



Development and Implementation of Personal Hygiene Information Design for Culinary Vocational Learning

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Received: November 8, 2021; reviews: 2; accepted: June 29, 2022.

Abstract

This research aims to developing information design through visual media (poster and pocket book) on personal hygiene, determine the feasibility visual media and analyze the effectiveness of the implementation of personal hygiene information design in culinary vocational. The research subjects were students of Cullinary-FT-UNJ. The study method used Research and Development (RnD) by Dick and Carey's model development. Analysis data used two ways, qualitative and quantitative with experimental designs. The study result revealed that poster media feasible to be developed and the average level of feasibility obtained 94.6% of media experts judgment, 87.5% of material expert judgment, and 97.22% of linguists expert judgment for the very feasible category. Feasibility judgment on the pocket book media obtained an average score 89.71% of media expert's judgment, 82.64% of the material expert judgment, and 96.87% of the linguist expert judgment in the

very feasible category. The effectiveness of visual media average on 3.5 indicates that personal hygiene learning with information design was effective. Implementation appropriate information design, it can increase student knowledge about personal hygiene.

Keywords

Personal Hygiene, Information Design, Vocational Learning, Cullinary

Introduction

Personal hygiene is influenced by individual values and their habits (Potter & Perry, 2009). A person's attitude and habits of personal hygiene can be influenced by several significant factors including body image, home condition, low socioeconomic, unclean environment, changes and motivations of a person, cultural values, health habits and status, availability of food and affordability, influence from friends, teachers, and relatives, family traditions, physical condition, demographics, and knowledge of health so that the individual is prone to disease (Akmal et al., 2013).

The preliminary research conducted by Kandriasari et al. (2020) with the title of personal hygiene awareness analysis in food processing and service activities states that based on the results of observations in the laboratory environment processing Culinary Study program has not been available socialization media to remind of the importance of personal hygiene in food processing and service. Awareness of applying personal hygiene by 53.3% of food respondents has not implemented personal hygiene properly and appropriately. Correlation data shows that there is no knowledge relationship with the application of personal hygiene, this can happen because the deciding factor is the pattern of habituation carried out during processing and food service is still not maximal. Given the importance of self-hygiene in processing practices, intensive socialization is required for students in the laboratory

Educational media related to health education, especially about personal hygiene for students have not been widely developed. The media that has been developed include educational media about nutritional problems (Raaff et al., 2014), oral and dental health (Hidayat, 2014), eye health (Chen et al., 2009), the prevention of obesity (Franko et al., 2008), and asthma disease (Krishna et al., 2003). However, personal hygiene problems in students have not been developed.

Health education requires media to deliver materials to be provided, one of which uses media posters and pocket books. As for the media of posters according to Kunoli (2012), it is a depiction that is shown as a notice, warning, or taste bud that usually contains images. The use of media in the provision of health education will attract students to learn the materials provided. Interesting media will give confidence, so that cognitive, affective and psycho motor changes can be accelerated (Setiawati & Dermawan is referred to in Zulaekah (2012)). Pocketbooks proved effective in improving students' knowledge. Related research states that developed pocketbooks are feasible and effective at improving the

knowledge and practice of vegetable and fruit consumption in students (Azadirachta & Sumarmi, 2017).

Based on the results of research on personal hygiene that has been done, then in this study will be conducted research that focuses on the implementation of the design of personal hygiene information through visual media in the form of posters and pocketbooks in the vocational learning of the field of food. The latest in this research is to design information through visual media in the form of posters and pocketbooks about self-hygiene and further implement the design of the information to analyze the effectiveness of the information media developed so that it can be used periodically in the implementation of practicum in the culinary laboratory.

Literature Review

Personal Hygiene

Hygiene is a health effort by maintaining and protecting the cleanliness of its subjects such as washing hands with clean water and soap to protect hand hygiene, washing dishes for dish hygiene, disposing of damaged food parts to protect the integrity of the food as a whole. Sanitation is a disease prevention effort that focuses activities on human environmental health efforts. Sanitation is a health effort by maintaining and protecting the environmental hygiene of its subjects. For example providing clean water for the purpose of washing hands, providing a trash can to house garbage so as not to be disposed of carelessly (Depkes, 2004). According to Bloomfield in Mustikawati, "there are several factors that affect personal hygiene, namely body image, social practice, socioeconomic status, knowledge, culture, habits, and physical condition" (Mustikawati, 2013).

Hygienic food processing concerns potential hazards in food products and the regulation, design and management of food processing facilities (E. Margas & J. T. Holah, 2014). There are a number of different mechanisms of product contamination caused by personnel, therefore a number of ways in which it can be reduced and controlled are recognized in this chapter. It is advised that food production facilities must have a comprehensive hygiene policy, appropriate facilities and clothing, effective training and assurance that sound employee and visitor hygiene practices are carried out. Good hygiene policy should contain how to conduct effective training and what are the important aspects to consider during hand washing, hand drying and crossing the barrier between low- and high-risk areas. The importance of personal hygiene in food production and preparation facilities is emphasized by reference to associated legal requirements and food poisoning outbreaks caused by contamination from personnel E. Margas and J. Holah (2014). Microbiological, chemical, and physical food service hazards can be controlled by a control plan comprising of five components. These comprise of: prevent day-to-day entry of the hazards into the area in which food is being prepared; ensure the preparation infrastructure (building structure, equipment,

and utensils) cannot harbor and, for microbiological pathogens, allow the growth of hazards; ensure preparation practices limit the cross-contamination vectors that can carry hazards from sources to food product or product contact surfaces; design an effective cleaning and disinfection program that will kill or remove hazards that have entered the preparation area and provide methods of monitoring and verification that provide evidence of the success of procedures put in place to control the hazards. As it is difficult to prevent microbial and allergenic hazards entering food preparation areas (with the raw ingredients) and food preparation surfaces are often simplistic (eg, chopping boards, table tops, containers, or pots and pans) control of hazards is dependent on preparation practices to prevent cross-contamination and cleaning and disinfection to frequently remove any hazards from the food preparation areas (Holah et al., 2016).

