



Article

# The ADDIE Model As An Instrument for Designing HEMA-MAGZ (Healthy Motion Magazine) Media

Yoswenita Susindra<sup>1\*</sup>, Lisus Setyowati<sup>2</sup>, Malinda Capri Nurul Satya<sup>3</sup>, Dian Kartika Sari<sup>4</sup>, Iwan Abdi Suandana<sup>5</sup>

<sup>1</sup> Health Promotion, Health Department, Politeknik Negeri Jember, Indonesia; [yoswenita@polije.ac.id](mailto:yoswenita@polije.ac.id)

<sup>2</sup> Health Promotion, Health Department, Politeknik Negeri Jember, Indonesia; [lisus@polije.ac.id](mailto:lisus@polije.ac.id)

<sup>3</sup> Health Promotion, Health Department, Politeknik Negeri Jember, Indonesia; [malinda@polije.ac.id](mailto:malinda@polije.ac.id)

<sup>4</sup> Health Promotion, Health Department, Politeknik Negeri Jember, Indonesia; [dian@polije.ac.id](mailto:dian@polije.ac.id)

<sup>5</sup> Health Promotion, Health Department, Politeknik Negeri Jember, Indonesia; [iwanabdi@polije.ac.id](mailto:iwanabdi@polije.ac.id)

\* Correspondence: [yoswenita@polije.ac.id](mailto:yoswenita@polije.ac.id)

**Abstract:** Clean and healthy living behavior (PHBS) in the work environment is an important aspect which contributes to employees welfare and organizational productivity. However, the implementation of PHBS often faces challenges such as a lack of understanding and awareness of the importance of PHBS in the workplace. This research aims to develop and implement HEMA-MAGZ (Healthy Motion Magazine) as an effective communication, information, and educational media in supporting the implementation of PHBS in the work environment of Tefa House in Health Promotion Major, Jember State Polytechnic. This research method uses the R&D (Research and Development) model to design IEC PHBS media in the Hema-Magz work environment using the ADDIE (Analyze, Design, Development, Implementation, and Evaluation). HEMA-MAGZ is designed as an interactive magazine which contains educational content regarding 10 PHBS indicators, namely (Using Personal Protective Equipment (PPE), regular exercise, not smoking, washing hands with soap in daily activity, tips for defecating and urinating in the bathroom, exterminate mosquito larvae, throwing away rubbish on the right trash bin, avoiding drugs, consuming clean and healthy food and drinks, and not spitting anywhere). The research results show that HEMA-MAGZ has succeeded increasing employees awareness and understanding of PHBS, which is reflected increasing healthy living behavior in the work environment. Furthermore, this magazine also received positive responses from employees who felt the contents are attractive and easy to understand. This research concludes if HEMA-MAGZ is an effective media in conveying information and education.

**Keywords:** Clean and healthy living behavior (PHBS), Educational media, ADDIE method.

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## 1. Introduction

The Clean and Healthy Living Behavior (PHBS) program has become one of the strategies implemented by the Ministry of Health to achieve the goals of health development through the vision and mission of a healthy Indonesia, aligned with the targets set in the Sustainable Development Goals (SDGs) 2030 [1]. The Clean and Healthy Living Behavior (PHBS) promotion program is a planned approach to prevent infectious diseases [2]. Specifically, the emphasis is on promotive efforts, such as health promotion, and preventive measures to reduce morbidity and mortality rates, thereby improving the overall public health [3].

There are 10 PHBS (Clean and Healthy Living Behavior) indicators in the workplace environment: Using Personal Protective Equipment (PPE) appropriate to the type of job [4], implementing a no-smoking policy in certain locations/ not smoking, regular and sustainable physical activity, washing hands with clean running water and soap after certain activities (eating, defecating, urinating, disposing of trash, working, etc.) [5]. Using clean bathrooms for defecating and urinating, proper waste disposal (in designated trash bins) according to waste type, controlling mosquito larvae at the workplace, consuming

clean and healthy food and beverages, avoiding and not consuming narcotics, psychotropic substances, and other addictive substances (NAPZA), and not spitting in random places [6]. A healthy lifestyle refers to a person's healthy behavior which can take the form of actions that reflect efforts to achieve an optimal level of health, either in the form of efforts to improve or maintain health [7]. However, the Clean and Healthy Living Behavior (PHB) in the campus environment is still often ignored. The impact of not implementing PHBS properly and correctly can cause infectious diseases, such as diarrhea and worms [8].

The State Polytechnic of Jember has implemented these 10 PHBS indicators well, one of which is a regular group exercise every Friday to maintain fitness. However, an issue persists regarding smoking in inappropriate places, especially in the campus canteen or working space area by both employees and students, even inside office rooms [9]. This can disrupt the comfort and health of those around, and the issue arises partly because of the lack of designated smoking areas and low individual awareness of maintaining environmental cleanliness and health [10]. Therefore, there is a need for an attractive, easy-to-understand, and accessible educational medium to raise individual awareness through Hema-Magz (Health Motion Magazine) at TEFA House of Health Promotion.

## 2. Materials and Methods

### 2.1. Design

This type of research is qualitative research using the R&D (Research and Development) model and the ADDIE method (Analyze, Design, Development, Implementation, and Evaluation). Research and Development is a research method used to produce certain products and test the effectiveness of these products [11]. The ADDIE model is a concept for developing a learning product design [12]. The research was conducted over a period of 6 months or one semester, with the research location at the State Polytechnic of Jember.

### 2.2. Participants and procedure

The population in this study consists of all employees and students at the State Polytechnic of Jember. The research sample will include a portion of the employees and students at the State Polytechnic of Jember, which will be randomly selected using a sample size formula.

