USABILITY ANALYSIS ON MOOC PLATFORM

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ABSTRACT

MOOC (Massive Open Online Course) is one of the alternative learning media that offers online learning facilities. This study explores the reasons why the use of MOOCs, especially Coursera, in Indonesia is relatively low. The purpose of this study is to examine usability on the Coursera web so that the use of this web can be maximized in a better way and following consumer desires. The research method used is by using a questionnaire and reviewing the literature. Data were collected from 101 respondents, and the results showed that the Coursera web has an average SUS score of 72.8, rating acceptability ranges in the high category, grade scale in category C, and adjective ratings in the good category. Coursera website is already included in a good category according to its users. Things that need to be improved are system complexity, assistance in using the system, and consistency in the system.

Keywords: *Usability, MOOC, Web Course, Evaluation, System Usability Scale*

1. INTRODUCTION

Technological advances in the 21st century have brought many changes to people's lives in Indonesia. Technological advances, especially the internet, facilitate access to information and communication for the public in all sectors of life, such as the economic, educational, social, cultural, and other sectors. A report from a statistical data portal quoted from databooks.co.id noted that there were 204.7 million internet users in Indonesia as of January 2022. This number covers 73.7% of the total population in Indonesia in early 2022.

The rapid growth of internet users in Indonesia significantly influences daily life. This also has a significant impact on the education sector. One example of its influence is the emergence of applications or websites that provide courses, learning, or training services in an online form. Especially with the emergence of Covid-19 in early 2020, which changed several structures of human life to remote activities or what is called online. So, online learning has also become a familiar subject compared to before Covid-19. The existence of technological developments in the education sector can create a distance learning system or by using internet media. Online learning during the Covid-19 pandemic, of course, requires the role of parents and costs as well as electronic devices such as laptops/computers and smartphones that are

sufficient and the network that needs to be supported. In addition, new methods are needed for online learning. Educators must be able to change strategies, styles, or methods in the teaching process during this pandemic. Masters of technology and information for teachers and students must be able to be applied online. Limited knowledge of information technology only Some people can adapt. People in urban and rural areas certainly have different knowledge about information technology used during online learning during this Covid 19 period. So good cooperation is needed between the government and the education office in conducting online learning. Many applications available today can be used to do online activities, providing opportunities for Massive Open Online Courses (MOOCs) to meet educational needs [1]. Trough the presence of this MOOC, it can facilitate learning because flexible learning activities can be carried out anytime and anywhere [2].

Massive Open Online Courses (MOOCs) are free web-based courses that usually include open access to online materials and interactions for a huge number of participants from around the world [3]. Massive Open Online Courses (MOOCs) typically include open access to online material and interaction for a large number of participants from around the world[4]–[6].

MOOCs are online courses that have free and open enrollment options, open-view curriculum, and open results. MOOC brings together social networks and online resources that are accessible and available to leading practitioners in fields of study. Most importantly, MOOCs build engaged learners who manage their participation based on shared learning goals, prior knowledge, skills, and interests[7]. MOOC is a platform that provides free access to high-quality learning materials, most of which are provided by top universities. They apply the concept of online learning where participants around the world can study, research, and share open educational resources [8]. MOOC shares some of the same course traditions, and also coordinate the long-term availability of informal communications such as social networks, recognized masters' assistance in the field, and openly accessible online assets [6], [9].

MOOC program is very flexible and self-paced learning so that participants can learn independently so they can go through it as fast or as slowly as they want. Furthermore, all the material in this MOOC program may not be available on the first day and is usually given in week-by-week fragments, so participants need to set their own pace. Learning media in MOOCs include learning videos, quizzes, assignments, discussions, exams, final assignments, personal reflections, etc.

MOOC attracts public interest through courses that are held, usually from well-known universities such as MIT, Harvard, Stanford, and many other well-known universities. Many MOOCs are available in Indonesia, such as FLIP, SEAMOLEC, Open University MOOCs, and IndonesiaX. However, the number of courses offered by these three MOOCs is less than the number of courses offered by MOOCs that are known internationally, such as Coursera, edX, or Future Learn [10].