Information Design (Visual Media)

According to Rosa and Shalahudin (2011), design or design in software development is an attempt to construct a system that provides satisfaction (possibly informal) to the specifications of functional needs, meets targets, meets needs implicitly or explicitly in terms of performance and use of resources, satisfaction of limitations on the design process in terms of cost, time and device. According to Roth et al. (2013), System Analysis And Design is "An exciting field in which analysts continually learn new techniques and approaches to develop systems more effectively and efficiently". Information system development or application development is a system approach to problem solving applied to the development of information system solutions to learning problems. Design information in personal hygiene learning using visual media.

Visual media is the type of media used only relies on the sense of vision for example print media such as books, journals, maps, images, and so on. Visually based media, this medium holds tight which is very important in the learning process. Visual media can facilitate understanding (e.g. through elaboration of structures and organizations) and strengthen memory. Visuals can also foster students' interest and can provide a connection between the content of the subject matter and the real world (Arsyad, 2011). So it can be interpreted that the design of the information is the stage to connect between the specification needs and the implementation. System design is divided into two sub-stages, namely conceptual design and physical design through visual media with the aim of facilitating the understanding of information provided about personal hygiene.

Poster

Media learning poster is one of the media consisting of a very simple symbol symbol or word, poster also as a visual combination of strong design, with color and message with the intention to capture the attention of students (Rizawayani et al., 2017). With poster learning media can provide an interesting and effective

learning nuance, in the learning of the solar system with posters can be done inside and outside the classroom, with functions that can be adapted to the needs either as supplements, complements, or substitution for learning activities in the classroom that have been used (Putri et al., 2014). Such learning can provide its own pleasure for students, so that the material that is actually difficult becomes easy for students.

Despite the fact that poster presentations are broadly favored in logical gatherings such as conference, they are now relatively being utilized as a teaching tool in a numerous field of study (Ozturk, 2017). In addition, Koshy (2011), stressed that the application of poster as learning media among large group of students were found to be effective and efficient way in developing their verbal and presentation skills. Moreover, using the poster also can change students' attitudes towards lessons in a positive way. The posters also can promoted a productive learning experience for students (Ozturk, 2017).

Pocket Book

Pocket book is a small book that has a number of pages that are not more than 30 pages back and forth containing writing accompanied by pictures and small and thin so that it can be put in a shirt pocket (BPTP Jambi, 2016). According to Sulistyani (2012), to produce a good pocket book should pay attention to several things, namely:

1. The use of terms and symbols should be consistent
2. Material written briefly and clearly
3. The writing in the contents of the pocketbook is well composed so that it can be easily understand
4. Design and colors are made interesting.
5. The number of pages should also be even to avoid the absence of blank pages.

Methodology

The development model used in this study is a model from Dick et al. (2015). The development stage of Dick & Carey was adapted into this development research into 4 stages. Researchers are trying to adapt Dick et al. (2015) learning development steps with module development steps as well as those that have been conveyed in theoretical studies. The 4 steps include:

Needs Analysis Stage

The analysis of needs will result in a theme customized to the Competency of Content and Basic Competency. In addition, this stage will determine the media to be developed.

Product Designs Stage

The product design stage includes the determination of media components, the concept of submission and organizing of materials, images, examples, and layout design of personal hygiene information. This stage will produce the initial product design in the form of media that has previously been done drafting product assessment instruments to be used as guidelines in designing products.

The Validation and Evaluation Stage

The expert validates the product so that it will produce evaluation and advice in product development. The results of evaluations and advice from experts are used to improve and revise the products that are being developed. The next set of validation and evaluation stages is the readability test stage. Products that have been declared eligible by experts are tested to Culinary Arts Vocational Education Students as potential users

Final Product Stage

This stage will produce the final product in the form of self-hygiene information design in the form of revised poster and pocketbook learning media based on assessment of the validation and evaluation stage. The final product is ready to be mass produced and disseminated as a medium in the learning process.

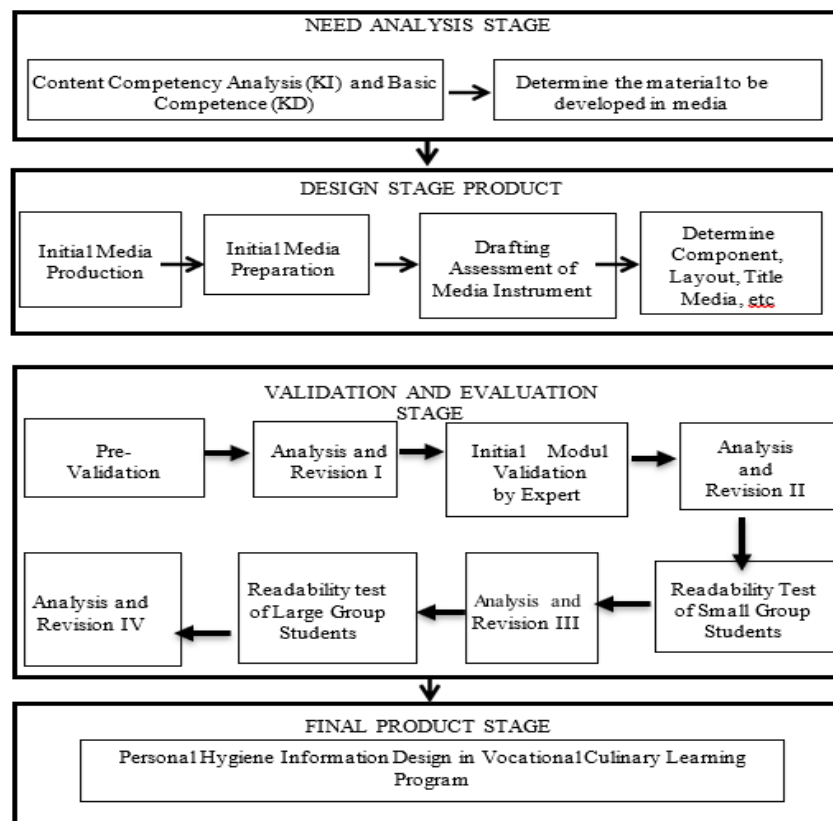


Figure 1. Media Development Procedure (Adapted from Dick & Carey)

Sites and Participant

The research was conducted at Culinary Arts Vocational Education Study Program, Faculty Of Engineering, Universitas Negeri Jakarta. The participants includes the experts and 50 students of Culinary FT-UNJ

