

Asah skill: An approach skill-based learning platform with management and strategic planning process

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Abstract: Digital transformation in education improves entities by implementing significant changes in education by combining information technology, computing, communication, and coordination. This paper proposes improving education through a digital transformation through platforms, specifically online skills-based learning called ASAH Skill. The survey was conducted by collecting question data from Google Forms. By using the Problem Validation method and Primary Data, obtained Product Validation on Customer Needs (Survey) and Product Strategy (Affinity Diagram). It is a market-based validation as a guide for designing ASAH Skill products that meet the criteria and needs of Skill Providers and Seekers. The method considered consists of three steps, namely strategic situation analysis (SSA), strategy formulation (SF), and strategy implementation (SI). We have finally found what customers need to develop their skills during the isolation period of the covid-19 pandemic. The survey was conducted on 51 respondents. Strategic Implementation consists of Mockup, Business Model Canvas (BMC), and Problem Solution Fit Canvas. The biggest detention experienced by respondents was very limited mobility (82.4%). The survey also showed that most of the activities respondents did during the pandemic were exploring new things (37.3%). Video editing is the most learned skill during the pandemic (25.9%), and YouTube is the respondents' main choice as a medium for learning skills (43.1%). Overall, the results of the study show that dispensing and learning skills are a new need for society during a pandemic. The provision of a platform is a development opportunity as a forum for the dissemination and learning of skills. The highest priority is on the 'easy to use' attribute where all respondents give an importance rating of 5.

Keywords: platform, online learning, skill, mockup

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Introduction

The modern world is constantly changing. The innovation introduces various human activity fields so that people can continue developing, improving knowledge, skills, professions, or as simple as trying new types of activities. In addition, it requires creativity, willingness to work with colleagues to find new solutions, and the ability to critically develop the presentation of information, reliability, and logical intervention. Digitalization also changes the pattern of people's social life; it leads to open new opportunities to acquire and increase knowledge. Digital technology in the modern world is not only a tool, but also an existential environment that opens up new opportunities: learning anytime, lifelong learning, the ability to design educational journeys, and personal education [1].

The development of digital technology affects all aspects of society, especially in developing certain abilities (skills). The skill itself is the ability to act with a determined result with good implementation. Skills consist of two categories that are hard skills and soft skills. Hard skills, also known as technical skills, are abilities related to certain tasks or situations. These skills involve understanding and proficiency in certain activities that involve methods, processes, procedures, or techniques. These skills are easy to measure, unlike soft skills related to a person's personality.

In the current era of the industrial revolution on digital technology, Indonesia's number of internet users has increased. In March 2021, the number reached 212.2 million, or 77.9% of the total population of Indonesia [2]. This increment is mainly due to the COVID-19 pandemic, where people tend to spend time in quarantine to learn, explore certain skills, and kill boredom. It can also provide benefits for self-development. The fact is skill development (HR) in Indonesia is still very low, where the index value of Indonesian HR 2020 is 0.53 /HCI<0.60 [3]. This condition is partly due to the lack of public awareness regarding the importance of developing skills, both hard skills and soft skills.

On the other hand, COVID-19 affects the availability of job opportunities and the termination of employment contracts for most private workers. It increases the unemployment rate and reduces the value of community productivity. Economic inequality also occurs simultaneously with the increase in the unemployment rate. Data in August 2020 showed that the national employment opportunity rate decreased by 1.84% from the previous year's same period [4]. It also encourages the government to target 212,000 people to participate in the New Entrepreneurial Creation Program. The important training programs and skills development improve the quality and index of Human Resources in Indonesia, including high unemployment, scattered skill-providing media, and difficulty getting a job.

Based on previous research, COVID-19 has a significant impact on digital transformation in Hungary education, so new insights are necessary for digital transformation [5]. The industry 4.0 era encourages productivity, economic opportunities, and future jobs, thereby encouraging digital disruption [6], and could enhance a platform-based application business model [7]. The success of a digital learning platform depends on the user (user context and cultural context), social (environment), institutional background, and several other aspects [8].

The various skill-based platform has been researched but only specific to a certain skill such as entrepreneurship promotion [9], software skill learning [10], and researching skill [11]. This specified skill-based platform only benefit certain people who needed a specified skill, hence it is needed to have a new different skill-based platform to cover various kind of skills.

