

FRESH ONLINE TRAINING (FOT) PLAN AND DESIGN MODEL FOR BLACK SOLDIER FLY LEARNING

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ABSTRACT

Fresh Online Training (FOT) is designed as a platform that educates people in Indonesia. Black Soldier Fly learning is a solution to reduce organic waste during the Covid-19 pandemic in this platform. This study aims to plan and design a model for Black Soldier Fly learning. Based on the research model, there are three steps: analyze customer requirements, plan business model, and design objectives learning. In this study, sample data using a questionnaire to meet customer needs toward online training. Furthermore, Business Model Canvas is a management strategy to visualize business concepts. In addition, ADDIE Model is a guideline in planning, developing, and facilitating online learning. The utilization of the Moodle platform is used to support and build FOT. The platform consists of exciting and valuable features to learn more flexibly and effectively using computers and the internet. By this study, FOT provides new ideas for online training, encourages business strategies in the field of environment, and improves quality to arrange and develop module learning that other researchers have never done.

Keywords: *Fresh Online Training (FOT), Black Soldier Fly, Business Model Canvas, ADDIE Model, Moodle.*

1. INTRODUCTION

Waste production in Indonesia every year always increases. The Minister of Environment and Forestry conveys this statement, Siti Nurbaya Bakar proverb, that the waste stockpile in Indonesia in 2020 was 67.8 million tons [1]. This high number of waste production certainly indicates the need to evaluate and review existing waste management systems and methods[2].

Waste management in urban areas is one of the most pressing and severe environmental problems governments face in low and middle-income countries. This increasingly formidable challenge will continue to increase due to urbanization and proliferates in the urban population [3].

Currently, the Government carries out the conventional waste management process by taking the existing waste at designated waste disposal points. Then the garbage officer will take the waste to the Final Disposal Site. At the Final Disposal Site, waste will be sorted, recycled, composted, or stockpiled. In addition to the conventional waste management system, some communities and communities have started to manage their waste

independently with various modern-style waste management innovations[4]. Modern waste management systems are oriented towards the paradigm of utilizing waste to be reused or used as potential to generate money. One example of current modern waste management system innovation is the Waste Bank.

The waste bank is an institution engaged in the waste management business. The waste bank activities include collecting waste separated by type to distribute to a recycling plant or waste enumerator[5]. The Waste Bank has increased in quantity every year with good business potential in the future. The Government supports the innovation as stated in Government Regulation of the Republic Indonesia number 81 of 2012 concerning the management of household waste and similar household waste, which explains that waste is defined as something of value through the application of the 3R (reduce-reuse-recycle) [6]. Reusing waste as an alternative raw material or recycling can grow the people's economy (circular economy) from waste management.

The development of information technology is growing so fast that it has the potential and opportunities to increase business

productivity, such as the Waste Bank. According to Indonesia Internet Service Provider Association, a survey shows that internet users in Indonesia in 2020 will be 196.7 million people. This number increased by 23.5 million or 8.9% compared to last year [7].

The development of web and mobile-based internet has helped the needs of the Waste Bank in developing an application system for waste reduction in Indonesia, especially in urban areas. Garbage will increase every year because human development is increasing, and more people are affecting more waste will be produced. Public knowledge about Waste Bank is minimal and not well distributed. The community needs to know the current problems and conditions of waste management.

In this paper, with the existence of a Waste Bank that continues to grow, it is necessary to design-related online training. The company hopes that the community will be aware of the importance of the environment and contribute to waste management. One of the innovations in waste management is the use of Black Soldier Fly technology. Online training is beneficial for people who have started processing organic waste with Black Soldier Fly technology and are interested in getting other views on processing it.

2. LITERATURE REVIEW

2.1 Online Training

Online training is the art of transferring knowledge through the internet connection using a laptop or gadget, from anywhere globally to targeted audiences who choose to learn a particular subject. There are two kinds of online training courses as free and paid versions.

In online training, and environment create where the employees can acquire or learn attitudes, abilities, specific skills, knowledge, and behaviours related to their skills. Training usually focuses on providing employees with specific skills to be used immediately for training carrying out their work and helping them correct weaknesses in their performance. Training has various career benefits long-term for employees[8].

Online training is like taking time during coffee breaks at work, sitting on the couch, taking online courses instead of watching television, and listening to audio or video files while travelling to and from work. These are some of the ways online training courses can take. Online training ensures

flexibility in terms of time and effort. The online training activity is meeting different people, and joining forums does not stop at social media sites. People with the same interests or learning goals build a community that interacts effectively, exchanging questions, doubts, and ideas. Participating in such groups may offer more detailed insight into the course is leading to[9].

2.2 Black Soldier Fly (BSF)

Black Soldier Fly (BSF), the black soldier fly, is an insect whose characteristics and nutrient content are studied. This fly originated in America and subsequently spread to subtropical and tropical regions of the world. Indonesia's tropical climate conditions are ideal for BSF cultivation[10]. In terms of cultivation, BSF is straightforward to develop on a mass-production scale and does not require special equipment. The final stage of larvae can migrate from the growth medium, making it easier to harvest. In addition, this fly is not a pest fly and is not found in densely populated settlements, so it is relatively safe from a human health perspective[11].