Instrument

The instrument used was a questionnaire which included an assessment form for experts and an assessment form for students. The feasibility instrument for learning media uses a Likert scale with alternative answers: very good, good, sufficient, lacking and very lacking. In order to obtain quantitative data, the alternative answers are given a score, namely very good = 4, good = 3, less = 2, very poor = 1

Table 1: Scoring Criteria for Alternative Answer to Questionnaires

No	Alternative Question	Score	
		Positif	Negative
1	Very Agree	4	1
2	Agree	3	2
3	Disagree	2	3
4	Very disagree	1	4

To determine the interested in personal hygiene information design media, respondents were given a questionnaire. To know the final value using the average item analysis in the questionnaire, namely by calculating the feasibility value of the questionnaire for each aspects divided by the number of statements. The results of the percentage score obtained from the study are interpreted as follows:

Table 2: Learning Media Feasibility Scale

Percentage	Criteria
81%-100%	Very Feasible
61%-80%	Feasible
41%-60%	Enough
21%-40%	Less Feasible
0%-20%	Very unworthy

To see the magnitude of the increase in students' conceptual understanding, a gain test is used. The result data from the calculation of knowledge instruments before and after using personal hygiene information design media and then the students will be interpreted by using standard gain as follows (Meltzer, 2002):

Table 3: The Score of Gain

Value of N-Gain	Category
$G > 0,7$	High
$0,3 \leq g \leq 0,7$	Medium
$G < 0,3$	Low

If the learning media can improve students' conceptual understanding, the learning media said that have been tested for its effectiveness.

Data Collection Techniques

The data collection techniques that used are questionnaires and objective test to see the effectiveness of the visual media development.

Data Analysis Techniques

Research data are collected by using expert validation sheets, teacher response sheets, student response sheets and data analysis using a Likert scale. The formula for calculating the percentage is as follows:

$$xi = \frac{\sum S}{S_{max}}$$

Keterangan :

S_{max} = Maximum score

$\sum S$ = Total Score

Xi = The feasible value of each aspects

The Response questionnaire to determine the interested in personal hygiene information design media, then respondents were given a questionnaire. To know the final value of the average analysis question in the questionnaire, namely by calculating the feasibility value of the questionnaire for each aspect divided by the number of statements. The data is presented in a descriptive manner. Representation involve shows the data are presented, Creswell (2012). To Know the magnitude of the increase in students' conceptual understanding is used a gain test with the equation:

$$gain = \frac{S_{post} - S_{pre}}{100 - S_{pre}}$$

Keterangan:

g(gain) = gain

Spre = first score

Spost = last score

Results and Findings

Based on the validation result of media's expert for poster and pocketbook, can be obtained that media is feasible, with the data obtained as follow:

Table 4: The Validation Result of Media’s Expert (Poster)

Value Aspects	Percentage
Cover	87,5%
Perfomance	96,4%
Presentation	100%
Avarage	94,6%

For poster media, it can be obtained that an average score of all three aspects is 94.6%, which means that this poster media is a very feasible category from the media expert's assessment.

Table 5: The Validation Result of Media’s Expert (Pocketbook)

Value Aspect	Percentage
Pocketbook Cover Design	83,33%
Book Content Design	93,75%
Presentation Technique	91,67%
Average	89,71%

For pocketbook media, it can be obtained an average score of all three aspects is 89,71% which means that this pocketbook media is a very feasible category from the media expert's assessment.

Table 6: The Validation Result of Media’s Expert (Poster)

Aspects	Persentase	
	Expert 1	Expert 2
Contents	75%	100%
Presentation	75%	100%
Average	75%	100%
		87,5%

The validation result of the material expert for the poster media was found that the media was feasible with an average score of 87.5%, which means that the poster media is a very feasible category from the material expert's assessment.

Table 7: The Validation Result of Material’s Experts (Pocketbook Media)

Aspects	Percentage	
	Expert 1	Expert 2
Content Eligibility	62,5%	100%
Presentation Eligibility	66,67%	100%
Contextual Assessment	66,67%	100%
Avarage	65,28%	100%
		82,64%

The average score of the three aspects that given by Material's expert is 82,64% which means that pocket book media is a very feasible category The results of linguist validation for poster and pocket book are found that the media is the highest item obtained on a scale of 4 (very good).

Table 8: The Validation Result of The Linguist's Expert (Poster)

Aspects	Percentage
Language suitability	100%
Communicative	91,67%
Avarage	97,22%

The average score of the two aspects is 97,22% which means that poster media is a very feasible category from the linguist's assessment.

Table 9: The Validation Result of The Linguist's Expert (Pocketbook)

Aspects	Percentage
Language suitability	100%
Communicative	91,67%
Avarage	96,87%

The average score of the two aspects is 96.87%, which means that the pocket book media is a very feasible category from the linguist's assessment. The results of testing with user by using an instrument for assessing the media design, personal hygiene information through Google Form were given to 15 students assessing poster media and 15 students assessing pocket book media

Table 10: The Validation Result of User (Poster)

Value of Aspects	Percentage
Display	92%
Presentation	86%
Language and Picture	95%
Avarage	92%

From the three aspects of the assessment, it can be obtained that the average percentage of 92% is very feasible

Table 11: The Validation Result of User (Pocketbook)

Value of Aspects	Percentage
Material	95%
Language	92%
Interest	91%
Avarage	93%

Based on the three aspects of assessment, can be obtained on an average percentage of 93% with the category "very feasible. The descriptive results of personal hygiene knowledge by using multiple choice question instruments that are valid and then given to students before (pre test) and after (post test) using information design media (Poster and Pocket book). The activity of filling in multiple choice questions for 50 minutes in the first meeting before learning activity and in the last meeting. Each student is given a link to fill out the questionnaire. The results of pre test and post test data for poster media are as follows:

Table 12: Pre Test Data (Poster)

Range	Category	N	%
≥ 76-100 %	Good	4	16
60-75 %	Enough	9	36
≤ 60 %	Low	12	48
Total		25	100

The data shows that knowledge about personal hygiene is lacking. The average score before being given poster media was 64.46 in the sufficient category.