This paper proposes a product design platform based on a skill-based digital platform: ASAH Skill. This product design aims to provide a media (platform) that brings together skill providers and seekers in the informal sector (Hard Skills/Soft Skills). The word 'Asah' comes from an Indonesian language meaning 'sharpen'. For those who are training providers, ASAH SKILL can be a medium to create new jobs by utilizing the skills they have. As for skill seekers, they can take advantage to acquire the required skills. Problem Validation and Primary Data methods approach is used, Product Validation is obtained in Customer Needs (Survey) and Product Strategy (Affinity Diagram). It is market-based validation as a guide for designing ASAH Skill products that meet the criteria and needs of Skill Providers and Seekers. With ASAH Skill, it is to be expected to increase the national employment rate.

Methodology

The methodology will be used to ensure the approach of the skill-based learning platform can meet and be accepted by the market consists of three steps, which are strategic situation analysis (SSA), strategic formulation (SF), and strategic implementation (SI).



Figure 1. Methodology diagram
(Source: Data Collection by Researchers)

Strategic Situation Analysis (SSA)

Strategic situation analysis discovers the current condition to find the gap between ideal and existing conditions [12]. This step is to identify the problems in society. It is important to discover the needs of the society for a new form to upgrade their skills during the pandemic Covid-19 that brought new normal, limiting mobilizations, social interactions, and even work termination. SSA uses a survey to map customer behavior and needs with a simple questionnaire.

This research considers ten simple questions for the survey to determine a set of situations people face. The questions are to determine the detention that respondent is experiencing, what they usually do during the pandemic, what skills they want to learn, and what kind of media they use for learning skills.

Strategic Formulation (SF)

The strategic formulation uses available knowledge to document the intended direction of a business and the actionable steps to reach its goals [12]. In this strategic formulation step, we will focus on the product itself, where we analyze what kind of a platform-based product needs from customers. In this case, the platform is in the form of an app on a smartphone. This paper considers the form of a smartphone app for a couple of reasons. First, more people use smartphones rather than desktops for daily internet needs. Second, creating a mobile app design is simple and compact. Third, a mobile-based platform can easily transform into a web-based platform. The considered product validation consists of a customer's need and a product strategy.

This research surveys participants' demographics to find what customers need. The survey consists of 5 different dimensions: performance, reliability, feature, aesthetics, and serviceability. These dimensions are based on [13] and will turn into 20 questions, where each question corresponds to a different attribute. A scale of 1 to 5 for each question will determine how important an attribute is, where a score of 1 is not important, while a score of 5 is very important. After obtaining the survey, each attribute considers an average score.

The next step is a product strategy. This step will be conducted based on the survey's customer needs. The product strategy solutions will be used in the form of an affinity diagram analysis. An affinity diagram is a kind of predictive analysis technique that does the process of data collecting and fetches the insightful hiding correlation in between the dataset.

Strategic Implementation (SI)

Based on the SSA and SF, a strategic implementation refers to the process of executing plans and strategies [9]. SSA validates the problem, and SF validates the product. And defines the market itself. It is important to prepare the product to be accepted by the market. The market validation consists of Business Model Canvas (BMC) & Problem-Solution Fit Canvas.

The BMC is a visual way of identifying key elements of business and how they relate. Variables used on BMC are the problem, solution, key metrics, unique value proposition, unfair advantage, channels, customer segments, cost structure, and revenue stream. Go To Market Strategy will be generated from BMC. Meanwhile, Problem-Solution Fit Canvas is trying to validate BMC by focus group discussion with the user to get the user's perspectives.

Results and Discussions

SSA Results

Figure 2 shows the survey to determine what customers need to develop their skills during pandemic covid-19 isolation. The survey was conducted on 51 respondents. The survey was conducted by collecting question data from Google Forms. Most of the respondents are fresh graduates and adults with an age range of 24-30 years. The graphic below shows the result of the survey of situation analysis.