As an online education provider that offers online courses or MOOCs or Massive Open Online Courses from leading universities around the world, Coursera offers a catalog of 6000+ online courses. Coursera courses consist of student discussion boards, homework/assignments, online quizzes or exams, and pre-recorded video tutorials which can be viewed weekly or at the user's convenience. According to a report from the coursera.org website, Indonesia is ranked 5th out of the top 10 countries based on student growth. The number of Coursera users in Indonesia in 2021 will reach 789,000 users.

As this MOOC course progresses, the effectiveness of learning on MOOC is still questionable because studies show that only 10% of participants can complete the MOOC course [11]. MOOC retention rates range between 3 and 15% [12]–[14]. [15], regarding an analysis of the use of the popular MOOC platform in Indonesia shows that around 695,000 people took advantage of MOOC facilities from 2017 to 2019. This figure is still relatively low because if it is a percentage, only 0.4% of total Indonesian internet users use MOOCs and relatively low when compared to data obtained from the Indonesian Central Statistics Agency which noted that there were 24.33 million students. There are several reasons for the decreased performance of this MOOC, one of which is related to usability issues in terms of user experience. Usability is the ability of certain users to use the system efficiently, effectively, and satisfactorily [16]. According to research results [17] using three open-ended questions and eye-tracking methods, Coursera needs to adhere to general design principles, finding that some learners spend much time on tasks such as using web searches, finding courses, and signing up. Most attendees reported that Coursera was difficult to use, and a common complaint from dissatisfied attendees is that Coursera does not offer language support.

Therefore, the purpose of this study is to examine the Usability of the Coursera web so that this website can be better optimized and follow user needs. This research was structured to examine how usability measures the Coursera MOOC platform in Indonesia. This usability measurement is carried out to determine how effective, satisfying, and efficient the Coursera website is. This study explores the reasons why the use of MOOCs, especially Coursera, in Indonesia is relatively low. This research proves whether a system's usability affects an interest in using the MOOC platform in Indonesia. Studies discussing the usability of MOOC in Indonesia are still rare, so benefit of this study is that it can be an additional insight and reference because this paper discusses the usability scale system on the Coursera MOOC platform in Indonesia. This study was compiled to help MOOC platform developers, namely Coursera, to be better or improve existing platforms by providing a better user experience.

2. LITERATURE REVIEW

Massive Open Online Courses (MOOCs) are web-based courses available for free that usually include open access to online materials and interactions for a large number of participants from around the world [4]–[6]. MOOC is an online tutoring with free and open registration options, a publicly shared

curriculum, and open results. MOOC mixes existing social networks and online energy resources and is assisted by well- known professionals in their fields.

In online higher education technology, MOOC (Massive Open Online Courses) courses have become a significant influence in education today. MOOC has opened new doors for students with opportunities that go beyond the boundaries of traditional education. MOOC stands for massive open online courses. MOOCs are online courses with interactive assignments, online learning videos, interactive assignments, forums, homework, and quizzes or exams. Students can watch tutorials, study course material, take quizzes and tests, and participate in class discussion forums at any time. Some MOOC platforms have recently started offering learning certificates at low prices and some platforms also offer certificate financing [18].

Blended learning is a combination of face- to-face interaction introduced at the end of the 20th century. All educational institutions around the world support blended learning in the 21st century. (Cairns & Alshahrani, 2013). MOOC is blended learning with interactive tools that deliver online courses that allow students to access learning resources anywhere, anytime. Designed as standalone online courses, MOOC gives students free access to unlimited capacity in each course. In a new form of teaching and learning emerging in higher education around the world, MOOCs exist alongside traditional university courses, resulting in blended learning courses[19].

One of the main goals of hybrid teaching and learning is to enhance students' learning experiences and ultimately their success and satisfaction[19]. Many educators and practitioners have explored how MOOCs can improve students' attitudes, outcomes, and learning experiences, especially in formal and informal higher education settings in recent years. From an educational perspective, students are expected to learn through and use interventions to achieve learning objectives. for example, in online learning, usability is closely related to user interaction [20].

Through the MOOC specifications according to [21], successful completion of the MOOC is determined by student satisfaction with the course. [22] As already explained, MOOCs are used as a helpful tool for editing and compiling content that promotes more effective learning, maintains a familiar environment for students, and reduces the learning burden. Studies in the literature indicate that there is empirical evidence for the usefulness of

MOOCs. For example, research [23] customized troubleshooting template for platform troubleshooting videos. The second study conducted empirical research to find out how various factors such as content, navigation, learning and support, accessibility, interaction, self- evaluation and learning ability can influence students' motivation to study at MOOC [12].