Table 13: Post Test Data (Media Poster)

Range	Category	N	%
≥ 76-100 %	Good	22	88
60-75 %	Enough	3	12
≤ 60 %	Low	0	0
Total		25	100

The result data of post knowledge test about personal hygiene increased after being given poster media. The average score after being given poster media is 86.63 in the good category. The prior knowledge (pre test) using pocket book media. The Data knowledge about personal hygiene is lacking. The average score before being given pocket book media was 59.29 in the low category.

The score of the pre-test was lower compared to the score of the post-test, implying the score was higher after the intervention of poster as learning media. Similarly, Primavera (2017) verified the difference after the utilization of poster to convey information about the flood disaster mitigation. The results indicated the significance of <0.005, namely 0.000 which implies there was a significant difference in the understanding about flood disaster mitigation knowledge before and after the additional media in the form of using poster. The score of the pre-test was 74 while the score of the post-test was 90.6. Likewise, Mandasari (2016), declared the effectiveness of poster as learning media in influencing the learning interest of students. It has been proven by the increase in the results of student outcome after the application of poster as learning media in the classrooms.

Furthermore, D'Angelo (2012) concluded that by the innovation in preparing posters, including by changing the display and presentation, can be a constructive model for academics. Posters will highlight communicative strategies in accordance with the objectives of the poster, in which it can be employed in various fields. In addition, this form has various advantages, including time-saving due to its explanatory feature. Students will see the images contained in the poster and conclude on their own.

Essentially, the use of poster as learning media has been informed to be effective in learning activities. It can be seen from the differences in the scores gained by students, which is 85.86 after using poster as learning media and 60.97 in the absence of learning media (Harsono et al., 2019).

Table 14: Pre Test Data (Pocketbook)

Range	Category	N	%
≥ 76-100 %	Good	2	8
60-75 %	Enough	8	32
≤ 60 %	Low	15	60
Total		25	100

Post-test data using pocketbook media, the knowledge about personal hygiene was good after being given pocket book media. The average score after being given a pocket book media was 91.54 in the good category. The advantages obtained, such as can be disseminated to a broad target, can stand a long time because it is not easily damaged and with a small size that can be carried everywhere (Sari et al., 2010). This pocketbook is indeed one type of conventional learning resource, but it can still make students interested in reading because the design is made interestingly (Meikahani & Kriswanto, 2015). In the renewal, this type of media is not a problem, because the use of this pocket book is in accordance with the circumstances of the target which does not allow the development of other, more modern media types. Situmorang and Safri (2011) also suggest that in developing new technology on a target, it is necessary to pay attention to the aspects of the availability of facilities and infrastructure needed for both utilization and maintenance.

Table 15: Post Test Data (Pocketbook)

Range	Category	N	%
≥ 76-100 %	Good	24	96
60-75 %	Enough	1	4
≤ 60 %	Low	0	0
Total		25	100

The results of testing the gain value and effectiveness of poster media, the results of the gain score on personal hygiene knowledge before and after being

applied to poster media showed a gain value of 0.62 in the range of $0.3 \leq g \leq 0.7$ which means that the increase in personal hygiene knowledge before and after using medium category poster. The effectiveness value of 3.70 indicates that the value of effectiveness > 1 means that there is a difference in effectiveness where personal hygiene learning with information design (posters) is declared effective.

Poster as a form of media are expected to enhance students' understanding of the subject matter conveyed by teachers (Ali, 2009). Poster can be highly effective in humanities sources and has been shown to improve meta cognitive practice too (Logan et al., 2015). In addition, the poster can act as a teaching aid in generating more effective learning activities and increase students' learning performance (Ogbulogo et al., 2014). Thus, using posters as a learning platform to deliver the knowledge to students can be an alternative to improving the quality of the learning process.

Posters as a form of media are expected to enhance students' understanding of the subject matter conveyed by teachers (Ali, 2009). Poster can highly effective in humanities sources and have been shown to improve metacognitive practice too (Logan et al., 2015). In addition, the poster can act as a teaching aids in generating more effective learning activities and increase students learning performance (Ogbulogo et al., 2014). Thus, using poster as learning platform to deliver the knowledge to students can be an alternative to improving the quality of the learning process. Al-Samiraa'I in Mahnun (2012) stated that the comprehension level of knowledge through the sense of sight is approximately 75%, the sense of hearing is 13%, while the rest (taste, touch, smell and knowledge) is 12%. Images in poster as learning media have significant impact, even three times better than others. Moreover, the combination of images and text will create a stronger impact. The combination of texts and images in learning media platform is estimated and proven to provide an important role in supporting the effectiveness of learning that delivered by the teacher (Mahnun, 2012). Larasati and Harsono (2017), reported that the right, suitable and attractive learning media selection is crucial to ensure the learning system works effectively and efficiently. In the study conducted by Larasati and Harsono (2017), revealed the difference between the pre-test before the intervention of poster media (55.69) and the post-test (85.21), which implies the effectiveness of poster as learning media.

Poster is an information channel or tool that persuades, suggests, or introduces something to people who view it (Rahmaniati, 2015). Hartini (2017), defines poster is made with a large size to be displayed to the public and to attract their attention by combining images, colours, and words. It is a potential learning media since it integrates theory, sketches, images, graphics, and other ideas with attractive design.

The results of gain test value and effectiveness of the pocketbook media, the results of the gain score on personal hygiene knowledge before and after the implementation of the pocket book media showed that the gain value was 0.79 in the range $G > 0.7$ which means that the increase in personal hygiene knowledge

before and after using book media pocket with high category 7 means increasing personal hygiene knowledge before and after using pocket book media with high category. The effectiveness value of 3.27 indicates that the effectiveness value is > 1 , so there is a difference in the effectiveness of personal hygiene learning with information design (pocket book) declared effective. Based on result of Research by Faris Nur Khulafah, the analysis of N-gain values obtained 0:52 that is between the range from 0.3 to 0.7 which means that the entry in the medium category (Agustini, 2010). It can be concluded that the pocket books give positive effect on psychomotor skill in class V and effectively used in learning to make batik jumpuit on the subjects of Multicultural Arts and Scarf (Khulafa & Santosa, 2018).