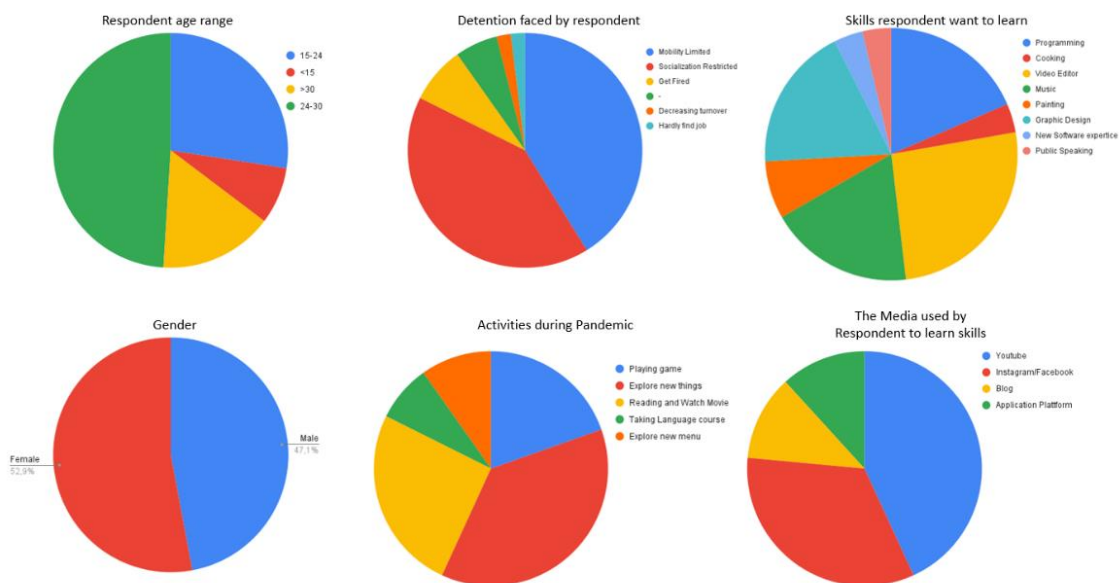


Figure 2. Survey of problem validation

The chart shows that most respondents are female, the age range at most is 24-30 years, and during the pandemic, the biggest detention experienced by respondents was very limited mobility (82,4%). The survey also demography that the most activities respondent do during a pandemic are exploring new things (37,3%). Video editors are the most popular skills to learn during a pandemic (25,9%), and YouTube became the main choice for responders as a medium to learn skills (43,1%). Overall, the result shows that dispensing and learning skills are a new need for society amid a pandemic. The provision of a platform is an opportunity for development as a forum for dispensing and learning skills.

SF Result

Strategic Formulation consists of Customer Needs and Product Strategy. Strategic Formulation consists of Customer Needs and Product Strategy. Consumer needs are known by spreading questions according to consumer needs for the product. The product strategy is made to determine the main priorities of consumer wants and needs for platform products. With the form of an affinity diagram, it can be seen that the highest consumer interest in the platform in terms of what must exist and which can support the use of the platform.

Customer Needs (Survey)

Based on the 20 questions related to customer needs, it shows that 50 respondents found the main attribute the skill-based platform needs. In this case, the platform is in the form of a smartphone app. These respondents are the same as the SSA survey given.

Table 1. Power consumption, cost and time

Dimension	Attribute	Importance Scale (Average)
Performance	The application recognizes user preference	4.28
Performance	The application can give important notification	3.66
Performance	The application provides any skills	4.32
Performance	Skill-seeker can find various skills in the app	4.68
Performance	Show skill provider profile	4.82
Reliability	Easy to use	4.9
Reliability	Low-cost internet access	3.96
Reliability	Less memory capacity	3.96
Reliability	Application runs without error	4.84
Reliability	The application can run on any OS	4.58
Reliability	A synchronize-able account with another platform (Google, FB)	3.66
Reliability	Payment can be done by application	4.14
Reliability	The application can be used anywhere and anytime	4.74
Feature	Have 'send feedback' feature when an error occurred	3.88
Feature	Application categorizes the skills	4.68
Feature	Have a "chat" feature between provider and seeker	4.6
Feature	Certificate at the end of the course	4.22
Feature	How to use app tutorials	4.4
Aesthetics	Attractive interface	4.38
Service ability	Application has customer service	4.02

Based on Table 1, the average score on the importance scale is 4.34. A score above 4.43 is considered the main attribute, meaning the product must include those attributes. The main attribute can be seen in Table 1 with bolded text. From table 1, we can see that the highest priority is within the 'easy to use' attribute, where all respondents gave an importance rating of 4.9.

Product Strategy (Affinity Diagram Analysis)

The product strategy will be in the form of an affinity diagram analysis. Affinity diagrams are similar to cause and effect diagrams but are more suitable for larger issues where even the main issue is not well defined [14]. The main attributes can then be modified from the customer needs into a solution of the product itself. Based on Table 1, we can create a diagram consisting of four different technical, account, features, and customer service categories. The detail of each category of the affinity diagram analysis can be seen in Figure 3.

