

Jurnal Rekayasa Sistem Industri Volume 12 No 1 - April 2023

http://journal.unpar.ac.id/index.php/jrsi/index ISSN 2339-1499 (online) – ISSN 0216-1036 (print)

Disampaikan: 23 Agustus 2022 Direview: 1 September 2022 Diterima: 8 Desember 2022

An Evaluation of the Career Development Center Website from User Experience Perspectives

Adindha Karunia Ciptaning Pragowoaji¹, Irwan Iftadi², Rahmaniyah Dwi Astuti³

^{1,2,3)} Industrial Engineering Department, Faculty of Engineering, Universitas Sebelas Maret Jl. Ir. Sutami 36, Kentingan, Surakarta, 57126

Email: adindha.karunia.c.p@student.uns.ac.id, irwaniftadi@staff.uns.ac.id, rahmaniyahdwi@staff.uns.ac.id

Abstract

With the launch of the career development center (CDC) website in the digital era, XYZ university in Indonesia takes the initiative to serve as a liaison between students and companies in need of new talent. The website is intended to distribute job market and career development information to students and graduates. However, no evaluation directly involving students and graduates was conducted during the development process. As a result, this study aims to assess the level of user experience to comprehend users' perceptions of the current CDC website. The User Experience Questionnaire (UEQ) is used in this study to assess students' and alumni's perceptions as one entity. In addition, semi-structured interviews are conducted to better understand users' pain points. From the measurement with UEQ, the website's attractiveness got a positive impression from users with 0,99 points. The pragmatic quality aspect also makes a positive impression. This aspect consists of three variables: perspicuity (1,21 points), efficiency (0,83 points), and dependability (1,12 points). In contrast, the stimulation (0,74 points) and novelty (-0,37 points) variables on the hedonic quality aspect leave the user with a neutral impression. Based on interviews, users believe that the job vacancy information available on the CDC website still needs to be improved in quantity and variety. Users also need help finding the novelty aspect in terms of website appearance. This study successfully incorporated UEQ into the evaluation stage of a university's career development center website, which had never been done in previous research.

Keywords: career development center, interview, UEQ, user experience, website evaluation

Abstrak

Di era digital yang mendukung percepatan pertukaran informasi, universitas XYZ mengambil langkah inisiatif untuk menjadi penghubung antara mahasiswa dengan perusahaan yang membutuhkan talenta baru dengan meluncurkan website CDC. Website ini dirancang untuk mendistribusikan informasi terkait pasar kerja dan pengembangan karir kepada mahasiswa serta lulusannya. Namun, evaluasi yang secara langsung melibatkan mahasiswa dan lulusan belum pernah dilakukan selama proses pengembangan. Oleh karena itu, penelitian ini bertujuan untuk mengukur tingkat user experience untuk memahami persepsi pengguna terhadap website CDC milik universitas XYZ saat ini. Penelitian ini menggunakan User Experience Questionnaire (UEQ) untuk menilai persepsi mahasiswa dan alumni. Selanjutnya, semi-structured interviews juga dilakukan untuk memahami alasan dibalik penilaian pengguna. Hasil pengukuran menunjukkan bahwa daya tarik website memperoleh impresi positif dari pengguna dengan total 0,99 poin. Aspek kualitas pragmatis juga memperoleh impresi positif. Aspek ini terdiri dari tiga variabel, yaitu: kejelasan (1,21 poin), efisiensi (0,83 poin), dan ketepatan (1,12 poin). Sebaliknya, variabel stimulasi (0,74 poin) dan kebaruan (-0,37 poin) pada aspek kualitas hedonis mendapatkan impresi netral dari pengguna. Berdasarkan wawancara, pengguna menilai bahwa informasi lowongan kerja yang tersedia di website CDC milik universitas XYZ masih kurang dalam jumlah dan variasi. Pengguna juga tidak menemukan aspek kebaruan dalam hal tampilan website. Penelitian ini berhasil menerapkan UEQ dalam tahap evaluasi website pusat pengembangan karier milik universitas, yang belum pernah dilakukan dalam penelitian terdahulu.

Kata kunci: career development center, interview, UEQ, user experience, website evaluation

Introduction

Information exchange, including information related to the labor market, takes place very guickly in this digital era. In the middle of the information rush, universities may serve as a bridge between students and firms looking for fresh talent. XYZ University claims this role by providing career development services through Career Development Center (CDC) XYZ institute. Since the first initiative, this university's CDC has strived to be responsive to the job market. Based on this vision, the institute launched a website to facilitate their students and alumnus with information related to the job market and career development. Companies are welcome to register as members to post their job vacancies on the website.

The CDC website must be developed with the user in mind to ensure that the website can meet user needs, including in the evaluation phase. Focusing on user needs at every step of product development is a user-centered design concept (Garrett, 2011). This approach is user-centered and attempts to provide a pleasant and efficient user experience.

All individual interactions with a system that results in thoughts, feelings, and perceptions are referred to as user experience (Tullis & Albert, 2013). UX is essential to system/product design since it promotes user satisfaction and interaction with that system/product (Sabukunze & Arakaza, 2021). It is considered a critical aspect since UX is an experience created by a system/product when someone uses it, and it might affect their decision to use the website again in the future or not. This decision was made as a consequence of user satisfaction with the website.

