Designing UI/UX for CareerSite Website Using LeanUX Method

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ABSTRACT

One of the causes of the increasing number of unemployed in Indonesia is due to fresh graduates who do not have sufficient information about careers so they are still unsure about choosing a job that suits their interests. Based on these problems, a CareerSite website was created which will equip the community in choosing and developing their interests and talents according to the job they want. Creating a CareerSite website interface design will make it easier for the public to develop their interests and talents. The research method used in this research is using LeanUX and with Usability Testing. 10 respondents were taken to try the prototype from the CareerSite website then continued to provide an assessment and feedback through a questionnaire. The results obtained from usability testing using the UEQ-S obtained a scales value on the pragmatic quality aspect of 1.900 and on the hedonic quality value aspect of 0.925. 60% of respondents stated that the appearance of the CareerSite website is efficient, fun and creative when used. Feedback obtained from respondents can be used as further research to develop this CareerSite website better.

1. Introduction

Internet users in Indonesia continue to grow from year to year. The Association of Indonesian Internet Service Providers (APJII) stated that the number of internet users in Indonesia has increased from 175 million users to 220 million users in 2022. This increase was driven by the need for communication during the Covid-19 pandemic in the past 2 years. According to the 2021-2022 (Q1) Indonesia Internet Survey, internet users in Indonesia reached 220 million people. Before the pandemic, the number of internet users in Indonesia was 175 million people. Internet penetration among the population in Indonesia is also high, currently reaching 77 percent according to the latest APJII survey. The increase in the number of internet users and usage in Indonesia is strongly influenced by the Covid-19 pandemic.

Looking at the increasing number of internet users in Indonesia, there is also data showing an increase in unemployment in Indonesia. The Central Statistics Agency (BPS) noted that Indonesia's open unemployment rate (TPT) for the August period was recorded at 5.86% or 8.41 million people. This figure is lower compared to August 2021 which reached 6.49% or 9.1 million people.

As reported by CNBC, the Head of BPS, Margo Yuwono, mentioned that the highest number of unemployed individuals come from vocational high school (VHS) graduates. Based on the available data, the unemployment rate for SMK graduates is recorded at 10.38%. Following that, the highest unemployment rate for those below VHS is held by high school (SHS) graduates, with a percentage

of 8.35%. This is due to fresh graduates not having sufficient knowledge about careers, making them unsure of which job to choose.

Fig. 1. 2022 Unemployment Rate Data

With this conflict in mind, the research conducted aims to create a UI website prototype for CareerSite using the Lean UX method, which will then be tested using Usability Testing. Usability testing can help identify and fix problems that may arise during product usage. This can improve the website's quality and ensure that it meets user needs and preferences. In addition, usability testing can also help improve product efficiency and effectiveness, making it easier and faster for users to complete their tasks. The output of this research will be a user-friendly UI prototype that meets the needs of users in finding employment through online career consultation and information..

2. Method

2.1. LeanUX

LeanUX is a development method that focuses on experience rather than design, with the goal of getting feedback from users as quickly as possible in order to make the right decisions. This method is quite efficient for application development because it combines the principles of Lean Startup, Design Thinking, and Agile (Nursyifa, 2021). LeanUX has four rotating process stages aimed at creating a quick and effective user experience. The stages of the LeanUX method can be seen in the following image.

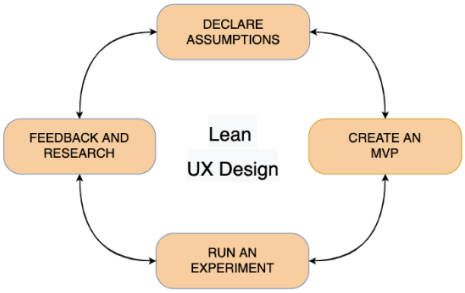


Fig. 2. LeanUX Method Cycle

2.1.1. Declare Assumption

Declare Assumptions is a stage of literature study to collect various theories as research guidelines, conduct observations and analyze data needed in UI/UX design, identify problems by creating a questionnaire, and make a list of assumptions in the form of an explanation of information and problems that exist during system usage. This stage focuses on identifying and revealing assumptions underlying product design [1].

2.1.2. Create an MVP

MVP (Minimum Viable Product) is a product that has features that can meet user needs. Generally, MVP is in the form of a prototype that can be a paper sketch or a clickable wireframe. A good MVP focuses on providing the most important and essential features for users, while avoiding the development of unnecessary features.