The research was supported by several studies that has been done before, such as Agustin (2013) shows that there is a significant difference between the use of pocket book and without pocket book to the learning outcomes of students in the physics of matter kinematics Circular Motion class X. Furthermore, a research conducted by Ami (2012), the research shows that science pocket book eligible for use in learning, because research shows that the pocket book material Human Excretion system had good category. Other than that, the results showed that pocket book : 'BRANO' which was developed based on the needs of students and teachers have met the eligibility, suitability and enforceability according to expert groups and builder group lesson (Putra et al., 2016). Other research studies that support this is carried out by Asward and Lina (2015), the study results conclude that pocket book with global warming materials are developed and effectively used as learning materials.

Therefore, the information design through posters and pocket books can increase student knowledge in the application of personal hygiene in food processing laboratories. By this study, it was suggested to do lot of improvements need to be made in order to improve the awareness of food handlers towards food safety, hygiene, sanitation and cleanliness. Also arrangement of regular health check-up or periodic health related training provide better and much healthier environment for food preparation, processing and services. Continuous education and training should strengthen the knowledge of food handlers for minimizing food borne hazards (Prabhakar in Rahman et al. (2018)). To maintain personal hygiene in everyday life must always try to prevent the arrival of diseases that can interfere with health (Murray et al., 1996; Pruss-Ustun et al., 2008). Personal hygiene is a procedure to maintain cleanliness in the management of safe and healthy food. Cleaning procedures are clean behaviors to prevent contamination of the food being handled. The process that is important for food processing workers is hand washing, hygiene and personal health (Green & Selman, 2005; Marriott et al., 2006). Education is a factor behind the knowledge and then knowledge influences behavior. Training for food workers and consumers regarding hygienic ways of handling food is a very decisive element in preventing foodborne diseases (Griffith et al., 2010; Jouve et al., 2010; Kouabenan & Ngueutsa, 2016).

Findings

Researchers develop personal hygiene information designs in the form of visual media (posters and pocket books). The initial design of the poster product was done using a camera and the CorelDRAW 2019 application then printed with A2 size art carton (42 cm x 59.4 cm) and equipped with a frame. Meanwhile, the pocket book product was done using the Microsoft Office Publisher 2010 program and then printed using Dragg paper A4 80 gram, A6 size (A6: 10.5 cm x 12.4 cm). The media poster developed contains the application of personal hygiene before starting the practicum. The Poster provides true and false information about what to apply in Personal Hygiene. After doing improvements for the advice given by given by media, material and language experts, the results of poster media that are suitable for research are obtained as follows:

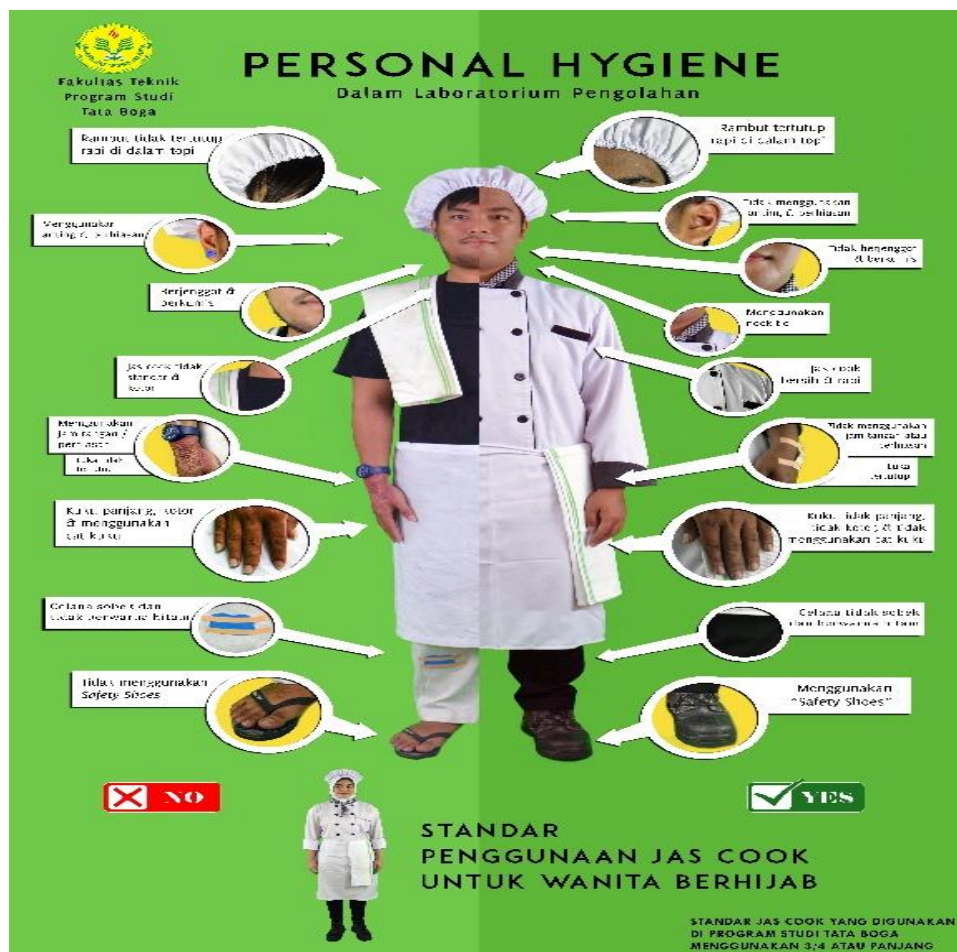


Figure 2. Personal Hygiene Poster

The pocketbook developed by the researcher contains are :

1). Introduction Page

The contains are acknowledgement and table of contents which aims to provide a background for media preparation and to facilitate the search for material contained in books.



Figure 3. Introduction Page of Pocket Book

2). The contents of the pocket book

The form of materials that include the understanding of personal hygiene description, personal hygiene equipment in the processing laboratory, the proper application of personal hygiene and the wrong in the processing laboratory.