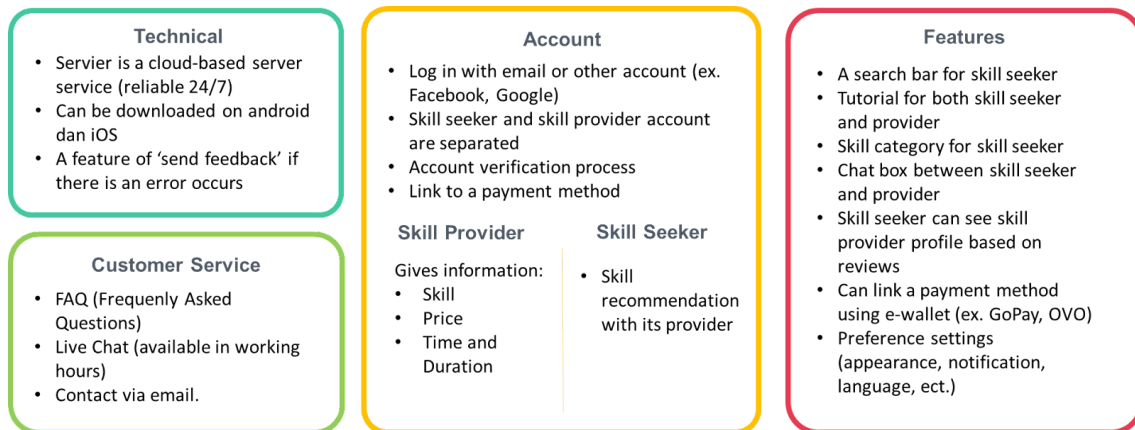


Figure 3. Affinity diagram analysis

Technical

The technical category is created because of the high priority of a platform to run smoothly. The 'Application runs without error' and 'Application can be used anywhere and anytime' attributes can be taken into account in the form of a cloud server-based service. The cloud-based server is usually reliable, where it can be guaranteed to run 24/7 without internal errors. This category includes the platform app that can run into different operating systems and error handling in the form of 'send feedback'.

Account

The account category is made for skill seeker and skill provider accounts. From the attribute 'show skill provider profile' and 'have a "chat" feature between provider and seeker,' we separated the skill seeker and skill provider accounts. It will help the platform to differentiate the roles. The skill provider needs to have a clear profile of the skill seeker, so the information needed for the skill provider are skill information, price, time and duration, experiences, etc. Both skill seeker and provider also need to verify their account. It is needed to validate whether the account is a real person.

Features

The features category covers all the features needed for the platform app. The 'skill-seeker can find vary skill in app' attribute can be in the form of a search bar, and the 'how to use app tutorial' attribute can be in the form of a tutorial for both skill seeker and provider. This category also consists of a category for skill, a chat box between skill seeker and provider, profile viewing for skill provider based on reviews, payment method feature, and preference settings such as appearance, notification, language, etc.

Customer Service

The customer service category consists of frequently asked questions, live chat for customer services, and contact information. This category is not as important as the other three categories, but it is needed to maintain the platform's reliability in assisting customers.

SI Results

The strategic implementation consists of Mockup, Business Model Canvas (BMC), and Problem Solution Fit Canvas.

Mockup

A mockup design is made based on the affinity diagram analysis. With the help of the affinity diagram, a clear idea of what the platform might look like in the form of a smartphone app.

