A Multicultural Culinary Magazine of West Kalimantan", consisting of 40 A4-sized pages. Each edition focuses on one culinary theme representing each ethnic group (Malay, Chinese, and Dayak), with regular sections including: (1) History and Philosophy of the Dish; (2) Preparation Process; (3) Local Ingredients and Sustainability; (4) Stories from the Kitchen; and (5) Learning Activities. The visual design employs natural colors symbolizing the three cultures: blue for Malay, red for Chinese, and green for Dayak (Mulyatiningsih, 2021).

The magazine content was developed based on ethnographic research involving in-depth interviews with cultural figures, homemakers, and chefs representing each ethnic group. Food photography was conducted using a professional food photography approach to enhance visual appeal. Each article is accompanied by infographics that illustrate nutritional values, preparation processes, and cultural philosophies (Widodo & Wahyuni, 2023).

### *Expert Validation Results*

The validation process was conducted by two content experts (a specialist in multicultural education and a cultural anthropology expert) and two media experts (a specialist in educational technology and a graphic design expert). The results of the content expert validation indicated a percentage score of 89%, categorized as "highly feasible." The evaluated aspects included alignment with learning objectives (90%), accuracy of cultural information (92%), content depth (85%), and local contextualization (88%). The validators recommended adding an ethnic distribution map and a glossary of cultural terms.

The media expert validation resulted in a 92% score, also categorized as "highly feasible." The assessed aspects included graphic design quality (94%), text readability (90%), photo quality (95%), layout and composition (88%), and color harmony (92%). The validators suggested adjusting the font size for several captions and increasing contrast in certain design elements to improve accessibility (Wahyuni et al., 2022).

### *Product Trial Results*

A limited trial involving 15 university students demonstrated positive responses, with 85% indicating that the magazine was highly engaging and easy to understand. The students appreciated the culinary-based approach, which helped them comprehend cultural differences without feeling intimidated. Several participants

suggested the addition of QR codes linking to videos of the food preparation process to provide a more interactive learning experience (Prasetyo & Suryani, 2021).

An extended trial with 35 students yielded more comprehensive data. In terms of readability, 91% of students stated that the language used was easy to understand and the presentation flow was logical. Regarding attractiveness, 88% of students expressed interest in reading the magazine to completion and anticipated future editions. From the perspective of learning benefits, 86% of students reported an increased understanding of cultural diversity after reading the magazine.

Pre-test and post-test results indicated a significant improvement in students' multicultural understanding. The average pre-test score was 65.4, while the post-test average increased to 82.7, representing an improvement of 26.5%. A paired sample t-test revealed a significant difference ( $p < 0.05$ ) between pre-test and post-test scores, indicating that the magazine was effective as a learning medium for fostering social tolerance (Sari & Kusuma, 2023).

## **Discussion**

The development of the multicultural magazine using the ADDIE model proved effective in producing a high-quality learning medium. The systematic approach of the ADDIE model ensures that every aspect of development is carefully considered, from needs analysis to final product evaluation (Branch, 2021). This finding aligns with the study by Gustina and Harahap (2022), which demonstrated that the application of the ADDIE model in instructional media development results in products that are valid, practical, and effective.

The selection of culinary themes as the central focus of multicultural learning represents an appropriate strategy. Culinary practices are tangible and closely related to students' daily lives, making them an engaging entry point for understanding more abstract cultural aspects such as values, norms, and worldviews (Ray, 2022). This approach is consistent with the principles of contextual learning theory, which emphasize the importance of connecting learning materials to students' real-life contexts (Johnson, 2019).

An engaging and professionally designed visual layout has been shown to enhance learning motivation and student engagement. This aligns with the Dual Coding Theory, which posits that information presented both verbally and visually enhances comprehension and memory retention (Paivio, 2020). The use of high-quality photographs, infographics, and well-structured layouts supports students in processing information more effectively.

The significant improvement in students' multicultural understanding after engaging with the magazine indicates that this medium is effective as a tool for fostering social tolerance. Improved cultural understanding can reduce stereotypes and prejudice while promoting empathy and intercultural respect (Banks, 2019; Gorski, 2020). In the long term, such outcomes may contribute to the development of a more harmonious and inclusive society.

## Conclusion

This study successfully developed a multicultural magazine based on the ADDIE model that proved to be both feasible and effective as a medium for teaching social tolerance. The magazine, which highlights the culinary diversity of three major ethnic groups in West Kalimantan—Malay, Chinese, and Dayak—received excellent validation scores from experts, with 89% from material experts and 92% from media experts. User responses indicated high levels of readability, attractiveness, and perceived learning benefits, with an average score of 88%. The effectiveness test revealed a significant 26.5% increase in students' multicultural understanding, indicating that the magazine functions effectively as an instructional medium.

The ADDIE model has proven effective in developing high-quality learning media through a systematic and structured approach. The selection of culinary traditions as the central theme for multicultural learning is a strategic choice, as it closely relates to everyday life and serves as an entry point for understanding deeper cultural values. This magazine can serve as a valuable reference for educators in integrating multicultural values into the learning process and contribute to fostering a generation that is tolerant and appreciative of diversity.

Suggestions for future research include developing the magazine in an interactive digital format incorporating multimedia features such as videos, audio, and interactive quizzes. Furthermore, subsequent studies should be conducted to examine the long-term impact of the magazine's use on students' attitudes and behaviors related to social tolerance. Developing magazines with cultural themes beyond culinary traditions could also serve as an alternative approach to further enrich perspectives in multicultural learning.

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