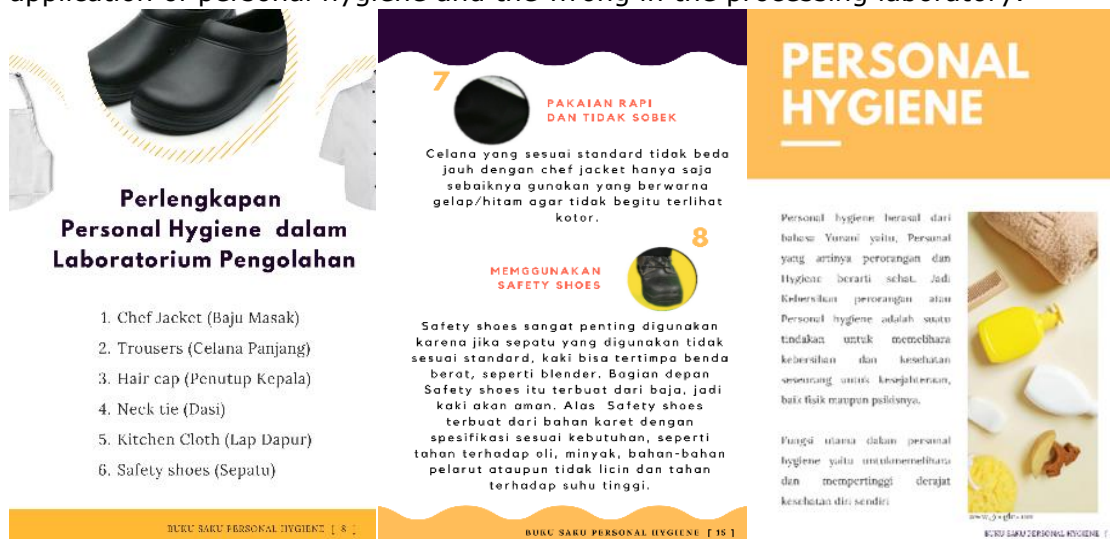


Figure 4. Content Page of Pocketbook

3). Pocketbook Cover Design

Contains about References and Back Cover that clarified in writing "FAKULTAS TAKNIK PROGRAM STUDI PENDIDIKAN TATA BOGA TAHUN 2020" and accompanied by logo Universitas Negeri Jakarta



Figure 5. Pocketbook Cover

Conclusion

Feasibility test results based on an average media expert rating of 94.6%, material experts at 87.5% and Language experts of 97.22% so that it can be summed up based on the value obtained by the poster media in the category is feasible. Feasibility test results on personal hygiene pocketbook media obtained an average value of 89.71% media experts, material experts 82.64% language experts by 96.87% so it can be concluded that pocketbook media in the category is very feasible. The average value after being given a media poster of 86.63 is in the good category. The average value after given the media pocketbook is 91.54 being in the good category. The effectiveness value of > 1 personal hygiene study with information design (poster) is declared effective and the effectiveness value of 3.27 indicates that the effectiveness value of > 1 personal hygiene study with information design (pocketbook) is declared effective.

Acknowledgement

First of all, the biggest thankful appreciation is certainly to Allah SWT for giving the author a blessing everyday that enable the author to finish this article. The great thankfulness also to the Faculty of Engineering who has funded the research through the BLU fund of faculty competitive research grants. Moreover, The author would like to say thank you to their colleagues for their contribution and support for this research. The last but not the least, Special appreciation to all reviewers who gave valuable inputs to the manuscript and helped in completing the paper.

References and Notes

- Agustin, V. N. (2013). Peningkatan aktivitas dan hasil belajar siswa melalui model problem based learning (PBL). *Journal of Elementary Education*, 2(1), 39-43. <https://journal.unnes.ac.id/sju/index.php/jee/article/view/2069>
- Agustini, F. (2010). *Manajemen Sumber Daya Manusia Lanjutan*. Medan: Madenatera.
- Akmal, S. C., Semiarty, R., & Gayatri, G. (2013). Hubungan personal hygiene dengan kejadian skabies di pondok pendidikan islam darul ulum, palarik air pacah, kecamatan koto tengah padang tahun 2013. *Jurnal Kesehatan Andalas*, 2(3), 164-167. <https://doi.org/10.25077/jka.v2i3.159>
- Ali, M. (2009). Pengembangan media pembelajaran interaktif mata kuliah medan elektromagnetik. *Jurnal edukasi elektro*, 5(1), 11-18. <https://www.academia.edu/download/30480883/348-1144-1-PB.pdf>
- Ami, M. S. (2012). Pengembangan buku saku materi sistem ekskresi manusia di SMA/MA Kelas XI. *BioEdu*, 1(2), 10-13. <https://jurnalmahasiswa.unesa.ac.id/index.php/1/article/view/439>
- Arsyad, A. (2011). *Media pembelajaran*. Jakarta: PT Raja grafindo persada. <https://www.academia.edu/download/30484693/jiptiain--umarhadini-8584-5-baii.pdf>
- Asward, I., & Lina, L. (2015). Pengaruh mekanisme corporate governance terhadap manajemen laba dengan pendekatan conditional revenue model. *Journal of Technology Management*, 14(1), 15-34. <https://dx.doi.org/10.12695/jmt.2015.14.1.2>
- Azadirachta, F. L., & Sumarmi, S. (2017). Pendidikan Gizi menggunakan media buku saku meningkatkan pengetahuan dan praktik konsumsi sayur dan buah pada siswa sekolah dasar. *Media Gizi Indonesia*, 12(2), 107-115. <https://doi.org/10.20473/mgi.v12i2.107-115>
- BPTP Jambi. (2016). *Booklet dan Buku Saku*. Badan Litbang Pertanian. <http://jambi.litbang.pertanian.go.id/ind/index.php/publikasi/media-cetak/booklet>
- Chen, W.-L., Lin, C.-T., Lin, N.-T., Tu, I.-H., Li, J.-W., Chow, L.-P., Liu, K.-R., & Hu, F.-R. (2009). Subconjunctival injection of bevacizumab (avastin) on corneal neovascularization in different rabbit models of corneal angiogenesis. *Investigative ophthalmology & visual science*, 50(4), 1659-1665. <https://doi.org/10.1167/iovs.08-1997>
- Creswell, J. W. (2012). *Educational Research: Planning Cconducting and Evaluating Quantitative and Qualitative Research* (4th ed.). Boston: Pearson. <http://hdl.handle.net/123456789/1093>
- D'Angelo, L. (2012). From posters to e-posters: the evolution of a genre. *Language*, 4, 46-54. <http://hdl.handle.net/10446/75257>
- Depkes, R. (2004). *Kebijakan dasar pusat kesehatan masyarakat*. Jakarta: Depkes.
- Dick, W., Carey, L., & Carey, J. (2015). *The systematic design of instruction* (5th ed.). Unites States of America: Pearson. <https://www.pearson.com/en-us/subject-catalog/p/systematic-design-of-instruction-the/P200000000343/9780132824859>