The utilization of BSF larvae as animal feed has direct and indirect advantages[11]. BSF larvae can decompose organic waste, including livestock manure, effectively because the larvae are classified as detritivores, which eat plants and animals that have undergone decay. Compared to larvae from the Muscidae and Calliphoridae fly families, these larvae do not cause a strong odour in the process of breaking down organic waste so that they can be produced in homes or settlements[12]. The ability of larvae to decompose these organic compounds is reported to be related to the content of several bacteria in their digestive system (Dong et al. 2009; Yu et al. 2011). Diener et al. (2011) also reported that BSF larvae were able to decompose up to 68% of urban waste, 50% for chicken manure, 39% for pig manure and 25% for a mixture of chicken and cow manure, while according to Zakova & Barkovcova (2013), BSF larvae were able to decompose plant waste up to 66.53%. This statement follows the opinion of Banks et al. (2014), which showed a decrease in volatile compounds in the media given BSF larvae based on observations in the laboratory.

2.3 Business Model Canvas (BMC)

Alexander Osterwalder and Yves Pigneur (2012) suggest the Business Model Canvas (BMC) is a strategic tool used to describe a business model

and describe the rationale for how organizations create, deliver, and capture value. Business Model Canvas is a tool to help us view the appearance of the business [13]. A business plan with several elements well integrated into it, including strategic analysis internally and externally.

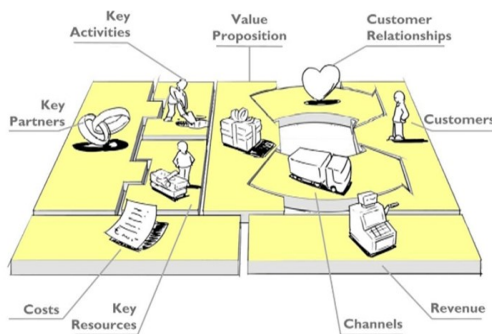


Figure 1: Business Model Canvas[14]

The Business Model canvas is divided into nine main categories, namely [15]:

1. Customer Segments

The customer is at the core of all business models. Without customers (who can produce profits), no company can survive for a long time. Companies can group customers into different segments based on similar needs, behaviours, or other attributes to better satisfy customers. A business model can describe one or more customer segments, large or small. Only then can the organization design a business model with the proper understanding of the customer's specific needs.

2. Value Propositions

Value propositions represent what products or services are offered that have advantages or added value to consumer segmentation. Excellence is one of the reasons consumers choose a particular product or service. It would be better if these advantages were different from its competitors.

3. Channel

Channel building blocks reflect how companies communicate with customer segments and reach out to them to provide a value proposition.

4. Customer Relationships

Customer relationships explain the various types of relationships that companies build with specific customer segments. Customer relationships can be driven by motivations, including customer acquisition, customer retention, and increased sales.

5. Revenue Streams

Revenue streams are income streams received by the company from each market segment or often referred to as income which is usually measured in terms of money received by the company from its customers.

6. Key Resources

Key resources are the most critical resources or assets used to realize the value proposition or operate the business. This point deals with the resources needed to create value for customers.

7. Key Activities

Every business model requires several key activities, namely the most important actions a company must take to succeed.

8. Key Partnerships

Key partnership describing the relationship with partners or third parties so that the business model process can work.

9. Cost Structure

The cost structure describes all the costs incurred to operate the business model. Managing costs will make the business more efficient and minimize the risk of loss.

Implementing a business model in a company has several benefits. First, related to its components, the business model makes it easier for planners and decision-makers to see the logical relationships between the components so that value can be generated for customers and the company. Second, the business model can be used to test the consistency of the relationship between its components. Third, business models can be used to test the market and assumptions used when developing a business. Fourth, business models can be used to show how radical a change is and its consequences [16].

2.4 ADDIE Model

ADDIE Development Research Model is a model that involves the stages of model development with five development phases, including Analysis, Design, Development, Implementation, and Evaluation [17]. The ADDIE model was developed by Dick and Carry in 1996 to design a learning system (Mulyatiningsih, 2016).

ADDIE Model is considered more rational and more complete. Mulyatiningsih (2016) suggests that models can be used for various forms of product development in learning activities such as

models, learning strategies, learning methods, media, and teaching materials[17].

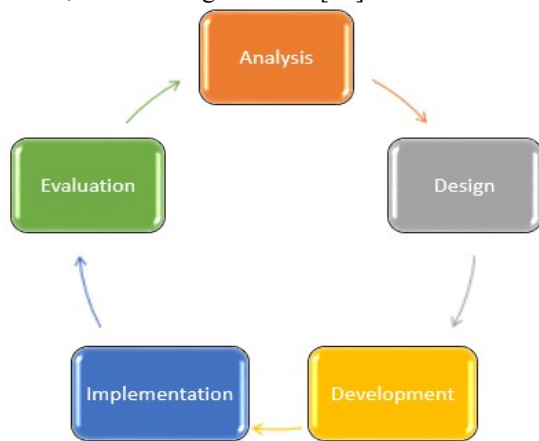


Figure 2: ADDIE Model Phase

2.5 Moodle

During the current pandemic, online learning applications are widely used at various levels of education. Many people are developing online-based learning platforms to support needs in the field of education.