People who interact with websites bring their past experiences and expectations (Barnum, 2021). Prior experiences and expectations influence people's feelings when utilizing other websites to accomplish their goals. Websites that primarily include informational materials aim to deliver that information as efficiently as possible so that users may understand it (Garrett, 2011). Similarly, the XYZ University CDC website is meant to suit the needs of students, graduates, and partner firms in terms of labor market information and career development.

From the initial launch until 2022, the XYZ University CDC continues to make various

efforts to develop the website. During this time, the need for CDC website users is only evaluated from the point of view of companies that have collaborated with XYZ University CDC and use the website to share information on job openings. Evaluation that directly engages students and alumni has never been done before. Meanwhile, according to Yablonski (2020), a product has the potential to confuse users if the product's objectives and limitations are not well identified during the development process.

Based on the results of preliminary interviews using semi-structured techniques with three alumni and two students using the XYZ University CDC website, interview participants claimed to use the CDC website to identify employment opportunities. Five participants were chosen for the preliminary interview. According to Guest et al. (2016); Nielsen & Landauer (1993); dan Virzi (2016) rule of thumb, 5-6 individuals are considered the optimal minimum number to begin conducting interviews.

Although the five users found the website useful, several improvements from the user experience side are still expected to overcome the problems they faced. User experience's evaluation from the point of view of students and alumni is required to know user impressions and needs.

This study aims to measure the level of user experience in order to understand user perceptions of the XYZ University CDC website. This evaluation will be focused on the students and alumni as one entity who have not previously been involved in the evaluation process. Through these measurements and interviews, user impressions and suggestions for improvements will be known for the website's future development to improve user satisfaction.

Literature Study

User Experience (UX)

In the last two decades, the influence of technology on humans has been increasingly explored from the standpoint of user experience (UX). The ISO 9241-210 standard defines user experience as a person's perception and response from using or anticipating a product, system, or service (Joo, 2017; Jusoh et al., 2019). Based on this definition, user emotions,

beliefs, preferences, perceptions, physical and psychological responses of users, behaviors, and achievements that occur before, during, and after usage are all part of the user experience.

User experience is useful for increasing customer satisfaction by paying attention to usability aspects and interactions between users and computers (Sabukunze & Arakaza, 2021). User experience will promote positive engagement between the user and the system. Jusoh et al. (2019) state that, in the area of research, user experience investigates the user experience for a particular product, system, or service, by including a view of a person's emotions, attitudes, and expectations. The subjective nature of user experience stems from the context of usage and the possible benefits of a product, system, or service (Hussain et al., 2018).

User experience is closely related to usability but they are two different things. The widely used general definition of usability is based on ISO 9241-11, which states that usability refers to the extent to which users may utilize a system, product, or service to fulfill stated goals effectively, efficiently, and with satisfaction in a specific context (Barnum, 2021). In comparison, user experience is a more significant notion that considers users' total experiences with the system/product and the thoughts, feelings, and impressions created by these interactions (Tullis & Albert, 2013).

User Experience Evaluation Method (UXEM)

User experience evaluation is useful for identifying important aspects of interactive product design and providing positive experiences. A user experience assessment will disclose how consumers view a system or product prior to, during, and after interacting with it. Hussain et al. (2018) categorize the user experience evaluation method (UXEM) into three categories: (1)Self-reported measurement method, (2) Observational measurement method, and (3) Physiological measurement method.

The first method involves users describing their opinions and experiences with the product without the influence of other parties. Meanwhile, another party's intervention is required to observe the user's response in the following two techniques. The self-reported measuring approach allows users to voice their

opinion on the product. This approach is appropriate for determining user perceptions and satisfaction with current product quality. One of the methods is a questionnaire which allows for quick and easy self-report rating.

Several standardized questionnaires, such as SUS, AttrakDiff, and UEQ, have been designed to assure measurement accuracy. The standardized questionnaire comprises a series of questions constructed so that the user may answer them independently after using the product or system (Díaz-Oreiro et al., 2019).

User Experience Questionnaire (UEQ)

The UEQ questionnaire provides a holistic evaluation that takes into account three aspects: attractiveness, pragmatic quality, and hedonic quality (Wijaya et al., 2021). According to (Schrepp, Pérez Cota, et al., 2017), a good user experience is insufficient if it allows users to accomplish tasks effectively and efficiently with a product; quality aspects unrelated to tasks must also be addressed. This result is consistent with (Rauschenberger et al., 2013) view that pragmatic and hedonic aspects should be considered. The aspects of the UEQ are based on the research model proposed by (Hassenzahl, 2001).

When people interact with a product, they form a subjective perception of the object's pragmatic and hedonic features (Rohles et al., 2022). The goal-oriented or task-oriented features of a system/product design are the focus of ergonomic quality, also known as pragmatic quality. High pragmatic qualities will enable users to achieve their goals effectively and efficiently. The focus of hedonic quality, on the other hand, is on non-task-oriented quality features of the system/product, such as the design's uniqueness and the user interface's attractiveness (Schrepp, Hinderks, Thomaschewski, 2017). As a result, the model assumes that a human will observe multiple distinct elements when evaluating a software product.