2.1.3. Run an Experiment

Run an Experiment is the process of running an MVP. This stage is carried out by testing the prototype to ensure that the prototype created meets the needs of users.

2.1.4. Feedback and Research

Feedback and research are two important components in the LeanUX method. Feedback is input provided by customers or end-users regarding the quality of the product or service provided, while research is a research activity carried out to understand the needs and preferences of customers or end-users.

2.2. Usability Testing

Usability testing is a method used to measure how easy a product or service is to use by end-users. This is typically done by asking a group of testers to use the product or service and perform a series of tasks given, while noting any issues or difficulties they encounter. The results are analyzed to identify problems that occurred during the test and to find solutions to improve the ease of use of the product or service. Usability testing is usually done before the product or service is launched to the market, to ensure that they can be used easily and effectively by end-users.

3. Results and Discussion

3.1. Declare Assumptions

3.1.1 Literature Review

Based on the literature study conducted by the researcher, it can be concluded that a good application is user-friendly and reliable, which means the application should be able to work easily so that users do not experience difficulties and are expected to perform its function with the required accuracy. The journal references used for this study can be found in Table 1.

Table 1. Journal References

No.	Author/Details	Title	Result
1	**Eryana Wahyu Sulistyo dan Sofa Sofiana** Jurnal Multidisiplin Ilmu Volume 1, No. 03, Juli 2022 ISSN 2829-2049	Web UI/UX Design Dictionary Information Services with the Lean User Experience (Lean UX) at Pamulang University	The results of SEQ testing can be concluded that user responses to usability testing by testing scenarios on the application received positive and acceptable results. The results of UEQ testing obtained excellent results on five scales: attractiveness, efficiency, effectiveness, stimulation, and novelty.
2	**Fachry Wirawan Priyanto, Hari Setiaji, S.Kom., M.Eng.** Jurnal Multimedia dan IT Vol.06 No.01 (2022), PP. 011-016 P-ISSN : 2548-9534	Application of LeanUX Method on Website User Experience Design Islamic Vibes	**A. Assumptions** The author and all team members create questions that will facilitate the author in obtaining assumptions. **B. Collaborative Design** The author brings together team members to jointly decide on the design layout. **C. MVPs and Experiment** The author designs a layout that will be used as a benchmark in the process of creating prototypes and systems. **D. Feedback and Research**

			The author receives feedback, which will be used as a reference for future development of the system.
3	**Nursyifa, Rini Mayasari, dan Agung Susilo Yuda Irawan** Journal of Information Technology and Computer Science Volume 4 Nomor 2, Desember 2021 p-ISSN : 2621-3249	Application of LeanUX Method on UI/UX Design of Digilib UNSIKA Application Windows Version	The SUS (System Usability Scale) results obtained an average score of 87.5, indicating that the usability of the prototype is very good. The evaluation results with a success rate on the Thinking Aloud test were 84%, while on the SUS test it was 94%. This proves that there has been an improvement in measuring design progress.
4	**Oka Ananta Pradipta, I Made Sukarsa, dan I Putu Arya Dharmaadi** Jurnal Ilmiah Teknologi dan Komputer Vol. 3, No. 1 April 2022 ISSN 2747-1233	UI Development of Career Consultation Mobile Application Using LeanUX Method	From the survey results conducted by distributing UEQ and SUS questionnaires to 10 respondents, it was found that the shortcomings of the website that became the basis of the study were in terms of dependability and novelty, which each had a value of 1.03 (below average) and 0.5 (below average).
5	**Fedelis Brian Putra Prakasa** Jurnal Buana Informatika, Volume 12, Nomor 1, April 2021: 58-67 ISSN 2087-2534	Gamification Mobile App Design for Scouts with UI/UX Method	This study shows that the implementation of gamification in this prototype was successful. In addition, the design results that have been tested using UI/UX methods obtained an average score of 2.04, which falls under the excellent criteria. Based on the research findings, it can be said that the use of gamification makes scouting activities more interesting.

3.1.2. Observation

During the observation, several things were observed, including similar websites and relevant and common problems. With these observations, the researcher can determine the system's functionality compared to similar websites to identify the system's shortcomings in terms of its interface and reliability. This will allow the researcher to create a website that meets the necessary interface and reliability requirements.