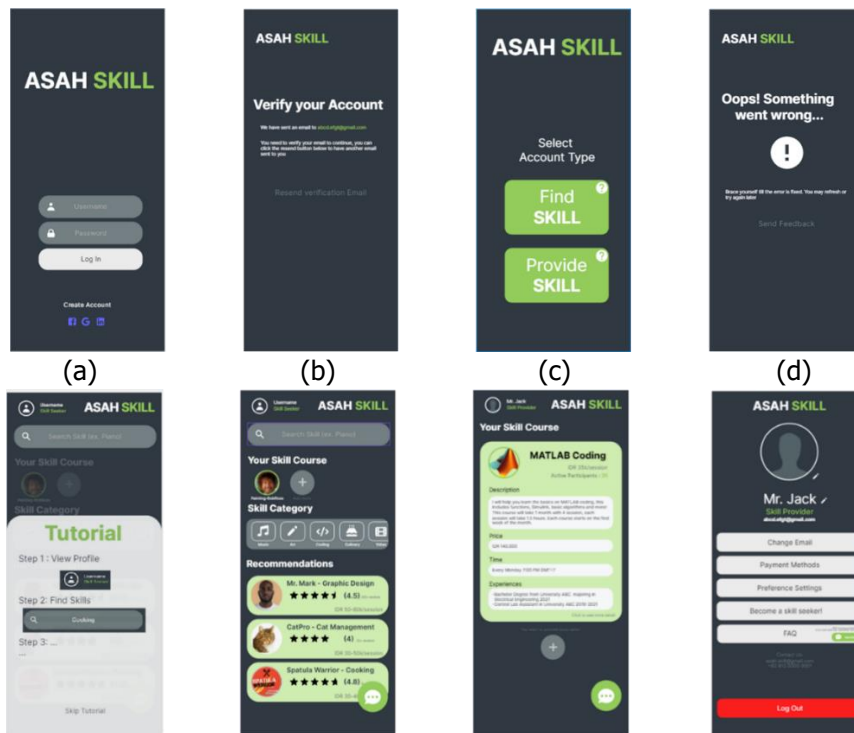


Figure 4. Mockup design: (a) login panel; (b) account verification; (c) separate account; (d) error message; (e) tutorial panel; (f) skill seeker main panel; (g) skill provider main panel; (h) ac-account panel

The mockup design from Figure 4 represents the key attribute needed for the application platform. Based on the affinity diagram analysis, six different panels are shown.

Business Model Canvas (BMC)

Business Model Canvas (BMC) helps us map out the marketing strategy to get the market's overview [15]. BMC can develop a clear view of your problem, solution, key metrics, value proposition, unfair advantage, channels, customer segments, cost structure, and revenue stream. The detail of every element in BMC will represent in Figure 5.

PROBLEM 1. High unemployment rate 2. The media of skill-based learning is still scattered 3. People find it difficult to find work, especially during a pandemic. 4. There is no platform for providing informal skills. 5. There is no media for skill owners to be productive from the skills they have. 6. Trend of learning new skills with free time during quarantine. Existing Solution 1. The media of skill-based learning is still scattered. Example: @bartega.studio 2. There is no platform for providing informal skills. Example: Skill Academy	SOLUTION 1. Providing a platform that brings together skill providers with skill seekers 2. Providing a platform that not only provides formal skills but also informal skills	UNIQUE VALUE PROPOSITION Skill Seekers: Looking for skills that are easier, varied, and affordable without being limited by space & time Skill Provider: Provides a platform to channel skills, so they can generate and give benefit to many people.	UNFAIR ADVANTAGE 1. Collaboration with the community 2. A platform that focuses on providing informal skills (hard skills / soft skills) 3. Granting of certification issued by an official org.. 4. Provide exposure for users to recruiters through personas 5. Provide a "gallery" feature for users to share the work of their skills.	CUSTOMER SEGMENTS 1. Graduated Middle/high school 2. Productive Workers (24-30 years old) 3. SES ABC Early Adopter 1. College Student 2. Workers (22-27 years) 3. People who lost their jobs due to the pandemic in Jakarta.
	KEY METRICS 1. Number of Users: a. Skill Provider b. Skill Seeker 2. Income: a. Fee on transactions that occur on the platform b. Advertisement	HIGH LEVEL CONCEPT ASAH Skill is a platform where people can get skills easily, varied, and at affordable prices without being limited by space & time.	CHANNELS - Community - Social Media (Youtube, FB, IG, Twitter, LinkedIn, TikTok) - Content Distribution Platform - Word of Mouth - User Referrals - Partnership (Influencer & KOL)	
COST STRUCTURE 1. Development Platform 2. Marketing 3. Human Resources		REVENUE STREAMS 1. Charge 10% of trainer rate based on class/session. 2. Subscriptions (Bundling classes/sessions) 3. Advertising 4. Add-ons (example: extra time, tools, etc)		

Figure 5. Business Model Canvas (BMC)

Problem

Problems on BMC is defining the problems behind this idea. ASAH Skill is designed to overcome the problems of the high unemployment rate, but the media of skill-based learning is still scattered. People find it difficult to find work. There is no platform for providing informal skills. There is no media for skill owners to be productive from their skills, and the trend of learning new skills with free time during quarantine.