The benefits of MOOCs have been widely discussed in the literature, but there are few expert reports on some of the problems and challenges associated with using MOOCs. For example, [24] evaluated the usability of educational websites among students in Jordanian universities. Student dissatisfaction with the design was noted, although they were satisfied with the site's content and navigation (ease of use).

The Malaysian public views MOOCs as a very recent development in Malaysia [25], and other recent research emphasizes the need to investigate further the factors that influence student readiness for MOOCs [26]. Even though these courses are free and helpful for student learning, there are still a few students who optimize the use of the system [27]. Due to little literature on implementing OpenLearning MOOCs in Malaysia, little attention has been paid to their use. With the above needs in mind, this paper addresses the current research gaps on the utility of OpenLearning MOOC to support undergraduate learning from a Malaysian perspective.

MOOC offers an attractive learning platform, especially for users with limited time, space, and financial difficulties [28]. Therefore the number of MOOC enthusiasts increased compared to the previous year. However, because students can freely choose when to study, MOOCs have a high dropout rate. Study [29] explains that there are several factors that trigger the emergence of dropout problems, one example is the lack of motivation from students to learn, learning material that is difficult to understand and also lack of support.

[30] Shows that the problem of high dropout rates caused by poor usability in the learning environment.There are many definitions of usability in the literature. One is the Nielsen definition, which describes usability with five distinct components. According to Nielsen's definition, the ability to learn efficiency, satisfaction, and memorability is the primary key of the ease of communication in the interface environment and its users.

The definition of usability is similar to Nielsen's definition of usability, namely ISO 9241- 11 which

describes usability in terms of efficiency, effectiveness, and satisfaction. So to find out the level of usability, it is necessary to test a web on its users[31]. To explain these components, effectiveness is that the user can do the task correctly and accurately. Efficiency is the resources that the user has spent while performing the specified task. Satisfaction is the positive or negative attitude of the user to the product (International Organization for Standardization). When the effectiveness of the Coursera learning environment was examined, the successful completion of the tasks showed that Coursera's usability was generally acceptable. This finding is in line with the results of previous studies.

Based on previous research, this paper uses usability measurements with the System Usability Scale (SUS). The System Usability Scale (SUS) is a questionnaire that can be used to measure the usability of computer systems according to the subjective perspective of its users [32]. John Brooke developed SUS in 1986. Currently, system usability scale (SUS) is widely used to measure usability. The System Usability Scale (SUS) has several advantages, including that SUS is easy to use because it has a score of 0-100. SUS is very easy to use and does not require complicated calculations. SUS is available free of charge, requires no additional costs, and has been proven to be a valid and reliable measure, even for small sample sizes [32]–[34]. Based on data obtained from the Indonesian Statistics Center, there are 24.33 million students in Indonesia in the 2021/2022 academic year. From these statistics, it can be seen that MOOC users in Indonesia are relatively low compared to the number of students in Indonesia

Research [15] regarding the analysis of the use of the popular MOOC platform in Indonesia shows that around 695,000 people are utilizing MOOC facilities from 2017 to 2019. This figure is still relatively low because the percentage is only 0.4% of the total Indonesian internet users using MOOC. Several online sites included in the MOOC platform include Sekolah Pintar, IndonesiaX, SPADA, Code Saya, MOOC Universitas Terbuka, and Dicoding.

Based on research conducted by [35], which analyzed the effectiveness of using the Massive Open Online Courses (MOOCs) system, it was stated that this system was one of the most prominent extensions of distance learning, especially during the pandemic and post-pandemic times. The results show that 73.3% of the respondents failed to complete the MOOC.

According to [36], there are ten general principles for user interface design, which are called usability heuristics. These include system state visualization, system alignment with the real world, consumer control and independence, consistency, and standards, error prevention, memory discovery, flexibility and ease of use, aesthetics and minimal design to help customers identify, diagnose, and correct faults, and assistance. as well as elections. This study was inspired to use the heuristic usability principle applied to the MOOC platform to measure user experience.

Usefulness resides in the interaction between the user and the product or system and can only be measured carefully by considering the consumer's ability, satisfaction, and income. Usability may change when the product, system, user, task, or environment characteristics change. A product cannot or cannot be used by itself but has characteristics that determine its suitability for a particular user, task, or environment. This paper helps to get an idea about the interactivity between the system and the user interface.