3.1.3. Determination of Assumptions and Outcomes

Table 2. Assumtions and Outcomes

No.	Assumtions	Outcomes
1.	The appearance of websites that are often encountered can seem monotonous.	Provide a website design that is very attractive by following current trends.
2.	Poor website usability.	Provide user-friendly features or website designs to facilitate users.

3.	A website that is perceived to have less effective functionality.	Provide the best functionality to create an effective website.
4.	The website used actually takes a lot of time to use.	Providing a simple yet attractive layout to ensure that users can easily understand and make the website very easy to use.
5.	Lack of satisfaction after using the website.	Providing good and attractive services and systems to attract user satisfaction and generate customer intention to use them.

3.2. Create an MVP

The creation of MVP is based on the assumption results used as the outcome to be achieved. Here, the researcher will describe the design analysis and prototyping stages.

3.2.2. Target User

The target users of the "CareerSite" website are the general public who are still unsure about finding their interests, talents, and careers that match their personalities, including fresh graduates who need a platform to develop themselves.

3.2.3. User Story

The user story of this website focuses on the ease of accessing every provided feature. To describe the process of how users use this website from start to finish, a user storyboard is needed. The user story of "CareerSite" website is presented in the following storyboard image

Fig. 3. CareerSite Storyboard

3.2.4. Experience Map

The experience map of the CareerSite website aims to illustrate the perspective on various interactions that users have with the product or features within the application. The existence of an experience map provides information about the emotions and thoughts of users at different stages when interacting with the product or service being used. In this study, the experience map of the "CareerSite" website is depicted in the form of a wheel as shown in the picture below.