Modular Object-Oriented Dynamic Learning Environment or Moodle is a platform used to support online learning management systems and using computers[18]. Development learning applications as well as e-learning, we can use Moodle as the best alternative. Moodle is a web-based application. For each learning activity related to material access, discussion, question, and answer. Another hand, evaluation can be done through the website's appearance using the help of a browser.

2.6 Related Work

Some researchers have conducted online training to compare and expand their knowledge using many methods. In this research, waste management, especially organic waste, will be resolved. It will be the solution to make a hygienic and robust environment using Black Soldier Fly technology implementation. There are several references and kinds of literature related to this research.

High-level thinking is one of the skills that students must have in learning in this era. The utilization of teaching materials does not facilitate students to develop high-level thinking that impacts the achievement of learning objectives. This

research aims to develop a module based on Higher Order Thinking Skills (HOTS) for high school students. The module was developed using research and development design regarding ADDIE model development. This research's data collection techniques used interviews, observations, instruments, and questionnaire responses[19].

Further, this research is eccentric and produced material training for emotional intelligence for principals using e-modules designed to practice independently based on the Contextual Teaching and Learning (CTL) method. The principal does not depend on the training carried out by the related parties. From preliminary observations about the analysis of the training needs of emotional intelligence found that principals desperately needed training in emotional intelligence but were constrained by the availability of time, budget, and rules [20].

Hereafter, pre-registration of nursing programs faces difficulties arranging clinical practicums for students due to the COVID-19 pandemic. Academics have explored strategies to address challenges by increasing flexibility in the learning process to ensure clinical competence in nursing students. Simulation is one of the technologies used to replicate clinically in real terms with a computerized software program. Simulation training curriculum development using ADDIE model. The application of the ADDIE model in the development of learning results in meeting student learning needs and allows flexibility in the learning process during the pandemic [21].

Subsequent research, E-learning has continued integrating into the educational process due to global information technology (IT). In America and European countries, the development and application of information and communication technology widely started early. However, since the 21st century, many Russian high schools have implemented and created their electronic technology. At Tomsk Polytechnic University (TPU), eLearning has gone through several stages of formation and development since 2000, starting with technical support for the educational process and providing a learning management system (LMS). According to the e-learning implementation strategy, one of the main goals of TPU is to provide an educational process through electronic courses up to 80 percent with the active involvement of teachers in e-course development [22].

Teaching a subject in Vocational High School requires a particular strategy on the part of learning design. Currently, Vocational High Schools use computer-based learning to deliver theoretical and practical materials. The computer as one of the teachers' media in the teaching process is commonly referred to as e-learning. Teachers need skills to operate and plan e-learning as a learning medium. In order to facilitate the delivery of several subjects, the learning design for e-learning must be well prepared by the teacher. Teachers must know the appropriate learning design model and what indicators are needed in implementing e-learning learning designs [23].

Based on previous researchers, this study provides the latest ideas on waste management and design Black Soldier Fly learning using Fresh Online Training (FOT). Organic waste reduction innovation aims to maintain environmental balance along with the increase in the amount of waste.

3. RESEARCH METHODOLOGY

3.1 Research Object

The object of research is the critical point of a study. The point of interest is in the substance or material being studied or solving the problem using the relevant theories. This research was conducted to discover people's insight about Black Soldier Fly and the design prototype of Fresh Online Training (FOT) using Moodle platform.

Start-up profile PT. Kompis Creative Solution is a startup that developed ideas and designs related to the Waste Bank application in 2019. This startup offers integrated and creative solutions in dealing with waste towards zero waste. Kompis engaged in various fields that utilize Information Technology and offer creative solutions for community development. This startup has also collaborated with various environmental companies.

Following the name Kompis which is taken from the Swedish language, which means 'friend.' The Waste Bank application offers a solution to the waste problem in Indonesia. Along with the development of the startup, PT. Kompis Creative Solutions centralizes on the Waste Bank application and the development of the Black Soldier Fly project.



Figure 3: User Interface Kompis Website

3.2 Research Model

This research was conducted by determining the research topic, followed by formulating the problem. Determination of the problem formulation comes from the findings obtained from startups. The next step is to conduct a literature review as a framework for the research model (see Figure 4).

The researcher uses the literature study method from several studies to obtain the research population, which is partly taken as a sample with the limits set within the scope of the research. The data collection instrument used for data collection in this study was a questionnaire. The questionnaire distributed contains several questions that must be answered entirely by respondents included in the research sample. Questionnaires were distributed directly to respondents via the internet (Google Forms).

The data received by the researcher was checked first. The purpose is to anticipate the existence of incomplete or inappropriate data. This step is done manually, deleting the answers that do not pass the questions determined by the author on the limits and scope of research. The following process analyzes the data as an online training research idea, and additional arguments need to be carried out in this research.