The perceived attractiveness of a product is determined by the user's perception of the quality of relevant characteristics in a certain usage situation (Laugwitz et al., 2008). Users form an overall assessment of a product's potential attractiveness based on their sense of its quality, and that judgment has implications for their behavior and experience (Rohles et al., 2022). As a result, in UEQ, the attractiveness

dimension is a pure valence dimension (Schrepp, 2019). The pragmatic quality aspect is linked to the perspicuity, efficiency, and reliability variable. In contrast, the stimulation and novelty factors are connected to the hedonic quality aspect.

Research Methodology

The main objective of this research is to measure the level of user experience to understand user perceptions of the XYZ University CDC website. Even though many researchers have worked on UX evaluation using UEQ and user interviews, few studies discuss the assessment of university-owned websites, especially career development websites. This paper, "the CDC website" will refer to XYZ University CDC website.

The evaluation will be focused on students' and alums' perspectives as website users. A two-part questionnaire was developed to assess the user experience of the CDC website. It consisted of demographic questions and a list of UEQ questions.

The first section is about the respondent's profile and general questions to gather demographic information from the respondents: gender, age, educational status, current/last education, and university of origin.

The second part is composed of statements from the User Experience Questionnaire. This standardized questionnaire was chosen because it can produce a holistic assessment considering attractiveness, pragmatic quality, and hedonic quality. Thus, it pays attention to the task-oriented aspects related to the website's usability and the non-task aspects. Both classical usability aspects (efficiency, perspicuity, dependability) and user experience (originality, stimulation) are measured.

UEQ measures six variables (Schrepp, 2019):

- Attractiveness: The overall impression of the product that users have. Do users like the CDC website?
- Perspicuity: The ease with which the product is used. Is it simple to learn how to utilize the CDC website?
- Efficiency: Can users complete their tasks without unnecessary effort?
- Dependability: Does the user feel in control of the interaction on the CDC website?

- Stimulation: Is using the CDC website exciting and motivating?
- Novelty: Is the CDC website innovative and creative? Does it pique the users' interest?

The attractiveness variable has six indicator items, whereas the other has four. The item indicators from UEQ used in the second section were taken from the ueq-online.org website, and the version used was the Indonesian version. On a 7-point Likert scale, users were asked to score their agreement with each of the 29 statements. Detailed item indicators of each variable can be seen in table 1 to table 6. The data collection was carried out online via Google Forms to reach alums & students from XYZ University and outside XYZ University who had used the website.

Table 1. Item indicators for attractiveness

Code	No item	Item	
ATT1	1	Annoying	Enjoyable
ATT2	12	Good	Bad
ATT3	14	Unlikeable	Pleasing
ATT4	16	Unpleasant	Pleasant
ATT5	24	Attractive	Unattractive
ATT6	25	Conservative	Innovative

Table 2. Item indicators for perspicuity

			•	
Code	No item	Item		
PER1	2	Not Understandable	Understandable	
PER2	4	Easy to Learn	Difficult to Learn	
PER3	13	Complicated	Easy	
PER4	21	Clear	Confusing	

Table 3. Item indicators for efficiency

Code	No item	ltem	
EFF1	9	Fast	Slow
EFF2	20	Inefficient	Efficient
EFF3	22	Impractical	Practical
EFF4	23	Organized	Cluttered

Table 4. Item indicators for dependability

Code	No Item	Item		
DEP1	8	Unpredictable	Predictable	
DEP2	11	Obstructive	Supportive	
DEP3	17	Secure	Not Secure	
DFP4	19	Meets	Does Not Meet	
DEP4	19	Expectations	Expectations	

Table 5. Item indicators for stimulation

Code	No Item	Item		
STI1	5	Valuable	Inferior	

	Code	No Item	Item	
	STI2	6	Boring	Exciting
Ī	STI3	7	Not interesting	Interesting
	STI4	18	Motivating	Demotivating

Table 6. Item indicators for novelty

Code	No Item	Item	
NOV1	3	Creative	Dull
NOV2	10	Inventive	Conventional
NOV3	15	Usual	Leading Edge
NOV4	26	Conservative	Innovative

Based on six variables, the UEQ questionnaire can assess user perceptions of the CDC website. The underlying reason for the user's ratings via UEQ must be investigated further to examine the findings and formulate improvements for the website. This can be fulfilled by conducting user interviews with the respondents. The goal of the user interview is to uncover the user's pain points or needs. This method's depth of information precedes the sample size (Portigal, 2013).

Like Hasan (2021), this study used semistructured interviews as a follow-up technique to explain concerns presented in the UEQ questionnaire. In this study, user interview participants were chosen among those who completed the questionnaire. In each interview session, participants were asked to describe their experiences with the CDC website, offer further information on the issues they have while engaging with the current CDC website, and suggest ideas for future development.

An affinity diagram will be used to map the outcomes of the interviews. Qualitative data is broken down into little notes and then categorized based on affinity (Remy et al., 2021). According to Martin & Hanington (2012), affinity diagrams aid in recording ideas and observations based on research on individual sticky notes, allowing the significance of each note to be explored.