- Franko, D., Striegel-Moore, R., Thompson, D., Affenito, S., Schreiber, G., Daniels, S., & Crawford, P. (2008). The relationship between meal frequency and body mass index in black and white adolescent girls: more is less. *International Journal of Obesity*, 32(1), 23-29.
- Green, L. R., & Selman, C. (2005). Factors impacting food workers' and managers' safe food preparation practices: A qualitative study. *Food Protection Trends*, 25(12), 981-990. https://www.cdc.gov/NCEH/ehs/EHSNet/Docs/Factors_Impacting_Food_Workers_Food_Prep_FPT_journal.pdf
- Griffith, C., Livesey, K., & Clayton, D. (2010). Food safety culture: the evolution of an emerging risk factor? *British Food Journal*, 112(4), 426-438. <https://doi.org/10.1108/00070701011034439>
- Harsono, Rosanti, S. Y., & Seman, N. A. A. (2019). The effectiveness of posters as a learning media to improve student learning quality. *The Journal of Social Sciences Research*, (1), 97-103. [https://www.arpgweb.com/pdf-files/spi5.jssr5\(4\)757-763.pdf](https://www.arpgweb.com/pdf-files/spi5.jssr5(4)757-763.pdf)
- Hartini, S. (2017). Pengembangan Media Pembelajaran IPS Menggunakan Poster Infografis dengan Materi Potensi dan Sebaran Sumber Daya Alam Indonesia untuk Siswa SMP Kelas VII. *Social Studies*, 6(6), 694-707. <https://journal.student.uny.ac.id/ojs/index.php/social-studies/article/view/9003/8655>
- Hidayat, A. (2014). *Metode penelitian kebidanan dan teknik analisis data*. Jakarta: Salemba Medika. http://repo.unikadelasalle.ac.id/index.php?p=show_detail&id=10573&keywords=
- Holah, J., West, S., & McHardy, M. (2016). Hygiene Requirements in Food Service. In *Handbook of Hygiene Control in the Food Industry* (pp. 205-219). Elsevier. <https://doi.org/10.1016/B978-0-08-100155-4.00015-7>
- Jouve, J.-L., Aagaard-Hansen, J., & Aidara-Kane, A. (2010). Food safety: equity and social determinants. In *Equity, social determinants and public health programmes* (pp. 95-114). World Health Organization. https://www.who.int/social_determinants/tools/EquitySDandPH_eng.pdf#page=105
- Kandriasari, A., Sachriani, M. D. I., Riska, N., & Yulianti, Y. (2020). Analisis Kesadaran Personal Hygiene Dalam Kegiatan Pengolahan Dan Pelayanan Hidangan. In *Prosiding SNP2M (Seminar Nasional Penelitian dan Pengabdian Masyarakat) UNIM* (pp. 10-15). <http://snp2m.unim.ac.id/index.php/snp2m/article/view/370>
- Khulafa, F., & Santosa, P. (2018). The developmet of pocket book as learning media to make batik jumput in multicultural arts and scarf subject. *Asia Pacific Journal of Contemporary Education and Communication Technology*, 4(1), 51-57. https://apiar.org.au/wp-content/uploads/2018/01/6_APJCECT_v4i1_2018_Edu-51-57.pdf
- Koshy, S. (2011). Poster presentation: An effective assessment for large communication classes. *Beyond Transmission: Innovations in University Teaching*. <https://ro.uow.edu.au/dubaipapers/167/>

- Kouabenan, D. R., & Ngueutsa, R. (2016). Control beliefs and engagement in hygienic and safety behaviours: the case of foodborne illness. *International journal of environmental health research*, 26(4), 381-395. <https://doi.org/10.1080/09603123.2015.1119807>
- Krishna, S., Francisco, B. D., Balas, E. A., Konig, P., Graff, G. R., & Madsen, R. W. (2003). Internet-enabled interactive multimedia asthma education program: a randomized trial. *Pediatrics*, 111(3), 503-510. <https://doi.org/10.1542/peds.111.3.503>
- Kunoli, F. (2012). *Asuhan keperawatan penyakit tropis*. Jakarta: Perpustakaan Nasional Katalog Dalam Terbitan (KDT).
- Larasati, C., & Harsono, S. (2017). *Pengembangan Media Pembelajaran Poster Untuk Meningkatkan Pengetahuan Siswa Terhadap Bencana Gempa Bumi Di Smp Negeri 3 Gantiwarno*. (Doctoral dissertation). Universitas Muhammadiyah Surakarta. <http://eprints.ums.ac.id/id/eprint/55608>
- Logan, R. W., Edgar, N., Gillman, A. G., Hoffman, D., Zhu, X., & McClung, C. A. (2015). Chronic stress induces brain region-specific alterations of molecular rhythms that correlate with depression-like behavior in mice. *Biological psychiatry*, 78(4), 249-258. <https://doi.org/10.1016%2Fj.biopsych.2015.01.011>
- Mahnun, N. (2012). Media pembelajaran (kajian terhadap langkah-langkah pemilihan media dan implementasinya dalam pembelajaran). *Jurnal pemikiran islam*, 37(1), 27-35. <http://ejournal.uin-suska.ac.id/index.php/Anida/article/view/310>
- Mandasari, G. T. J. (2016). *Penggunaan media poster pada mata pelajaran pendidikan agama islam di kelas IV SD inpres bilonga kecamatan bontonompo kabupaten gowa*. (Doctoral dissertation). Universitas Islam Negeri Alauddin Makassar. <http://repositori.uin-alauddin.ac.id/id/eprint/8012>
- Margas, E., & Holah, J. (2014). Personal hygiene in the food industry. In *Hygiene in Food Processing* (pp. 408-440). Elsevier. <https://doi.org/10.1533/9780857098634.3.408>
- Margas, E., & Holah, J. T. (2014). 12 - Personal hygiene in the food industry. In H. L. M. Lelieveld, J. T. Holah, & D. Napper (Eds.), *Hygiene in Food Processing (Second Edition)* (pp. 408-440). Woodhead Publishing. <https://doi.org/10.1533/9780857098634.3.408>
- Marriott, N. G., Gravani, R. B., & Schilling, M. W. (2006). *Principles of food sanitation*. Springer. <https://doi.org/10.1007/978-3-319-67166-6>
- Meikahani, R., & Kriswanto, E. S. (2015). Pengembangan buku saku pengenalan pertolongan dan perawatan cedera olahraga untuk siswa sekolah menengah pertama. *Jurnal Pendidikan Jasmani Indonesia*, 11(1). <https://journal.uny.ac.id/index.php/jpji/article/viewFile/8166/6837>
- Meltzer, D. E. (2002). The relationship between mathematics preparation and conceptual learning gains in physics: A possible "hidden variable" in diagnostic pretest scores. *American journal of physics*, 70(12), 1259-1268. <http://www.physicseducation.net/docs/AJP-Dec-2002-Vol.70-1259-1268.pdf>