The next step is to develop a business model in this research. The business model used is the Business Model Canvas. The Business Model Canvas is a brief overview of the business model designed and increases the company's focus on critical business planning points. The visual nature of the Business Model Canvas is easy to understand and explains the business aspects related to each other. The design of this business model has nine blocks that need to be elaborated, including the customer value proposition, customer segments,

channels, customer relationships, revenue streams, key resources, key partners, key activities, and cost structure.

The business model design has been done; the next step is to implement the ADDIE Model. The application of the model as a framework in planning and developing education and training. The ADDIE model can make it easier for educators and training instructors to design any type of curriculum, regardless of the learning method used. The development process in the ADDIE model has five stages, including analysis as input for the system, then design, development, and evaluation are the processes, and implementation is the result.

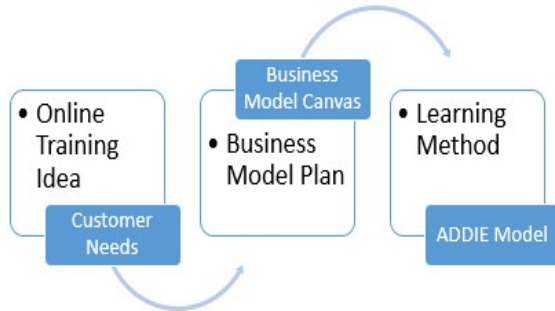


Figure 4: Research Model

4. RESULT AND DISCUSSION

In this study, the test results are carried out in stages, starting from analyzing respondent data in questionnaires, business planning models, and learning module development designs. This study aims to educate the public through technology in the environmental field used in the learning system module about the Black Soldier Fly. Following are the results and discussion of the analysis that has been carried out:

4.1 Determine Customer Needs

The first step to developing Fresh Online Training (FOT) is to analyze customer needs regarding current online training based on the completed questionnaire data. The distribution of the questionnaire aims to develop an idea of the expected online training system and evaluation of the online training learning system. The survey of respondents through this questionnaire obtained 141 respondents, where the criteria for respondents were over 17 years of age.

As shown in Figure 5, questionnaire data processing shows as many as 141 respondents based on gender, dominated by women with 75

people (53.2%) and the remaining 66 people (46.8%). The questionnaire data were filled in based on the respondent's interest in online training as an alternative learning medium during the Covid 19 pandemic.

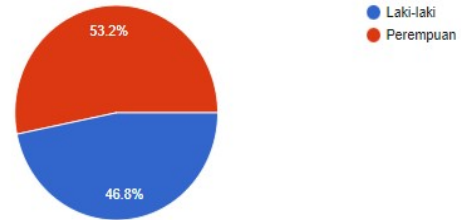


Figure 5: Online Training Interests by Gender

The age grouping is done as one of the online training plans for the methods and learning methods used. Figure 6 shows that the sample for the age range of 26-35 years has a percentage of 50.4%. The millennial generation, or generation Y, is the generation that was born at a time when technology was already developing. This study aims to expand new information and opportunities, especially the millennial generation, to learn Black Soldier Fly through Fresh Online Training.

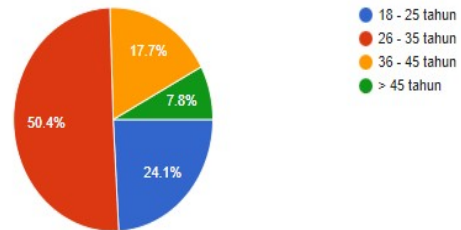


Figure 6: Grouping by Age

Individual knowledge of online training is required before planning and designing a business model. It aims to determine a person's level of understanding about online training. Figure 7 shows that almost every individual has attended online training with a percentage of 94.3%. The percentage results explain that individuals are familiar with online training that has been applied as a learning medium.

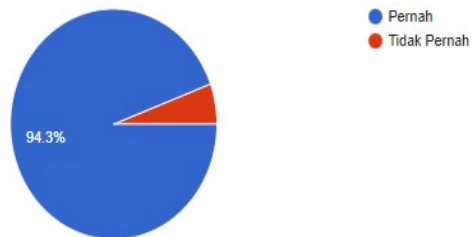


Figure 7: User Understanding of Online Training

In this study, Fresh Online Training (FOT) will be designed, where the online training will explain learning about Black Soldier Fly (BSF). Respondents stated that most of them did not know about the Black Soldier Fly. Based on the results of respondents by 80.5%, it shows that individuals are less familiar with learning science in the environmental field. The introduction of Black Soldier Fly learning is a new thing to learn how to manage the volume of organic waste and business opportunities in the pandemic era to improve the community's economy.

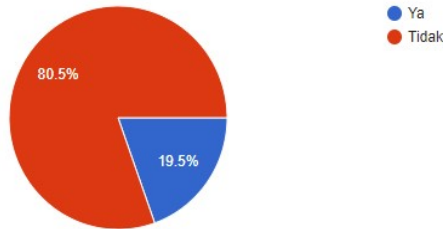


Figure 8: Familiar Level of Black Soldier Fly

4.2 Business Model Canvas Plan

Business Model Canvas is a tool to find out the condition of the company that is running to be developed or create a business idea that will be run. Using the Business Model Canvas, a company or business organization will quickly map and analyze that business model. It starts from the value of the company, customer segments until financial structure.