The results of the user experience evaluation will then be analyzed. The mean value of each variable was calculated using the UEQ Data Analysis Tool. It represents user perceptions of the CDC website, whether positive, negative, or neutral evaluations. The benchmarking results assist in understanding the user experience value of the CDC website compared to other products previously measured using UEQ. The affinity diagram results are used to further elaborate on user

perceptions of the CDC website to understand the context of user ratings.

Results and Discussion

The application of UEQ requires 20-30 respondents to offer a sufficiently reliable assessment (Rauschenberger et al., 2013; Schrepp, Pérez Cota, et al., 2017). This survey gathered 39 respondents, 18 of whom are still students, and the rest are alums. There were 28 female responders (73%). Most responders (62%) were between 18 and 22 years old. The highest level of education attained by but undergraduates respondents varied. accounted for 80% of all respondents. A total of 36 responders were from XYZ University, with the remaining three coming from other universities.

UEQ uses the semantic differential scale, so the participants' UEQ responses are scaled from -3 to +3. The most negative answer is represented by -3, neutral by 0, and positive by +3. Then, the value of each scale is known by calculating the mean value of each item indicator. The user's evaluation is neutral if the mean value is between -0.8 and 0.8. A score greater than 0.8 indicates a positive impression, whereas a value less than 0.8 indicates a negative evaluation (Sagirani et al., 2021; Schrepp, 2019). The questionnaire calculation results are shown in Table 7 below.

Table 7. Results of UX scale calculations

Variable	Mean	Var	Std. Dev.	Desc
ATT	0,99	1,13	1,06	Positive
PER	1,21	0,98	0,99	Positive
EFF	0,83	1,24	1,11	Positive
DEP	1,12	0,88	0,94	Positive
STI	0,74	1,24	1,11	Neutral
NOV	-0,37	1,65	1,28	Neutral

Figure 1 shows that the novelty variable received the lowest score compared to the other variables. Based on the aspect, the attractiveness and pragmatic quality aspects generated a positive impression with average values of 0,99 points and 1,05 points, respectively. Meanwhile, the average value of the hedonic quality aspect is 0,19 points, indicating that the user rates this aspect as neutral.

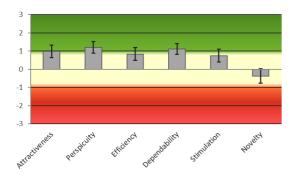


Figure 1. Results of UEQ calculation

Figure 2 shows the position of the CDC website with a benchmark data set given by the UEQ Data Analysis Tool Version 10. Based on 462 product assessment data from various products such as business apps, websites, webshops, and social networks, this data set was created from 21.174 respondents. According to the findings, variable perspicuity is above average, but attractiveness, efficiency, dependability, and stimulation are below average. The website's novelty is the only variable that is classified as bad.

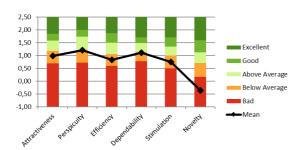


Figure 2. Benchmark results from the CDC website

Afterward, a user interview was conducted to understand the users better. There was a total of eight interview participants who were all willing to be interviewed. The semi-structured interviews included three XYZ University graduates, one non-XYZ University graduate, two XYZ University Master students, and two XYZ University undergraduate students who had previously responded to the questionnaire. Each interview session was conducted for 45-60 minutes. The interview is separated into three stages: the opening, the main questions, and the closing.

Afterward, user statements from the interviews were collected and organized using affinity diagrams. Each interview participant gets a different sticky note color to help identify throughout the grouping process. Finally, out of

230 statements, we create three main labels, eight sub-labels, and nine specific cases, as shown in Table 8.

Table 8. Categorization in an affinity diagram

Label	Sub-label	Specific cases
	In general	-
		Job vacancies
Information	In particular	Events
	·	Career
		Dictionary
		Aesthetic
	Design	Content
		Structure
	Navigation	-
		Registration
Usefulness	Features	Profile
		Application
		Submission
		Self-
		development
		Feature
	Interaction Control	-
	Remarks	-
Opinions	Comparison	
Sp.: 110110	with other	-
	products	

Interpretation of the Findings

The following presents the XYZ University CDC website evaluation result according to 6 UEQ variables and affinity diagram findings.

A. Attractiveness

In the UEQ, attractiveness results from product evaluation based on the quality (pragmatic and hedonic) felt by users during product use. This aspect measures the user's overall impressions of the CDC website. The measurement results show users' positive impressions of the CDC website. Users value the website as enjoyable (ATT1), good (ATT2), pleasant (ATT4), user-friendly (ATT6), and pleasing (ATT3).

Information

The information on the XYZ University CDC website is regarded as credible. Users consider the website active and useful since it gives information on job openings, events, career development news, and interview calls. The availability of job openings in local businesses around the Central Java area draws users, and the amount of event information is also considered adequate.

Even so, users complain about the following:

- Information needs to be updated faster, and the number of job vacancies is relatively small when viewed from the users' study program suitability.
- Users expect more job information coming from big companies.
- Events are still limited to meeting the needs of undergraduate students.
- Information in the career dictionary is considered very limited (currently, only five types of professions are described).