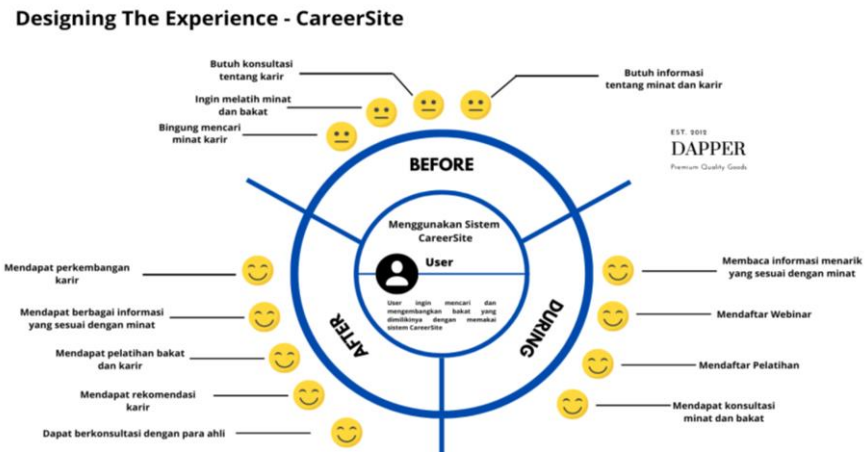


Fig. 4. Experience Map

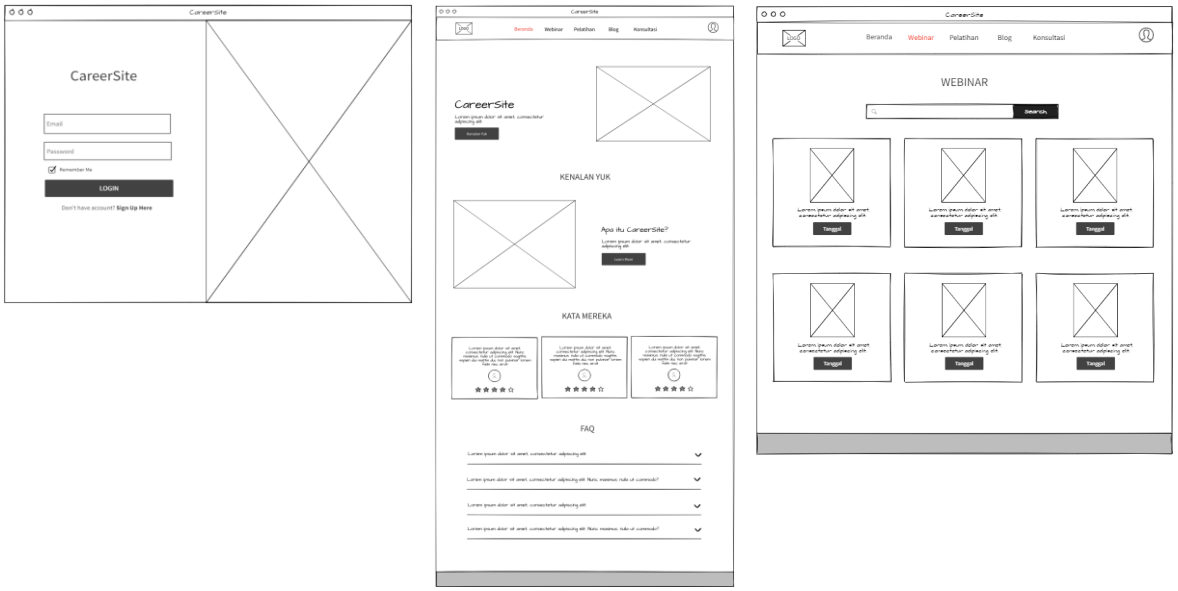
3.2.5. Limitation

The application limitations of the "CareerSite" website include:

1) Admin can manage user members with roles
2) User roles consist of: Admin, Consultant, User
3) Displaying webinars, seminars, and career/interest-related training.
4) Recording consultancy transactions with experts
5) There is a search function.

3.2.6. Low Fidelity Prototyping

Low Fidelity Prototyping is used to obtain a rough and simple version of the product created with the aim of testing and evaluating its feasibility and ease of use. Low fidelity prototyping is made simple to show the general design and how the features function. One form of low fidelity prototyping is wireframing. Wireframing is a sketch design in the form of boxes and lines to illustrate the desired design. The wireframe of the CareerSite website can be seen in the following image:



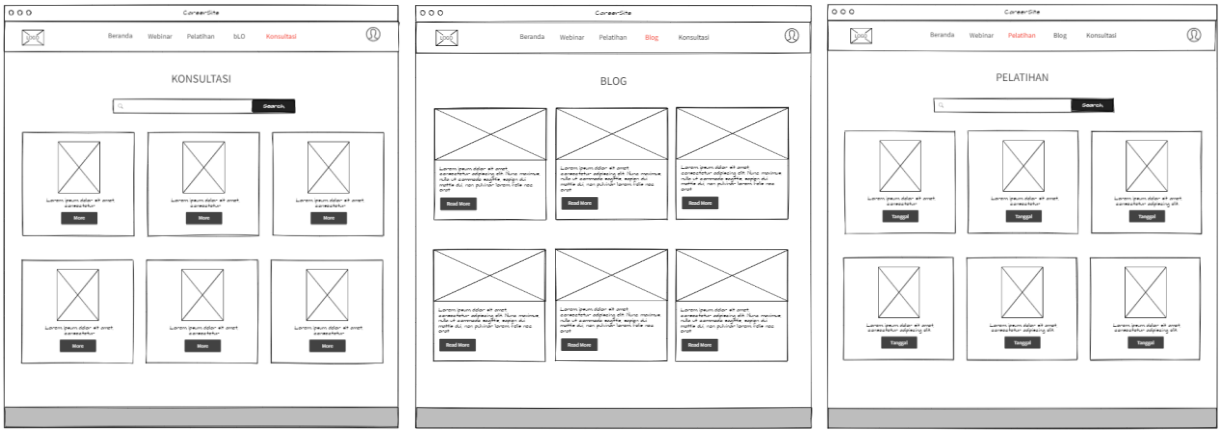
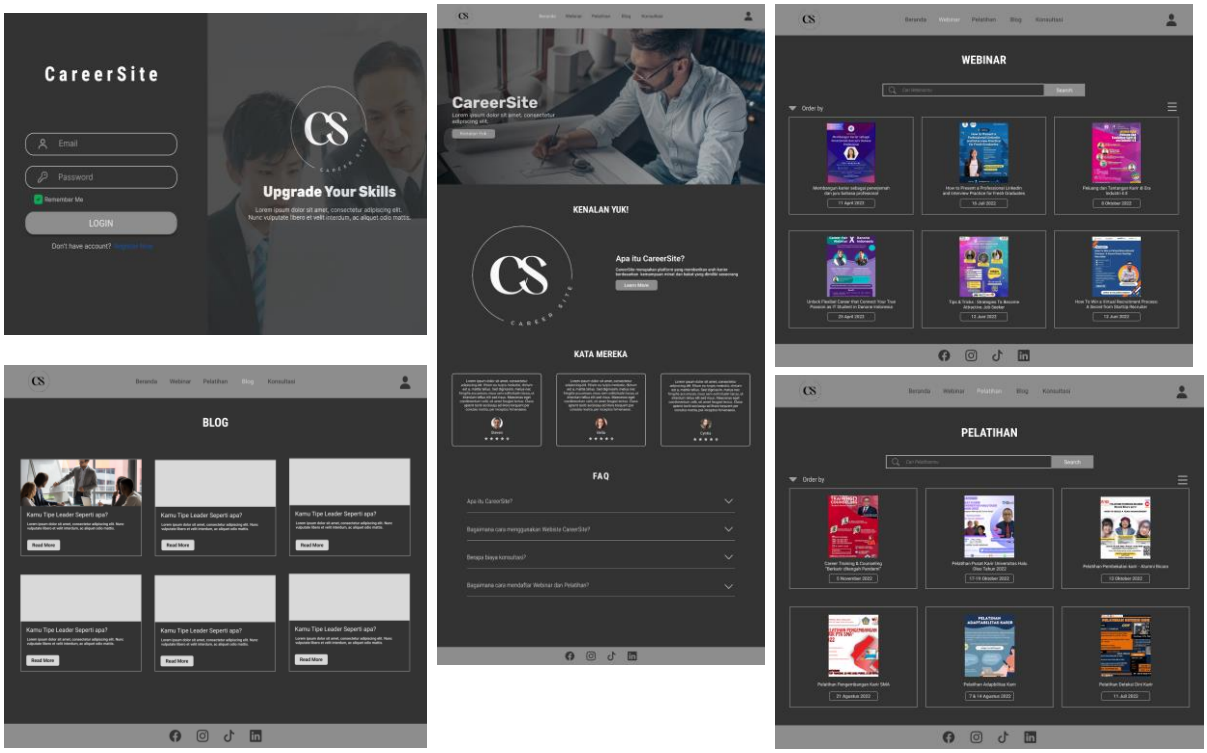