According to research [37], Sus is a valid and reliable measuring instrument, SUS is able to make a comparison between normal scores and scores that people get or achieve, Sus is able to know whether people like the system you are using or not, not only that with it Sus if they will recommend to others. All of these activities can be done within a short duration, and believe the results obtained can be relied upon. Ask some small users or ask for the impression of the first message to the system. Sus is very relevant to compare two application versions based on different technology. Sus has successfully used all kinds of technologies, including hardware, cellphones, business software, and others, even though they are made before people know the website.

Research [38] stated that SUS was initially developed in English, and no research has been conducted to develop Indonesian type SUS. The existence of this self- adaptation version is intended to help usability researchers and practitioners in Indonesia assess product usability. Therefore, this study was conducted to adapt the original SUS to the Indonesian type through cross-cultural suitability and reliability tests. SUS Indonesia compatibility is 0.841, which leads to the conclusion that this version can be relied upon by service professionals. The results of the study used an adaptation of 10 Indonesian translations of SUS items and were considered equivalent to the corresponding items from the original SUS. This version of SUS was also

validated with ten respondents as discussed in the previous section. This instrument has a similar pre-meaning semantic comparison to the original SUS, and its version has no difficulty translating the language rules.

Research conducted by [39] regarding User Experience analysis of university academic portal users was carried out using quantitative research methods. In this case, getting the usability part is the satisfaction that affects the network. The data processing method in this research uses the System Usability Scale (SUS) questionnaire, which contains ten questions for the participants. When the questionnaires have been collected, they are then calculated using the method for each respondent being summarized for each question. For odd questions 1, 3, 5, 7, and 9, subtract 1. For even questions, it is 5; subtract the value from problems 2, 4, 6, 8, and 10. Then add (*2.5). The score is 0-100. When all scores are obtained for each participant, the average number to obtain the total score is by adding the total score of the respondents and dividing it by the number of respondents. After the total number of each respondent is calculated, it is interpreted based on the determination of the level of the adjective. The user experience (UX) analysis results show that usability can be estimated using the System Usability Scale questionnaire. Consumer experience and satisfaction can be measured by consumer income using the results of calculations and survey testing, proving that the Sam Ratulangi University INSPIRE portal rises to the Acceptable category level with a SUS score of 70, 88, and the Adjective category "good" (good) is heard. Grade C qualifications and income are based on the evaluation ratio. Complaints from respondents or based on feedback, suggestions for feedback from respondents include adding notifications or icons that display notifications to the login page, as well as adding registration data to the login page and adding images to their original position settings to make them more attractive.

Research conducted by [40] aims to test the IndonesiaX website. The research method carried out by researchers in this research is quantitative; this is in this research carried out there is a test carried out on the data generated from the questionnaire, namely by testing the validity and reliability. In this case, to get the usability part that affects the website. The data processing technique in this research is to use a System Usability Scale (SUS) questionnaire which contains ten questions for participants, and when the questionnaires have been collected, then the calculation of the results of the Indonesian test is calculated. co. id using the SUS instrument follows

several conditions, namely that each statement has a contribution score, and each number varies from 0 to 5. For each sentence with an odd number, the response ratio is that the respondent decreases with 1 each sentence is even-numbered, up to 5, minus the scale of the respondent's answer. To get the total number of usability systems, the total number of inputs is multiplied by 2.5. The results of the IndonesiaX website quality test prove that the IndonesiaX website gets a score of 69.4, which means that the IndonesiaX website is assessed as an area that can be obtained with a large marginal score, and the class ratio and adjective evaluation are in good criteria.

3. RESEARCH METODOLOGY

The methodology used in this research is the quantitative method. Quantitative research methods are methods for responding to research problems related to information in the form of values and statistical programs. Data was collected through a usability testing questionnaire based on the System Usability Scale Questioner.

The method of collecting samples from this research is probability sampling, which is done randomly without looking at the strata that exist. The population in this research is all consumers who have used Coursera. The sample size of this case study research is based on the Slovin formula. The total population for this research is 789,000 Coursera users in Indonesia. As a result, the percentage of allowance used is 10%, and the calculation results are rounded to achieve conformity, namely 100 respondents.