- Murray, C. J., Lopez, A. D., & Organization, W. H. (1996). *The global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020: summary*. World Health Organization.
https://apps.who.int/iris/bitstream/handle/10665/41864/0965546608_eng.pdf
- Mustikawati, I. S. (2013). Perilaku personal hygiene pada pemulung di TPA kedaung wetan tangerang. *Forum Ilmiah*, 10(1), 27-35.
<https://digilib.esaunggul.ac.id/public/UEU-Journal-4522-Intan.pdf>
- Ogbulogo, C., George, T., & Olukanni, D. (2014). Teaching aids, quality delivery, and effective learning outcomes in a Nigerian private university. In *EDULEARN14 Proceedings* (pp. 61-68). IATED.
<https://library.iated.org/view/OGBULOGO2014TEA>
- Ozturk, O. (2017). Using Poster Presentations to Facilitate Preservice EFL Teacher Learning. *International Journal of Language Academic*, 5(4), 401-415.
<http://dx.doi.org/10.18033/ijla.3719>
- Potter, P. A., & Perry, A. G. (2009). *Fundamental keperawatan* (7th ed.). Jakarta: Salemba Medika.
- Primavera, A. (2017). *Pengembangan Media Poster Sebagai Pembelajaran Mitigasi Bencana Banjir Pada Siswa Ekstrakurikuler Ssb Di Smp N 1 Karangdowo, Klaten*. (Doctoral dissertation). Universitas Muhammadiyah Surakarta.
<http://eprints.ums.ac.id/id/eprint/56783>
- Pruss-Ustun, A., Bos, R., Gore, F., & Bartram, J. (2008). *Safer water, better health: costs, benefits and sustainability of interventions to protect and promote health*. Geneva: World Health Organization.
- Putra, A. B. N. R., Irdianto, W., Mukhadis, A., & Suhartadi, S. (2016). Pocket book learning: Learning methods to train students productive and creative using 'BRANO' as an effective learning recorder. *AIP Conference Proceedings*, 1778(1), 030034. <https://doi.org/10.1063/1.4965768>
- Putri, N. W. M. A., Jampel, I. N., & Suartama, I. K. (2014). Pengembangan E-Learning Berbasis Schoology pada Mata Pelajaran IPA Kelas VIII di SMP Negeri 1 Seririt. *Jurnal Edutech Undiksha*, 2(1). <https://doi.org/10.23887/jeu.v2i1.3796>
- Raaff, C., Glazebrook, C., & Wharrad, H. (2014). A systematic review of interactive multimedia interventions to promote children's communication with health professionals: implications for communicating with overweight children. *BMC medical informatics and decision making*, 14(1), 1-21.
<https://doi.org/10.1186/1472-6947-14-8>
- Rahman, A., Tosepu, R., Karimuna, S. R., Yusran, S., Zainuddin, A., & Junaid, J. (2018). Personal hygiene, sanitation and food safety knowledge of food workers at the university canteen in Indonesia. *Public Health of Indonesia*, 4(4), 154-161. <https://doi.org/10.36685/phi.v4i4.219>
- Rahmaniati, R. (2015). Penggunaan media poster untuk meningkatkan hasil belajar IPA peserta didik kelas VB SDN 6 Langkai Palangka Raya. *Pedagogik Jurnal Pendidikan*, 10(2), 59-64.

- Rizawayani, R., Sari, S. A., & Safitri, R. (2017). Pengembangan media poster pada materi struktur atom di SMA Negeri 12 Banda Aceh. *Jurnal Pendidikan Sains Indonesia*, 5(1), 127-133. <http://www.e-repository.unsyiah.ac.id/JPSI/article/view/8435>
- Rosa, A. S., & Shalahudin, M. (2011). *Modul Pembelajaran Rekayasa Perangkat Lunak : Terstruktur dan Beorientasi Objek*. Bandung Modula. <https://onesearch.id/Record/IOS2883.JABAR000000000022040>
- Roth, R. M., Dennis, A., & Wixom, B. H. (2013). *Systems Analysis And Design*. Singapore: John Wiley & Sons, Inc.
- Sari, N., Suryandari, A., & Santjaka, A. (2010). Studi Efektifitas Buku Saku terhadap Skor Pengetahuan Penyakit Menular Seksual pada Siswa SMA negeri Banyumas. *Bidan Prada: Jurnal Ilmiah Kebidanan*, 1, 28-36. <https://ojs.stikesylpp.ac.id/index.php/JBP/article/view/38>
- Situmorang, S. H., & Safri, M. (2011). Urgensi Pengembangan Teknologi Tepat Guna untuk UMKM di Kota Medan. *Jurnal Ekonom*, 14(4), 197-208.
- Sulistiyani, N. H. D. (2012). Perbedaan hasil belajar siswa antara menggunakan media pocket book dan tanpa pocket book pada materi kinematika gerak melingkar kelas X. *Jurnal Pendidikan Fisika*, 1(1), 164-172. <https://digilib.uns.ac.id/dokumen/detail/29364>
- Zulaekah, S. (2012). Pendidikan gizi dengan media booklet terhadap pengetahuan gizi. *KEMAS: Jurnal Kesehatan Masyarakat*, 7(2), 127-133. <https://journal.unnes.ac.id/nju/index.php/kemas/article/view/2808>