Fig. 5. CareerSite Website Wireframe

3.2.7. High Fidelity Prototyping

High fidelity prototyping is the process of designing a product that closely resembles the final desired product. This type of prototyping can be interactively tested with the interface that is created, making it almost identical to the final version of the product. The creation of high fidelity prototypes helps the design and development team to evaluate and test the product's performance in greater detail, ensuring that the resulting product meets expectations and meets established quality standards. In this study, high fidelity prototyping was created using the Figma tool so that the design of the website could run interactively. The prototyping of the CareerSite website can be accessed through the following link: https://intip.in/FigmaCareerSite. We present some mockups of the website below.



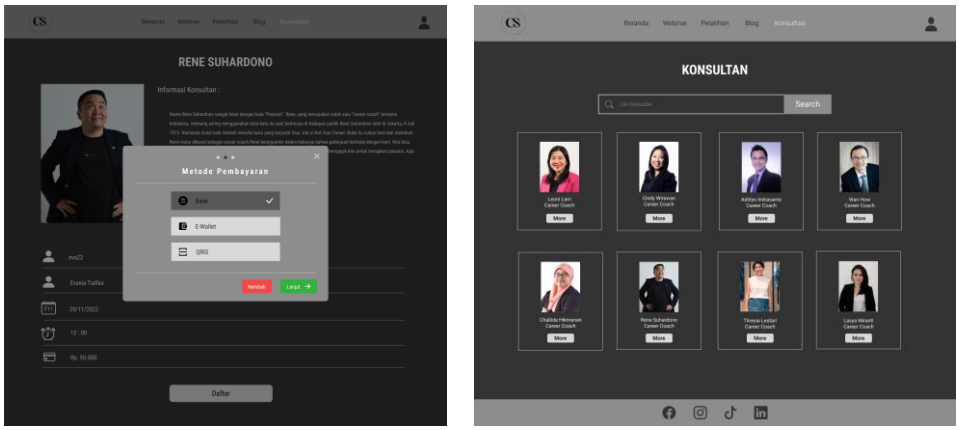


Fig. 6. CareerSite Website Mockup

3.3. Run an Experiment

At this stage, an experimental test is conducted on the interactive prototype of the Minimum Viable Product (MVP) that was previously created. In this experiment stage, usability testing is conducted on the interactive prototype by a number of individuals who are suitable for the target users of the "CareerSite" website.