Usefulness

One aspect of website aesthetics that users like is the absence of advertisements that might interfere with the website experience. On the other hand, companies that do not have a logo detract from the website's aesthetics. According to the interview, the career dictionary feature draws users' attention to be utilized as a reference for understanding related to a job position.

Opinions

Users generally agree that the website is effective for discovering job openings. Users also prefer the XYZ University CDC website since it is free to use and has no subscription requirements. Users, however, are not convinced of the benefits of applying through the XYZ University CDC website over alternative methods (email/other websites). Furthermore, information on other websites people visit is thought to be updated faster than on the CDC website. The quantity of jobs on other websites is also considered more varied and appealing.

According to what has been described above. despite receiving positive impressions with a mean value of 0.99 points, comments included sentiments. Nine of these comments are about the information available on the CDC website. According to user interviews, the primary reason users access the CDC website is to find information on job vacancies. Since the user does not fully achieve this goal, the website's attractiveness decreases in the user's eyes. As a result, greater emphasis must be placed on

the availability of information tailored to the user's needs.

B. Perspicuity

The perspicuity variable is focused on the clarity and simplicity of use of the CDC website. Users assessed the CDC website as easy to comprehend (PER1), easy to learn (PER2), easy (PER3), and clear (PER) based on the UEQ results. The CDC website has an above-average score compared to other digital products in the UEQ data set. According to the assessment, 25% of the benchmark data (468 measures total) has a higher perspicuity variable value than the CDC website, while 50% is rated worse.

Information

Regarding information, users continue encountering various writing faults on the website, resulting in a lack of clarity. Furthermore, events with inadequate event descriptions (no registration flow explanation) mislead users.

Usefulness

Several things are included in positive sentiment:

- The signup page's instructions are assessed as clear.
- The account creation feature helps make utilizing the CDC website easier.
- The ability to create XYZ University and non-XYZ University accounts simplifies the registration procedure.

However, users also convey a few things that confuse them:

- The user is unsure if they have to prepare any files to register.
- Users are unaware of the actions required to become a member.
- The "Fresh graduate/experienced" option on the profile confuses users who have not yet graduated and have no job experience.
- Users anticipate the functionality of uploading a personal CV and an experience description column in the CV created on the CDC website to complete the information.
- Users are puzzled while applying for jobs requiring application files to be gathered.
- Because there is no clear information on the process and counseling

results, users are apprehensive about enrolling in the self-development feature.

Opinions

As previously stated, various factors confuse users. Nonetheless, all interview participants said that the XYZ University CDC website is simple to use, even when compared to other websites that users visit.

Based on the description above, despite receiving positive impressions from users with a mean value of 0.99 points, 12 user comments included negative sentiments. Nine of these comments are about the information available on the CDC website. According to user interviews, the primary reason users access the CDC website is to find information on job vacancies. Because the user does not fully achieve this goal, the website's attractiveness decreases in the user's eyes. As a result, greater emphasis must be placed on the availability of information tailored to the user's needs.

C. Efficiency

Next is efficiency, or the ability to utilize the CDC website swiftly and efficiently. The UEQ measurement findings reveal that the website is efficient (EFF2) and practical (EFF3). Meanwhile, users give the website's speed (EFF1) and information organization (EFF2) a neutral rating.

The CDC website has a lower-thanaverage efficiency rating than other digital products in the UEQ data set. According to the assessment, 50% of the benchmark data (468 measures in total) is more efficient than the CDC website.

Despite having a positive impression with a mean value of 0.83 points and being considered efficient, users believe efficiency can still be improved. As a result, nine negative user comments were recorded regarding the information arrangement, registration issues, and application status.

Information

Based on interviews, it is known that information about the number of applicants is noticed and visible by users. Information regarding currently available and closed vacancies is also helpful because it may be used as a reference in the future.

Usefulness

Users have a positive impression of several things related to usefulness:

- Users are comfortable with the CDC website's content structure.
- Each vacancy's description is easily accessible.
- The event's date is clearly stated.
- A list of job openings that is simple to find.
- Simple navigation.
- Filter & search allows users to speed up the job search process.

However, users also mentioned several issues that hindered their ability to use the website efficiently:

- The filter feature is not displayed on the homepage, so users cannot directly search for job vacancies according to their interests.
- Job vacancy categorization is based solely on the most recent and popular.
 As a result, users should use the 'popular' category to look for job openings in large corporations.
- As one of the most updated information categories, event information is located at the bottom of the page (lower chance of being noticed).
- Users still have issues registering with SSO at the email confirmation stage.
- The application status has not changed in a long time, leading users to doubt the application's progress.
- There is no notification of application progress via email as a notification to users without opening the CDC website.
- Users doubt the usefulness of the counseling feature due to the need for more information and instructions regarding the service.

D. Dependability

The fourth variable, dependability, assesses how the user perceives interaction control when using the CDC website. Interaction on the CDC website is considered predictable (predictable - DEP1), supportive (supportive - DEP2), and safe (secure - DEP3). Despite the positive impression, two aspects of interaction control leave users

dissatisfied. As a result, users rate items related to meeting expectations as neutral (DEP4).