Based on our research, the existing solution that has already come up for those problems is a platform that only provides formal education and skill-based learning held by the studio on the website/social media.

Solution

Our proposed solution that we provide to overcome the problems is providing a platform that brings together skill providers with skill seekers and provides a platform that provides formal skills and informal skills.

Key Metrics

The key metric is being used to measure the success rate of our solution. ASAH Skill's key metrics are the number of users (skill provider & skill seeker) and income earned by a fee on transactions on the platform and advertisement.

Unique Value Proposition

The unique value proposition is being used to show the product's highlight and how it differs from the existing product that has already been launched on the market. We give two perspectives of our product's value proposition that is Skill Seekers, who are looking for skills that are easier, varied, and affordable without being limited by space & time, and Skill Providers, who provide a platform to channel skills, so they can generate and give benefit to many people. On the high-level concept, ASAH Skill is a platform where people can get skills easily, varied, and at affordable prices without being limited by space & time.

Unfair Advantage

Unfair advantage is being used to show the benefits that users get. ASAH Skill's unfair advantages are a collaboration with the community, a platform that focuses on providing informal skills (hard skills / soft skills), granting of certification issued by an official organization, providing exposure for users to recruiters through personas, and providing a "gallery" feature for users to share the work of their skills.

Channels

ASAH Skill's channels are community, social media (YouTube, FB, IG, Twitter, LinkedIn, TikTok), content distribution platforms, word of mouth, user referrals, and partnerships (Influencers & KOL).

Customer Segments

In this element, we are trying to focus on our product's customer segment. It will help the product be accepted by market accept the product. Our customer segments are graduated middle/high school, productive workers (24-30 years old), and SES ABC. Meanwhile, our specific customer for early adopter is college student, workers (22-27 years), and people who lost their jobs due to the pandemic in Jakarta.

Cost Structure

ASAH Skill's allocated cost is being used for the development platform, marketing in all channels defined above, and human resources to run the company.

Revenue Stream

In this element, we are trying to find the benefit that the company gets by build/investing in this product. We have four streams that charge 10% of the trainer rate based on class/session, subscriptions (bundling classes/sessions), advertising, and add-ons (extra time, tools, etc.).

Problem Solution Fit Canvas

Problem Solution Mapping Canvas is not only a mapping but also an enabling translation where you turn problems into solutions and communication strategies, taking customer behavior into account to increase the chances of receiving solutions. It gives us a glimpse of ideas that might fit into reality. In this paper, the problem fit canvas is used as BMC validation to answer the purpose of the ASAH skill product design. The Problem Solution Fit Canvas can be seen in Figure 6.

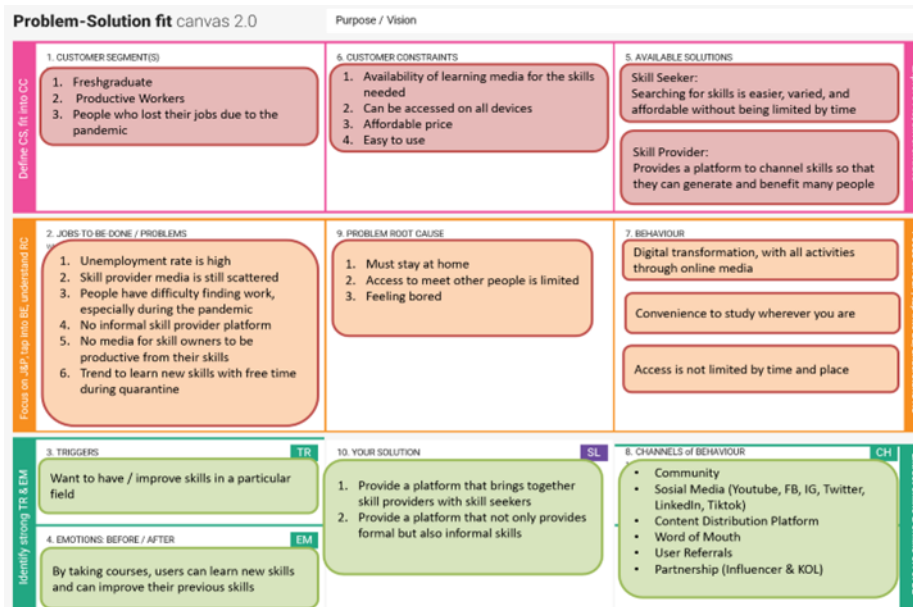


Figure 6. Problem Solution Fit Canvas
(Source: Data Collection by Researchers)

Customer Segment

Customer segment is used to determine the target market of the product. People from the younger generation can and will accept and use the product as it functions and uses it. In the ASAH SKILL product design, the target market for the product is young people who have just graduated from school (fresh graduates), productive workers, and people who have lost their jobs due to the COVID-19 pandemic.