The SUS calculation uses a 5-point Likert ratio, namely "Strongly Disagree=1", "Disagree=2", "Neutral=3", "Agree=4", and "Totally Agree=5". Respondents are asked to provide an evaluation of 10 items. The SUS statement matches the subjective evaluation [32]. The problem notes from SUS that are intended to be used and distributed to respondents refer to instruments from Brooke [41], which have adapted themselves to Indonesian [38], which is shown in this table 1.

Table 1: System Usability Scale Questionnaire

1	I think that I would like to use this systemfrequently.
2	I found the system unnecessarily complex.
3	I thought the system was easy to use.
4	I think that I would need the support of a technical person to be able to use this

	system.
5	I found the various functions in this systemwere well integrated.
6	I thought there was too much inconsistency inthis system.
7	I would imagine that most people would learnto use this system very quickly.
8	I found the system very cumbersome to use.
9	I felt very confident using the system.
10	I needed to learn a lot of things before I could get going with this system.

Table 2: System Usability Scale Questionnaire (Indonesian version)

1	Saya berpikir akan menggunakan sistem ini lagi
2	Saya merasa sistem ini rumit untuk digunakan
3	Saya merasa sistem ini mudah digunakan
4	Saya membutuhkan bantuan dari orang lain atau teknisi dalam menggunakan sistem ini
5	Saya merasa fitur-fitur sistem ini berjalan dengan semestinya
6	Saya merasa ada banyak hal yang tidak konsisten (tidak serasi pada sistem ini)
7	Saya merasa orang lain akan memahami cara menggunakan sistem ini dengan cepat
8	Saya merasa sistem ini membingungkan
9	Saya merasa tidak ada hambatan dalam menggunakan sistem ini
10	Saya perlu membiasakan diri terlebih dahulu sebelum menggunakan sistem ini

Each value in the statement has a participation number. The input point number for each item ranges from 0 to 4. For points 1, 3, 5, 7, and 9, the entry point is the ratio position minus 1. For points 2, 4, 6, 8, and 10, the entry point number ie, 5 minus the ratio position. Multiply the total input level by 2.5 to get the total system advantage. SUS numbers range from 0 to 100 [38], [42]. A product has good usability if the overall SUS score is the same or above 68 [38], [43].

The following is the formula for calculating the SUS score [40]:

SUS score =

$$\{(S1-1)+(5-S2)+(S3-1)+(5-S4)+(S5-1)+(5-S6)+(S7-1)+(5-S8)+(S9-1)+(5-S10)\}*2.5$$

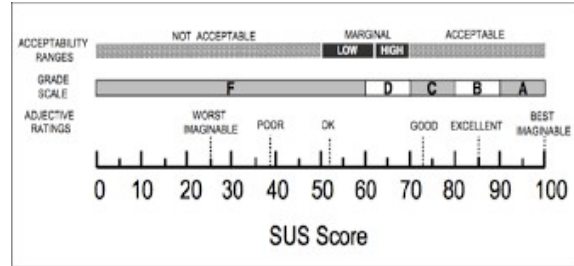System usability scale scoring methods based on the calculation:

1. Acceptability Ranges

Figure 1: Acceptability Ranges

2. Grade Scale

Table 3: Grade Scale

SUS Score	Grade
>80.3	A
68-80.3	B
68	C
51-68	D
<51	F

3. Adjective Ratings

Table 4: Adjective Ratings

SUS Score	Adjective Ratings
>80.3	Best Imagine
68-80.3	Excellent
68	Good
51-68	Ok
<51	Poor

4. DISCUSSION AND RESULT

Based on data obtained from 101 respondents, it is known that 57.4% are female and 42.6% are male. The age of the respondents is dominated by the age of 10-25 years, which is 51.5% or the equivalent of 52 people. Then for respondents aged 26-41, there were 46 people, and three respondents aged between 42-57 years. The highest level of

education for respondents was at number 54, with the final level of a Bachelor's Degree; the last education level of 32 respondents was high school, the last education level of 11 respondents was a diploma and the other four respondents were Masters. Based on the data obtained, the largest number of Coursera users have jobs as employees/civil servants, with a total of 38 people. In the second place, most Coursera users have jobs as students or students, with a total of 32 people. And 18 people work as housewives, and 12 respondents are teaching staff (teachers/lecturers)

The recapitulation of the results of distributing questionnaires for usability testing based on the System Usability Scale (SUS) was obtained in Fig 2.range from 0 to 100 [38], [44]. A product has goodusability if the overall SUS score is the same or above 68 [38], [43].