Implementation of Fresh Online Training (FOT) for a business mapping company is essential. Business process mapping should keep information clear and straightforward, although organizations can include more or fewer details as they believe necessary. Fresh Online Training is one of a method to design appropriate business models using nine main categories with the following explanation :

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
<ul style="list-style-type: none"> - Online training service provider - Customers that need a new learning - Government Institutions 	<ul style="list-style-type: none"> - Fresh Online Training - Online training education with experienced trainers - Flexible learning duration - Online training certification program - Educational offer as a business prospect 	<ul style="list-style-type: none"> - Black Soldier Fly technology education - Online training quality - Interest and ease of learning - Material Assessment - Trainer Assessment 	<ul style="list-style-type: none"> - Focus on customer service - Promotions and special price offers - Providing incentives - Black Soldier Fly implementation community 	<ul style="list-style-type: none"> - Global Consumer Market - Psychographic - Behavioral - Geographic - Demographic
	Key Resources		Channels	
	<ul style="list-style-type: none"> - Trainers and Employees - Learning Management System (LMS) - Computer, Internet, and Server 		<ul style="list-style-type: none"> - Direct Marketing - Indirect Marketing - Collaborate with partners and the surrounding community 	
Cost Structure		Revenue Streams		
<ul style="list-style-type: none"> - Fixed Cost: LMS, Hosting, Employee, and Trainer Salary - Variable Cost: Website development, operation, and maintenance costs 		<ul style="list-style-type: none"> - Income from participants participating in online training - Income from ongoing event sponsors and investors - Income from government institutions 		

Figure 9: Business Canvas Model for FOT

4.2.1 Customer Segments

The customer segment serves to define the customer segment to be served. The following is an explanation of customer segments:

a. Global Consumer Market

The level of internet use is getting higher, and learning resources are through physical media and online media; one example is online training. This online training can be attended by both male and female customers over the age of 17.

b. Psychographic

Online customers prefer the semi-group type of online training. Semi-group is a type of online training that combines individual and group learning. This training makes it easier for individuals to exchange ideas with each other.

c. Behavioral

Customers often use the use of media in learning through mobile and website learning. In this case, there is no problem if the customer

uses one of these media as learning information.

d. Geographic

For customers who have participated in online training in the Java Region, online training information must be disseminated even outside the Java Region.

e. Demographics

Customers who have attended online training are not limited by educational background, and work is the criteria. Online training is open to anyone who wants to grow together in learning practical new knowledge.

4.2.2 Value Propositions

The composition of this segment depends on the target market that will become the customer. The following is the proportion of the value offered:

a. Black Soldier Fly Technology Education

At this stage, the company provides information related to innovations in waste management, especially organic waste, to the target market. In addition, the company offers a free trial offer to the target market to find out how to learn and get the benefit.

b. Online Training Quality

Customer trust in services is very much needed. This business offers what modules are studied, learning system methods, free consultation during learning, and excellent features in the Learning Management System (LMS).

c. Interest and Ease of Learning

The learning gained is not only theoretical through online training. On-site practice is also carried out to apply the previously studied theory, following the learning module procedures.

d. Material Assessment

Material assessment is carried out during the learning process and is usually used as a basis for making improvements to the teaching and learning process. Trainers will provide feedback on the learning process, monitor progress, and determine learning progress during online training.

e. Trainer Assessment

The trainer assessment is an assessment that is carried out after the learning process is complete. The customer conducts an

assessment to provide the achievement of the results obtained after the learning process.

4.2.3 Channels

This segment focuses on the media or means used to deliver marketed online training. The company uses the following channels:

a. Direct Marketing

The company conducts direct marketing, which consists of direct relationships with individual and group customers to respond immediately and foster customer relationships. Direct marketing carried out are direct mail, telemarketing, email marketing, and online marketing.

b. Indirect Marketing

Indirect Marketing also carries out the company's marketing of online training with new learning education. This marketing involves third parties such as advertisements on company websites, Waste Bank applications, influencers, government agencies, and volunteers working in the environmental field.

c. Collaborate with Partners and Community

The company cooperates with partners and the community to benefit as a multi-channel business to increase company profits. In this case, it is necessary to disseminate information to the community and information to partners regarding this online training program.

4.2.4 Customer Relationships

The characteristics of customers are different, so companies must understand how to attract new customers and retain loyal customers. The steps taken include:

a. Focus Customer Service

This stage is part of the success of a business. This focus is applied to realize customer needs, and the business will be more developed in the future. Every customer and business has a strategy that differs from one another across customer segments.

b. Promotions and Special Price Offers

The Learning Management System (LMS) built by the company offers promotions and special offers to target customers. The offer is not only applied to new users but also loyal customers.

c. Providing incentives

Customers who take online training have the opportunity to get incentives. Incentives apply to customers and online training members who successfully invite colleagues or relatives to join online training.

d. Black Soldier Fly Community

The establishment of an online community aims to improve relationships with customers. When customers have completed the online training, they can join a community that has the same interest to help reduce the amount of waste and develop business with Black Soldier Fly technology. This community provides benefits not only for themselves and the group but also for the surrounding environment.