For the usability testing of the interactive prototype, we used 10 respondents who will run the prototype according to the scenarios and instructions we provide. Table 2 shows the scenarios that will be tested, and Table 3 shows the standardized testing time used.

Table 3. Testing Scenarios

Code	Scenarios
1	How do you log in to CareerSite website?
2	How do you want to find out what CareerSite website is?
3	How do you view the list of webinars on CareerSite website?
4	How do you view the details of a webinar?
5	How do you register for a webinar?
6	How do you view the list of trainings on CareerSite website?
7	How do you view the details of a training?
8	How do you register for a training?
9	How do you view the list of blogs/articles on CareerSite website?
10	How do you view the details of a blog/article?
11	How do you view the list of consultants on CareerSite website?
12	How do you view the details of a consultant?
13	How do you register for a consultation?

Table 4. Standardized Testing Time

Time	Detail	Detail Code
< 5 s	Fast	C
> 5 s until <10 s	Slow	L
> 10 s	Stop (user is considered not understanding)	B

3.4. Feedback and Research

This stage is the final stage. The feedback provided by 10 respondents, who are several students with basic knowledge in the field of information technology, is analyzed through Usability Testing and evaluated with the User Experience Questionnaire Short Version.

3.4.1 Usability Testing

Table 5. Usability Testing Results

	User1	**User2**	**User3**	**User4**	**User5**	**User6**	**User7**	**User8**	**User9**	**User10**
Code1	C	C	C	C	C	C	C	C	C	C
Code2	C	L	C	C	C	C	C	C	L	C
Code3	C	C	C	C	C	C	C	C	C	C
Code4	C	C	C	C	C	C	C	C	C	C
Code5	C	C	C	C	L	C	C	C	C	C
Code6	C	C	C	C	C	C	C	C	C	C
Code7	C	C	C	C	C	C	C	C	C	C
Code8	C	C	C	C	C	C	C	C	C	C
Code9	C	C	C	C	C	C	C	C	C	C
Code10	C	C	C	C	C	C	C	C	C	C
Code11	C	C	C	C	C	C	C	C	C	C
Code12	C	C	C	C	C	C	C	C	C	C
Code13	L	C	C	L	C	C	C	L	C	L

Based on the results of the interactive prototype testing in table 5, it can be seen that the prototype of the "CareerSite" website is very easy to understand for users. However, in code 13, there were 4 respondents who experienced slowness due to the speed of their typing, resulting in delays. After this, an evaluation test was conducted using the User Experience Questionnaire Short Version (UEQ-S). The aspects measured in UEQ-S are pragmatic and hedonic aspects with 8 testing items on the "CareerSite" website.

3.4.2. User Experience Questionnaire Short Version

Table 6. User Experience Questionarie Short ver

Obstructive	o o o o o o o	Supportive
Complicated	o o o o o o o	Simple
Inefficient	o o o o o o o	Efficient
Confusing	o o o o o o o	Clear
Boring	o o o o o o o	Engaging
Unappealing	o o o o o o o	Attractive
Conventional	o o o o o o o	Creative
Common	o o o o o o o	Cutting-edge

During the questionnaire filling process, respondents were accompanied to ensure that they fully understood the aspects being assessed. This was done to maintain consistency in the UEQ inconsistencies. The results obtained after entering the evaluation data from respondents into the Excel UEQ Data Analysis Tool showed that the scale values for the pragmatic quality aspect were 1.900 and for the hedonic quality aspect were 0.925. In the pragmatic quality aspect, there were 4 items that respondents rated as excellent, namely supportive, easy, efficient, and clear. In the hedonic

aspect, there were also 4 items that respondents rated above average, namely exciting, interesting, inventive, and leading edge. 60% of respondents stated that the CareerSite website was efficient, engaging, and innovative when used. The results of the UEQ Data Analysis Tool scales for the evaluated aspects can be seen in figure shows the benchmark results for the evaluated aspects.