Problems

Problems describe the problems behind which the product is designed and made. ASAH SKILL is designed to overcome problems including the high unemployment rate, the availability of skill providers that are still scattered, the difficulty of finding work, the trend of learning new skills, the absence of an informal skill provider platform, the absence of media for skill owners to be productive from existing skills.

Triggers

Triggers are things that trigger people's desire to use the ASAH SKILL product design. The desire to have or improve new skills in certain fields is the main trigger why customers need this media platform.

Emotion

Emotion aims to ensure that the product design goals can be achieved and follow users' wishes. So that by taking courses, users can learn new skills and improve their previous skills.

Customer Constraints

Customer constraints aim to determine user wants and needs that must be available on a skill development media platform. In this case, customer needs for the platform include the

availability of learning media for the skills needed, can be accessed on all devices, affordable prices, and easy to use.

Problem Root Cause

Describing the background of the problem emerged the concept of designing the ASAH SKILL media platform. The problems are due to the pandemic, community activities are limited, people are not encouraged to do activities outside the home, access to meet other people is limited, and there is a sense of boredom and boredom because they don't have activities.

Available Solution

Available solution is a solution that can be provided for users of the platform design, both skill seekers and skill providers. Skill seekers will get solutions to find skills easier, varied, and at affordable prices without being limited by space and time. On the other hand, skill providers can provide a platform to channel skills so that they can generate and benefit many people

Your Solution

It is suggested that we provide to answer the needs of users (searchers and skill providers) by providing a platform that brings together skill providers with skill seekers and provides a platform that provides not only formal skills but also informal

Behavior

Habits of people in the current digitalization era use online media to make work easier, get the convenience of studying and working anywhere, and have easy access without limits of space and time.

Channel for Behavior

These are channels that users commonly use to meet their needs. The channels include community, social media (YouTube, FB, IG, Twitter, LinkedIn, TikTok), content distribution platforms, word of mouth, user referrals, and partnerships (Influencers & KDL).

Conclusion

The need for skills is found in the productive age range who experience mobility barriers during the COVID-19 pandemic. Based on the data, 43,1% of the medium used to learn and channel skills are YouTube. But 82.4% of respondents chose there are some obstacles such as less interactive & scattered information available. From the survey results, it can also be seen that learning skills through a specific channel are a necessity. So that this can be an opportunity in providing an application-based platform that can improve the quality of learning from users.

From above, we got the opportunity to provide an application-based platform. To fulfill the customer needs, we need to survey on a scale of 1 to 5 to see which parameters were the main focus of the application. The scale of the greatest interest lies in the ease of application (easy to use) and the provision of profiles for skill providers. Based on the data of customer needs, we formulate the product strategy using affinity diagrams for ASAH SKILL that can be categorized into Technical, Customer Service, Account, and Features. The technical category is created because of the high priority of a platform to run smoothly. Customer Service is needed to maintain the platform's reliability in assisting customers. The account category is made for skill seeker and skill provider accounts. The Features category consists of a category for skill, a chat box between skill seeker and provider, profile viewing for skill provider based on reviews, payment method feature, and preference settings such as appearance, notification, language, etc.

In the last step, we get insight on how to communicate business ideas or concepts to be more accepted by the market through clear segmentation, our specific customers for early adopters are college students, workers (22-27 years), and people who lost their jobs due to the pandemic in Jakarta. Channels used, are channels that users commonly use to meet their needs including community, social media (YouTube, FB, IG, Twitter, LinkedIn, TikTok), content distribution platforms, word of mouth, user referrals, and partnerships (Influencers & KDL). The distinguishing value proposition with existing platforms where people can get skills easily, varied,

and affordable prices without being constrained by space and time. It is also supported by Problem Solution-Fit Canvas which can validate proposed ideas for customer needs that have not been offered by other applications.

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