4.2.5 Key Partners

Key partners are external parties needed to carry out key activities. It aims to optimize operations and business risks. Following are the key partners of this business:

a. Online Training Service Provider

Companies in all industries worldwide have chosen to form partnerships to strengthen competitiveness in domestic and international markets. Fresh Online Training (FOT) is engaged in education regarding online training related to organic waste management and how to reduce waste into a business opportunity. By cooperating with online training services, new income is obtained on the company's website and other companies.

b. Customers Need New Learning

Customers who need new learning are undoubtedly interested in online training. Black Soldier Fly learning can be emphasized in one of the excellent learning modules in online training. With this, customers want to find something new and try things that have never been studied before.

c. Government Institutions

Government institutions are key partners where cooperation is needed in developing community education and the economy. By partnering with government agencies, it will form a more regular business cycle.

4.2.6 Key Resources

This segment contains a list of resources planned and owned by the company to realize the value proposition under the company's goals. The following key resources are needed:

a. Learning Management System (LMS)

In designing the Learning Management System, it is called the Fresh Online Training (FOT) program because online training has never been implemented in the company. With the LMS, the online learning platform can be run and equipped with the customers' features.

b. Trainers and Employees

Trainers and employees are an essential primary resource. Trainers must be experts so that the customer understands the learning material in an informative and precise manner. Employees are needed as managers of Learning Management Systems, marketing to promote online training, managing corporate and financial strategies to achieve targeted profits.

c. Computer, Internet, and Server

To execute successful online learning, computers, the internet, and servers are needed, which are actual units to meet the continuity of the online training business process.

4.2.7 Key Activities

This segment has a crucial role so that Fresh Online Training (FOT) can operate smoothly. The key activities of this design include:

Table 1: Key Activities FOT

No	Key Activities	Details
1	Fresh Online Training (FOT) as a new Learning Management System	The activity starts with customers participating in online training through LMS, which provides training on how to manage waste and apply Black Soldier Fly technology
2	Online training education with experienced trainers	Experienced trainers influence the way of teaching and methods applied in the learning process
3	Flexible learning duration	The application of flexible duration is adjusted to the customer's free time by choosing a schedule that online training services have provided
4	An online training certification program	The certification program is intended so that customers who have taken classes can measure their understanding and know whether they have been able to apply to learn well

5	Educational offer as a business prospect	With the online training certification, it is hoped that each customer can apply the new knowledge as a business opportunity while reducing the volume of organic waste that has increased.
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work together to protect the environment through government assistance funds.

4.2.9 Cost Structure

This business model is a financial consequence of the method used in the business model that has been created. An efficient cost management process will make the business more efficient and can minimize the risk of loss. The following cost structure built by the company consists of two things:

a. Fixed Cost

The costs incurred by the company include the Learning Management System (LMS) Website, hosting, employee salaries, and trainer salaries. Detailed discussion will be discussed in the Budget Analysis.

b. Variable Cost

This cost is a variable cost that can go up or down depending on the company's condition. This cost consists of website development, operational, and maintenance costs.

4.2.8 Revenue Streams

This segment must be managed as much as possible to increase business revenue. The following are the company's sources of income:

a. Income from an online training participant

The company earns revenue from online training customers. Online training registration is the initial stage for companies to earn income.

b. Income from Event and Investors

Companies need to work together with other companies to participate in an event to increase customer trust regarding online training services. In addition, submitting proposals to other companies engaged in the environment or nature conservation aims to attract investors' attention and cooperate.

c. Income from Government Institutions

Relationships with government agencies need to be done to develop the company's business. The online training offered needs to highlight the advantages of the training modules taught so government agencies can

4.3 ADDIE Model Design

In this study, the ADDIE model is one model to arrange learning modules, and there are five steps to build FOT. To build these steps, we must arrange materials and a learning management system. We choose the platform Moodle to educate our clients and give new insight into BSF learning.