Compared to other digital products in the UEQ data set, the dependability variable is also one of the below-average variables. According to the assessment, 50% of the benchmark data (468 measurements in total) are more efficient than the CDC website.

Usefulness

There are two problems with interaction controls.

- The arrow in the website banner is a 'clue' that other information is visible in the banner. The arrow becomes ineffective when the banner only shows one poster, but the user still captures the 'clue.'
- When accessed via smartphone, the "Job Vacancy" column scrolling speed [on the homepage] differs from that of the main page.

E. Stimulation

Users find the CDC website valuable (STI1) and motivating (STI4) due to its stimulation. Nonetheless, users gave the website a neutral rating for its excitement (STI2) and interest (STI3). The benchmark results classify the stimulation variable value from the CDC website as below-average, where 50% of the benchmark data (468 measurements) from other products motivate users better than on the CDC website.

With a neutral rating and a mean value of 0.74 points, there are not many complaints submitted by users that are directly related to the stimulation variable. Users are less motivated to continue using the CDC website because its appearance is less appealing.

Usefulness

Users mentioned several things regarding website stimulation:

- The design does not entice users to use the CDC website regularly.
- The font used is deemed monotonous and formal.
- The failure to register significantly impacts the stimulation of the use of the CDC website. Email verification is not included in the user's account creation stages. This failure resulted in negative emotions and laziness when accessing the CDC website. As

a result, the user may miss out on the opportunity to apply for a job and instead visit another career website.

F. Novelty

The novelty variable assesses how innovative and creative the CDC website appears to users. Users rate the website's creativity (NOV1), leading edges (NOV3), and innovativeness (NOV4) as neutral. The novelty variable had the lowest average value compared to the other variables and was classified as "bad" on the benchmark. The evaluation shows that, in terms of novelty, the CDC website falls into the bottom 25% of the benchmark data set (468 overall measurements in total). Users do not find the appearance novel compared to other career websites, so the CDC website is still classified as conventional (NOV2).

Experience and users' expectations influence the user experience with a product. As a result, the user's perception of the novelty of the CDC website is influenced by their perception of the career website they also use. Users find the CDC website's appearance less appealing because it is relatively simple and formal.

Just like the stimulation variable, users do not submit many complaints regarding this variable. The novelty of the website is not a priority for users. Users value the availability of information and the ability to obtain it over the novelty of the interface.

Website Development Recommendations

The following are suggestions for website improvement. The recommendations are formulated based on the results of the research analysis.

1. Increase the number of job openings offered on the website

By 87% of the questionnaire respondents, who are CDC website users, accessing the website to find information on job vacancies. As the website's primary function in users' eyes, job vacancy information needs to be optimized.

Based on the results of questionnaires and interviews, the main thing users complain about is job vacancy information availability on the website. Although it is beneficial, the limited job vacancies cause users' primary needs to become unfulfilled.

The XYZ University CDC institute can collaborate with more companies to also expand the scope of job vacancies. Efforts to increase the amount of information on job vacancies can be based on four main aspects considered by users of the website when looking for job vacancies. The four aspects are company scale, work qualifications, work location, and suitability of majors. Users hope the university CDC website can provide more information, ranging from job vacancies for companies national-scale to vacancies domiciled in Central Java.

2. Improving the aesthetics and effectiveness of the website user interface

The UI of the website needs to be improved to upscale the hedonic quality aspect, which is closely related to user emotions. This development can be done by paying attention to the typographic hierarchy, font size, font type, and text layout to make it easier for users to find specific types of information. Illustrations and icons can also be added to make the interface more attractive. In addition, writing errors that prevent users from understanding the information on the website also need to be considered.

The registration button as a Call To Action button needs to be designed more prominently by paying attention to the font size and shape of the button. In addition, the registration button for users as jobseekers and companies needs to be distinguished to make it easier for both users. If two registration buttons have been pinned under the website description, then the registration option does not need to be displayed on the navigation bar. The registration CTA also does not need to be shown when the user has registered.

Aside from accessing the website to obtain information on the latest job vacancies, users also access the web to find events organized by the university CDC. Therefore, the placement of the two pieces of information on the website's homepage needs to be considered. As one of the most updated information categories, event information needs to be considered to be placed above the fold (content seen before the user scrolls down). The location of the "Events" section on the homepage can be exchanged for the "Latest News" section.

Still related to the website's homepage, the scrolling speed between the job vacancies

column and the main page can be adjusted to increase the website's dependability. This is related to user complaints when accessing the website via cellphone. The CDC website has been designed interactively to match the width of the user's device screen and browser, and it displays the job vacancy information column when accessed via cellphone. The space between the information column border and the main page border is small, making it difficult for users who want to scroll through the main page. The difference in scrolling speed further decreases user interaction control over the website.