Item	Mean	Variance	Std. Dev.	No.	Negative	Positive	Scale
1	1,7	1,8	1,3	10	obstructive	supportive	Pragmatic Quality
2	2,0	0,7	0,8	10	complicated	easy	Pragmatic Quality
3	2,0	0,4	0,7	10	inefficient	efficient	Pragmatic Quality
4	1,9	0,5	0,7	10	confusing	clear	Pragmatic Quality
5	0,9	1,7	1,3	10	boring	exciting	Hedonic Quality
6	1,0	2,7	1,6	10	not interesting	interesting	Hedonic Quality
7	1,2	1,7	1,3	10	conventional	inventive	Hedonic Quality
8	0,6	2,3	1,5	10	usual	leading edge	Hedonic Quality

Short UEQ Scales	
Pragmatic Quality	1,900
Hedonic Quality	0,925
Overall	1,413

Fig. 7. Scale Value Testing Results

Table to create the benchmark graph

Scale	Lower Border	Bad	Below Average	Above Average	Good	Excellent	Mean
Pragmatic Quality	-1,00	0,72	0,45	0,38	0,19	0,76	1,9
Hedonic Quality	-1,00	0,35	0,5	0,35	0,39	0,91	0,925
Overall	-1,00	0,59	0,39	0,33	0,27	0,92	1,41

Fig. 8. Benchmark Testing Results

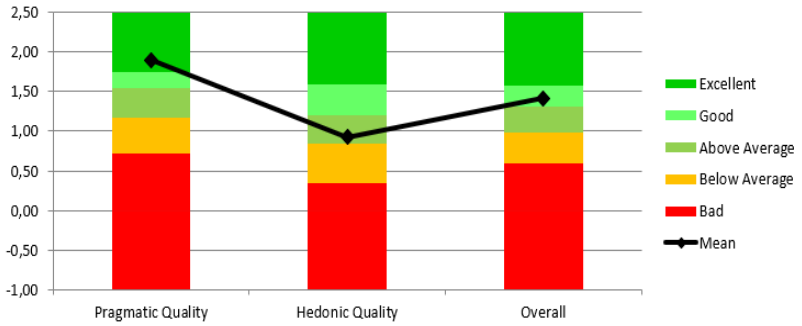


Fig. 9. Benchmark Testing Results Graph

3.4.3. Feedback User

During this interactive prototype testing, we gathered feedback and evaluations from 10 respondents regarding the appearance of the CareerSite website. Additionally, we collected opinions and feedback from the 10 respondents on the CareerSite website appearance. This is expected to be a solution for improving the development of the CareerSite website appearance in the future. The respondent feedback can be seen in Table.

Table 7. User Experience Questionarie Short ver Results

User 1	Adjusting the size of images on the webinar and training pages, as well as the size of the search bar.
User 2	-
User 3	Clear and easily understandable icons and display
User 4	Coherent color combination and layout between elements
User 5	Adjusting the color display

User 6	-
User 7	Attractive design, features, and color display
User 8	Efficient, clear, and user-friendly display
User 9	Addition of more complex features
User 10	The display is already good and easy to use.

The feedback obtained can be further researched to determine whether the assumptions made can provide a solution to the existing problem or not.

4. Conclusion

Conclusion

Designing an interactive prototype of the CareerSite website was done using the Figma tool and following the Lean Ux method. The interactive prototype design was then tested on 10 respondents who were experienced in the UI/UX field. The testing was done using the Usability Testing method and measured with UEQ-S. In this testing, there were 8 statement items to test the consistency of the CareerSite website's appearance.

The results of this testing showed a scale value of 1.900 for the pragmatic quality aspect and a value of 0.925 for the hedonic quality aspect. From the obtained scale values, it can be concluded that the pragmatic quality aspect has excellent interpretation, while the hedonic quality aspect has above-average interpretation (good). 60% of the respondents stated that the CareerSite website's appearance is efficient, enjoyable, and innovative when used.

Opinion

We realize that further development is still needed for the interactive prototype design of CareerSite website that we created, so the feedback we have gathered can be used for further research. This does not rule out the possibility that we are open to suggestions and criticisms given so that the design of the CareerSite website interactive prototype can be improved.

Provide a statement that what is expected, as stated in the "Introduction" chapter can ultimately result in "Results and Discussion" chapter, so there is compatibility. Moreover, the prospect of the development of research results and application prospects of further studies can also be added into the next (based on result and discussion).

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