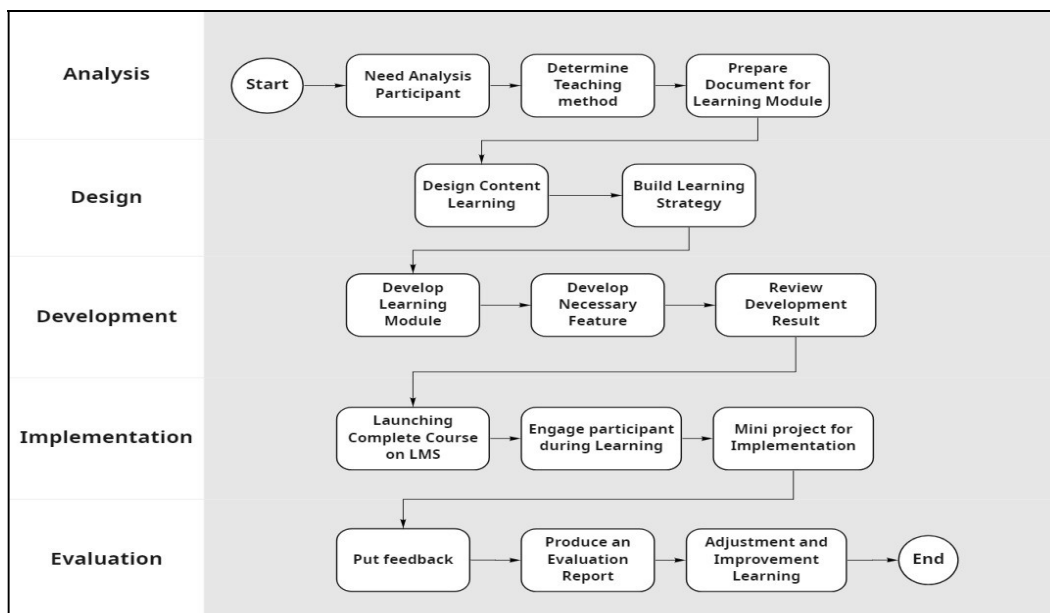


Figure 10: ADDIE Model for FOT

4.3.1 FOT Analysis Phase

The analysis stage is the initial stage carried out in designing online training. This stage is done by making observations using online questionnaires. The research scale used to measure attitudes and opinions uses a Likert scale. With this Likert scale, respondents were complete with 1 as Strongly Disagree until 5 as Strongly Agree. The following stages of analysis are carried out by designing Fresh Online Training (FOT):

By analyzing customer needs, the company is expected to know clearly how and what customer needs regarding online training are. This step is expected to create services that are following or closer to customer needs. Furthermore, the run business can grab the interest or attention of customers and survive with tough business competitors as it is today. The following indicators are shown in the table below, where the sign (V) is the most significant percentage:

a. Need Analysis Participant

Table 2: Analysis Phase for FOT

No	Indicator	Result Evaluation				
		1	2	3	4	5
1	Online training helps the learning process according to interests				V	
2	Online training with adequate facilities is highly expected				V	
3	The material significantly presented affects the development of participants' abilities			V		
4	The presentation of the material delivered by the trainer uses language that is easy to understand				V	
5	The trainer is very informative and responsive to participants' questions				V	
6	Lesson session with a not too long duration			V		
7	The learning module provides interactive quizzes or group discussions				V	
8	Online training certification program measures skill level				V	
9	The actual practice of learning online training materials is needed				V	
10	The online training can be a business opportunity				V	

b. Determine teaching methods

Based on the results of the analysis of the teaching method that is of interest to customers, namely Blended Learning. Blended Learning is a learning method where the face-to-face learning process is harmoniously combined with the online learning process. Figure 4.11 shows the most popular blended learning with a percentage of 56.4% compared to other teaching methods as follows:

c. Prepare document for Learning Modules

Teaching materials are a set of materials divided into modules that are systematically arranged to assist trainers in carrying out teaching activities. In this case, the preparation of documents is prepared based on books and journals that have been published. In the design of the module document, three primary materials are consisting of several modules. There are 14 modules designed in this online training.

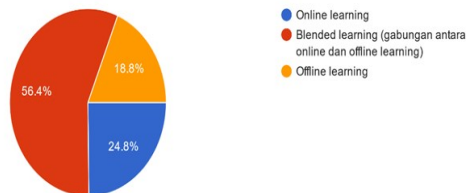


Figure 11: Teaching Method for FOT

4.3.2 FOT Design Phase

Design is an advanced stage that is carried out after analysis. Learning content is essential in learning. Online training learning content consists of various materials presented in the Learning Management System (LMS). This content creation

is intended to assist customers in understanding the material to be studied, as explained below:

1. Design Content Learning

Learning content needs to be detailed in determining the module specifications that customers need during learning. The media used is a website-based Learning Management System. The company provides the LMS to develop an online training business with learning materials that have been prepared. Learning module resources need to meet teaching standards and have been validated. Trials of learning content can be seen when customers try free trials. Based on a questionnaire survey conducted by customers that this method is used to choose the best online training, as shown in Figure 12 below:

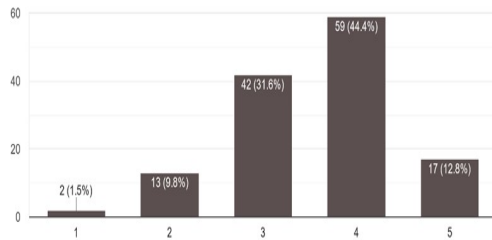


Figure 12: Free trial for FOT

2. Build Learning Strategy

The learning strategy must explain the general components of a learning module device and develop procedural materials based on customer characteristics. The learning module developed aims to assist customers in obtaining easy learning. Customers also need adequate facilities during the online training learning process as the results of the questionnaire survey are listed in Figure 13 below:

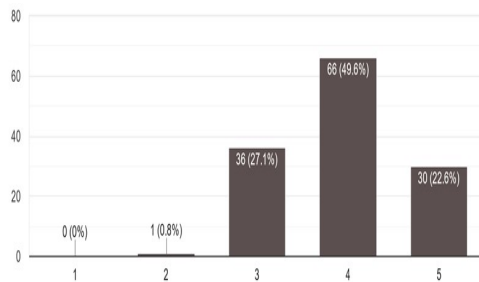


Figure 13: Adequate Facilities for FOT

4.3.3 FOT Development Phase

The design of the Fresh Online Training prototype is a website that functions as a Learning Management System that provides learning in the environmental field, especially the implementation of the Black Soldier Fly. A platform on the website using Moodle. Customers can easily understand what features are displayed on the website. The following shows the LMS login page in Figure 14:

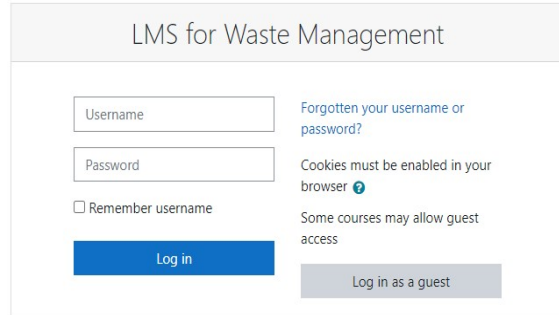


Figure 14: Login Page for FOT

The design stage is explained about what things need to be applied in designing a Learning Management System. In this study, there are three stages in website development as follows:

a. Develop Learning Modules

Based on Figure 15, it was found that in this online training learning, three primary materials are consisting of the Waste Bank, the Development of the Waste Bank System, and the Black Soldier Fly. The company takes the material to provide a view to the community that maintaining environmental sustainability has an important role.

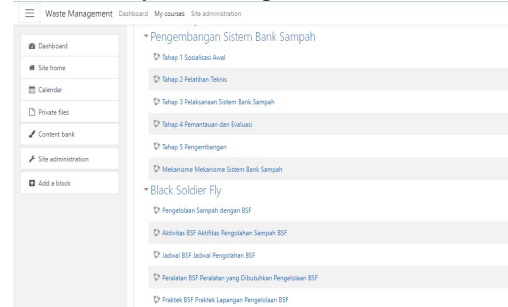


Figure 15: Course Page for FOT

b. Develop Necessary Features

The features displayed on the LMS consist of an initial introduction to the material, pre-tests carried out before starting the online training, available modules and videos to be studied, discussion forums for problem-solving, individual and group assignments for customer understanding of the content of the learning modules. In addition, there is a

feedback feature regarding the completed module learning. There are many features in FOT :

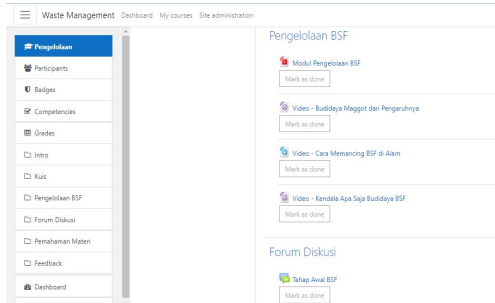


Figure 16: Module Learning for FOT



Figure 17: Video features for FOT

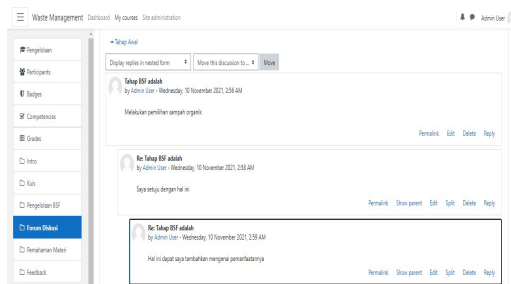


Figure 17: Forum Discussion for FOT

c. Review Development Result

One of the most critical stages of website development is the review and testing stage. This stage can recognize errors or defects that exist from a website that is built. The main features in the testing phase are verification and validation. The testing phase is used to answer whether the website can run or behave as specified.

4.3.4 FOT Implementation Phase

This implementation stage will be carried out after the development stage has been completed. Researchers explain things that need to be done in the implementation phase, including launching learning modules in the LMS, customer involvement during the online and offline training

process, and implementing projects for customers interested in developing a business from learning Black Soldier Fly.

4.3.5 FOT Evaluation Phase

The evaluation phase of the research is the last stage of the ADDIE Model phase. At this stage, the researcher explains what needs to be done, including receiving feedback from customers regarding online training, preparing evaluation reports, adjusting materials, and improving the quality of online training learning.

5. CONCLUSION

This study proposes Fresh Online Training to expand our knowledge and information about Black Soldier Fly. With Business Model Canvas and ADDIE Model, online training became customized and no longer followed the traditional pattern of the content company on the website. Based on the results of the study, it was found that :

1. Respondents have an interest in and believe in online training as a learning media solution.
2. The idea of online training was initiated by the individual's interest in online training. Black Soldier Fly can be applied in reducing the volume of waste which is increasing every year.
3. The results of the questionnaire distribution were obtained and analyzed using the Business Model Canvas which consists of 9 essential segments to design an online training business plan.
4. The design of learning modules using the ADDIE model method consists of 5 stages.
5. Build a new design of the prototype website using Moodle platform.
6. LMS features are based on customer needs from a questionnaire regarding online training criteria.
7. Increase business opportunities in improving the community's economy and also preserving nature.

In future research, we can add more facilities from participants evaluation after online training, and we can also add more business sector perspective to get more holistic view.

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