3. Adding instructions to complete the profile

Users who have completed the profile can directly apply for a job vacancy. On the other hand, users who still need to complete the profile will not be able to apply for the job. There are no additional instructions regarding the application submission flow in the job vacancy details. For new users who have completed the profile section, the interaction output of the "Apply for Jobs" button is unpredictable. As for those who have not, the statement "Only members can apply for vacancies" cannot be understood because of the perception that they have carried out the registration process as a condition for becoming a member. Therefore, it is necessary to add information that the application will be submitted based on the personal data that the user has input in the profile section. This information can be added to the "Confirm Application" pop-up notification to ensure users have updated their data. Then the label "Only members can apply for vacancies" can be replaced with more direct instructions such as "Please complete your personal data on your profile." It will increase the perspicuity and dependability of the website.

4. Displaying search and filter features on the website's homepage

There were complaints about the search and filter features, which were considered "hidden" by two interview participants. The Search and Filter features embedded on the website's main page can make it easier for users to search for job vacancies efficiently. Users do not need to access the "Jobs" page first to use the feature. This can improve the consistency and learnability of the CDC website.

5. Adding information about the counseling process

Users expect complete information related to the technical output of the counseling session. Two interview participants brought up the counseling section of the "Self-Development" feature. This information can be provided in direct instructions on the "Online Counseling" page or booklets/posters that explain the full range of counseling services.

The technical aspect relates to the registration flow through the website and how the counseling session will occur. Output relates to what users can expect and what the counselor can provide in the counseling process. This information will help convince, set expectations, and prepare users to maximize the counseling services facilitated by the university CDC. This will increase perspicuity, efficiency, and stimulation.

6. Adding information about the career dictionary

The Career Dictionary is one of the features that attract and distinguishes this university's CDC website from other development/information websites. One of the interview participants considered that the Career Dictionary feature could still be developed by increasing the information presented. Meanwhile, another interview participant revealed that the feature seemed like it needed to be more ready to be launched because the available information was still minimal. The types of jobs in the Career Dictionary can be added by prioritizing the most searched job vacancy by users and the most frequently opened job types by employers on website. This can increase attractiveness of the website.

Adding the "Student" option to the user's profile

In the "General Information" section on the "Member Profile" page, there is only a choice of status between "Fresh Graduate" or "Experienced". Meanwhile, active students, as one type of member on the CDC website, who do not have experience are not included in these two categories. Users become unsure which option to choose and whether it will affect the recruitment process. Therefore it is necessary to add the "Student" option for users who are still students.

Conclusions

The user experience measurement of the CDC website has been successfully carried out using the User Experience Questionnaire and user interviews. Based on the results of the UEQ assessment, the attractiveness and pragmatic quality aspects received positive impressions from users, while the hedonic quality aspects received a neutral impression. According to the attractiveness variable, the website was rated as enjoyable, good, pleasant, user-friendly, and pleasing. In terms of the perspicuity variable, the website is simple, clear, and easy to understand. The website is also thought to be efficient and practical. Based on the interaction control, the CDC website is predictable, assists users in completing their tasks, and is safe.

User interviews have uncovered the background behind user ratings. Overall, participants thought the XYZ University CDC website met their expectations. Nonetheless, not every user is delighted with the CDC website. The responses of the participants support this. Even though they stated that the CDC website met their expectations, they included their complaints and hopes for improvement. An affinity diagram is created for each comment submitted by the user. This diagram aids in the process of drawing conclusions and developing improvement suggestions.

Based on the results of the UEQ and affinity а proposed improvement constructed based on user needs. Suggestions for improving the CDC website include: (1) increasing the available job vacancies, (2) improving the aesthetics and effectiveness of the website user interface. (3) adding instructions to complete the profile, displaying search and filter features on the website's home page, (5) adding information about the counseling process, (6) adding information about the career dictionary, and (7) adding the "Student" option to the user's profile.

For the website to stay relevant to the user's needs, evaluation needs to be done regularly. This research used the self-reported measurement method to understand users' perceptions. Further research in user experience evaluation can be conducted by implementing observational, physiological, or combining several methods to understand better how the user and product interact.

References

- Barnum, C. M. (2021). *Usability Testing Essentials: Ready, Set-- Test!* (2nd ed.). Cambridge: Elsevier.
- Díaz-Oreiro, I., López, G., Quesada, L., & Guerrero, L. A. (2019). Standardized Questionnaires for User Experience Evaluation: A Systematic Literature Review. *Proceedings*, 31(14), 1–12. https://doi.org/10.3390/proceedings201903 1014
- Garrett, J. J. (2011). The Elements of User Experience: User-Centered Design for The Web and Beyond (2nd ed., Vol. 2). Berkeley: New Riders.
- Guest, G., Bunce, A., & Johnson, L. (2016). How Many Interviews Are Enough?: An Experiment with Data Saturation and Variability. *Field Methods*, *18*(1), 59–82. https://doi.org/10.1177/1525822X05279903
- Hasan, L. (2021). Examining User Experience of Moodle e-Learning System. *International Journal of Advanced Computer Science and Applications*, 12(11), 358–366. https://doi.org/10.14569/IJACSA.2021.0121 141
- Hassenzahl, M. (2001). The Effect of Perceived Hedonic Quality on Product Appealingness. *International Journal of Human-Computer Interaction*, 13(4), 481–499. https://doi.org/10.1207/S15327590IJHC130 4 07
- Hussain, J., Khan, W. A., Hur, T., Bilal, H. S. M., Bang, J., Ul Hassan, A., Afzal, M., & Lee, S. (2018). A Multimodal Deep Log-Based User Experience (UX) Platform for UX Evaluation. Sensors (Switzerland), 18(5). https://doi.org/10.3390/s18051622
- Joo, H. (2017). A Study on Understanding of UI and UX, and Understanding of Design According to User Interface Change. In International Journal of Applied Engineering Research, 12(20), 9931-9935.
- Jusoh, S., Almajali, S., & Abualbasal, A. (2019).
 A Study of User Experience for E-Learning Using Interactive Online Technologies.
 Journal of Theoretical and Applied Information Technology, 97(15), 4036–4047.
- Laugwitz, B., Held, T., & Schrepp, M. (2008).
 Construction and Evaluation of a User
 Experience Questionnaire. Lecture Notes in
 Computer Science (Including Subseries

- Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 5298 LNCS, 63–76. https://doi.org/10.1007/978-3-540-89350-9 6
- Martin, B., & Hanington, B. (2012). *Universal Methods of Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions.* Beverly: Rockport Publishers.
- Nielsen, J., & Landauer, T. K. (1993). Mathematical Model of The Finding of Usability Problems. *Conference on Human Factors in Computing Systems*, 206–213. https://doi.org/10.1145/169059.169166
- Portigal, S. (2013). *Interviewing Users: How to Uncover Compelling Insights*. Brooklyn: Rosenfeld Media.
- Rauschenberger, M., Schrepp, M., Perez-Cota, M., Olschner, S., & Thomaschewski, J. (2013). Efficient Measurement of the User Experience of Interactive Products. How to use the User Experience Questionnaire (UEQ). Example: Spanish Language Version. International Journal of Interactive Multimedia and Artificial Intelligence, 2(1), 39-45.
 - https://doi.org/10.9781/IJIMAI.2013.215
- Remy, C., Harboe, G., Frich, J., Biskjaer, M. M., & Dalsgaard, P. (2021). Challenges and Opportunities in the Design of Digital Distributed Affinity Diagramming Tools. *ACM International Conference Proceeding Series*.
 - https://doi.org/10.1145/3452853.3452871
- Rohles, B., Backes, S., Fischbach, A., Amadieu, F., & Koenig, V. (2022). Creating Positive Learning Experiences with Technology: A Field Study on The Effects of User Experience for Digital Concept Mapping. *Heliyon*, 8(4), 1-21. https://doi.org/10.1016/J.HELIYON.2022.E0 9246
- Sabukunze, I. D., & Arakaza, A. (2021). User Experience Analysis on Mobile Application Design Using User Experience Questionnaire. *Indonesian Journal of Information Systems*, 4(1), 15–26. https://doi.org/10.24002/IJIS.V4I1.4646
- Sagirani, T., Hariadi, B., Sunarto, M. J. D., Amelia, T., & Lemantara, J. (2021). Evaluation of User Experience on Using the "MoLearn" Application in Learning Activities of High School Students. *International Journal on Advanced Science, Engineering*

- and Information Technology, 11(6), 2422–2427.
- https://doi.org/10.18517/IJASEIT.11.6.1245
- Schrepp, M. (2019). *User Experience Questionnaire Handbook* (8th ed.), [Online], Diakses dari: www.ueq-online.org [2022, 10 March].
- Schrepp, M., Hinderks, A., & Thomaschewski, J. (2017). Construction of a Benchmark for the User Experience Questionnaire (UEQ). International Journal of Interactive Multimedia and Artificial Intelligence, 4, 4–40. https://doi.org/10.9781/ijimai.2017.445
- Schrepp, M., Pérez Cota, M., Gonçalves, R., Hinderks, A., & Thomaschewski, J. (2017). Adaption of User Experience Questionnaires for Different User Groups. *Universal Access* in the Information Society, 16(3), 629–640. https://doi.org/10.1007/S10209-016-0485-9
- Tullis, T., & Albert, B. (2013). Measuring the User Experience: Collecting, Analyzing, and

- Presenting Usability Metrics (2nd ed.). Waltham: Elsevier.
- Virzi, R. A. (2016). Refining the Test Phase of Usability Evaluation: How Many Subjects Is Enough?:
 - Https://Doi.Org/10.1177/001872089203400 407, 34(4), 457–468. https://doi.org/10.1177/0018720892034004 07
- Wijaya, I. N. S. W., Santika, P. P., Iswara, I. B. A. I., & Arsana, I. N. A. A. (2021). Analisis dan Evaluasi Pengalaman Pengguna PaTik Bali dengan Metode User Experience Questionnaire (UEQ). Jurnal Teknologi Informasi Dan Ilmu Komputer, 8(2), 217–226.
 - https://doi.org/10.25126/jtiik.202182763
- Yablonski, J. (2020). Laws of UX Using Psychology to Design Better Products & Services (1st ed.). Sebastopol: O'Reilly Media.

DOI: https://doi.org/10.26593/jrsi.v8i2.xxxxxxx

This page is intentionally left blank.