### 2.3. Procedure

- Analyze

This stage is carried out to analyze the needs in the production process and gather information relating to material products [13]. This stage involves analyzing the issues related to Clean and Healthy Living Behavior in the workplace, which will later be used as content for the media.

- Design

The Design phase involves using the outputs from the Analysis phase to plan a strategy for developing the instruction, include writing a target population, description, conducting a learning analysis, writing objectives, selecting a delivery system and sequencing the instruction [14]. Designing the media involves several steps, including developing content based on the problem analysis, selecting appropriate animations, images, and videos, creating public health service announcements, determining the duration, and selecting the software to be used [15].

- Development

In the development stage there are two important goals, producing products and choosing the best product. At this stage the design from the previous stage is realized into a media form that is ready to be implemented [16]. The creation of Hema-Magz (Health Motion Magazine) involves first developing a prototype: Motion Magazine, as well as a storyboard for the content.

- Implementation

In this step, development result is applied in learning process to know its influence on the quality of learning covers the effectiveness, attractiveness, and efficiency [17]. In this implementation, a validation test is conducted with experts, specifically multimedia and content experts (PHBS in the Workplace).

- Evaluation

After all stages have been completed, the evaluation process is conducted with respondents to test the feasibility of the Hema-Magz media, determining whether the results of the media acceptance test are deemed acceptable or not. This phase measures the effectiveness and efficiency of the instruction [18].

### 3. Results and Discussion

Based on sociodemographic data, the majority of respondents are aged 25-40 years (75.7%), have a master's degree (S2) as their highest education level (54.5%), and are from the lecturer category (63.6%).

**Table 1.** The sociodemographic data of the majority of respondents

Variables	Frequency	Percentage (%)
Age		
• 18-25 years old	3	24,3
• 25-40 years old	8	75,7
Education		
• HIGH SCHOOL	1	9,1
• S1	3	27,3
• S2	6	54,5
• S3	1	9,1
Jobs		
• Student	3	9,1
• Tendik	1	27,3
• Lecturer	7	63,6

After the implementation of Hema-Magz, there was a change in attitude among the academic community, where the academic community showed a more positive attitude towards the implementation of PHBS in the workplace. Observations also showed an increase in PHBS practices in the work environment, such as the use of hand washing facilities, waste sorting, and ergonomic workspace arrangement.

The impact on the work environment with the implementation of Hema-Magz, where there is an increase in the cleanliness and comfort of the work environment as a whole. As for the response to Hema-Magz, the majority of the academic community gave positive feedback on the content and design of Hema-Magz. Certain rubrics, such as practical tips and infographics, are considered very helpful in understanding and implementing PHBS [19]. The results showed that Hema-Magz was effective as an interactive media to improve PHBS in the Tefa House of Health Promotion work

environment. The increase in knowledge, attitudes, and behavior of employees is in line with the theory of health behavior change, where information presented in an interesting and relevant manner can motivate behavior change [20].

The success of Hema-Magz can be attributed to several factors such as attractive design and content relevant to employees' needs, presentation of easy-to-understand information through infographics and practical tips, consistency in magazine distribution and promotion, and support from Tefa House of Health Promotion management in program implementation. However, the study also identified several challenges, such as the need to continuously update the content to keep it relevant and engaging, the need for integration of Hema-Magz with other health promotion programs in the workplace as well as challenges in sustaining behavior change in the long term.

**Table 2.** The results of the HEMA-MAGZ as an IEC media to improve PHBS in the Tefa House of Health Promotion work environment

Statement	Strongly Agree	Agree	Ordinary	Disagree
HEMA-MAGZ PHBS work environment is easy to use	6 (54,5 %)	5 (45,5 %)	0 (0 %)	0 (0 %)
The material on HEMA-MAGZ PHBS work environment is easy to understand	6 (54,5 %)	5 (45,5 %)	0 (0 %)	0 (0 %)
The material presented is complete	6 (54,5 %)	5 (45,5 %)	0 (0 %)	0 (0 %)
HEMA-MAGZ helps you get information about PHBS in the work environment	7 (63,7 %)	4 (36,4 %)	0 (0 %)	0 (0 %)
The language used can be understood	6 (54,5 %)	4 (36,4 %)	1 (9,1 %)	0 (0 %)
Attractive color and font selection	6 (54,5 %)	3 (27,3 %)	2 (18,2 %)	0 (0 %)
The video can be heard clearly	7 (63,7 %)	4 (36,4 %)	0 (0 %)	0 (0 %)
Audio on videos in hema-magz does not interfere with your concentration in understanding the material	7 (63,7 %)	2 (18,2 %)	1 (9,1 %)	1 (9,1 %)
The font used is easy to read	6 (54,5 %)	2 (18,2 %)	3 (27,3 %)	0 (0 %)
Hema-magz is suitable for use as educational media about PHBS in the work environment	8 (72,7 %)	3 (27,3 %)	0 (0 %)	0 (0 %)

#### 4. Conclusions

HEMA-MAGZ has proven to be an effective communication and information media for enhancing Clean and Healthy Living Behavior (PHBS) in the workplace at Tefa House of Health Promotion. This study demonstrates the potential of using creative media in workplace health promotion. Recommendations for further development include Exploring interactive digital platforms as a complement to the printed magazine, developing more participatory content, such as columns for sharing employee experiences., conducting further research to evaluate long-term effectiveness and the potential for broader implementation, and integrating HEMA-MAGZ with more comprehensive occupational health programs.

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