Figure 2: Recapitulation of the results of SUS-based questionnaire distribution

	Respondent	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	SUS Score
1	Respondent 1	2	3	3	1	1	2	3	0	1	0	40
2	Respondent 2	1	1	1	2	1	2	2	1	3	0	35
3	Respondent 3	3	3	3	4	3	3	3	3	3	3	77,5
4	Respondent 4	3	4	4	4	3	3	3	3	4	3	85
5	Respondent 5	3	3	2	3	2	3	3	3	3	3	70
6	Respondent 6	3	3	3	2	3	1	2	3	3	2	62,5
7	Respondent 7	3	2	2	4	4	3	3	3	3	4	77,5
8	Respondent 8	2	1	1	2	1	2	2	1	0	1	32,5
9	Respondent 9	4	3	3	3	3	4	4	4	3	4	87,5
10	Respondent10	4	3	3	3	3	4	4	4	3	3	85
...	...	...	...	...	...	...	...	...	...	...	...	...
101	Respondent 101	3	3	3	3	3	3	3	3	3	2	72,5

The data obtained in Fig.2 is processed using Microsoft Excel with the SUS method. Based on the data processing results, the average SUS score is obtained, which is presented in Fig. 3

Figure 3: Recapitulation of the results of SUS-based questionnaire distribution

	Respondent	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	SUS Score
1	Respondent 1	2	3	3	1	1	2	3	0	1	0	40
2	Respondent 2	1	1	1	2	1	2	2	1	3	0	35
3	Respondent 3	3	3	3	4	3	3	3	3	3	3	77,5
4	Respondent 4	3	4	4	4	3	3	3	3	4	3	85
5	Respondent 5	3	3	2	3	2	3	3	3	3	3	70
6	Respondent 6	3	3	3	2	3	1	2	3	3	2	62,5
7	Respondent 7	3	2	2	4	4	3	3	3	3	4	77,5
8	Respondent 8	2	1	1	2	1	2	2	1	0	1	32,5
9	Respondent 9	4	3	3	3	3	4	4	4	3	4	87,5
10	Respondent10	4	3	3	3	3	4	4	4	3	3	85
...	...	...	...	...	...	...	...	...	...	...	...	...
101	Respondent 101	3	3	3	3	3	3	3	3	3	2	72,5
	Total											72,8

Based on the results of data processing in Fig. 3, it can be seen that the Coursera web has an average

SUS score of 72.8 with rating acceptability ranges in the high category, the grade scale in category C, and the adjective ratings in the good category (good).

Furthermore, calculations are also carried out on the number of questions to determine which question has the lowest overall score by considering the difference between the total score for each problem and the ideal number for 101 respondents. As a result, the ideal score is obtained for each part of the problem. The results of calculating the difference in scores will show the question of what factors are lacking from the Coursera web. The results of calculating the difference in scores are in Fig. 4.

Figure 4: Recapitulation of Calculation Results for theDifference in Scores for Each Question

	Ideal Score Total	Ideal Score of 101 Respondents	Total Score Difference
1	329	404	75
2	299	0	-299
3	316	404	88
4	256	0	-256
5	327	404	77
6	308	0	-308
7	316	404	88
8	308	0	-308
9	298	404	106
10	183	0	-183

Based on Fig 4, it can be seen that the level of comparison of negative ratings is in question number 2 regarding the complexity of the system, question number 4 regarding the motivation to use the system, question number 6 regarding the stability of the system, question number 8 concerning uncertainty in using the system and question number 10 regarding adaptation to the use of the system. The analysis of the calculation of the difference in scores shows that improvements to theCoursera website can be made in the field of systemcomplexity, encouragement in system use, system stability, methods for overcoming difficulties or confusion in system use, and solutions regarding ways to be able to adapt to system use.

5. CONCLUSION

Based on data analysis and reviews, it can be concluded that the Coursera website has an average SUS score of 72.8 with a rating acceptability range of the high category, the grade scale is in category C, and the adjective ratings are in a good category.

Coursera website is already included in a good category according to its users, but it still needs improvement so that it can be more effective and efficient to use. Based on the hypothesis at the beginning, it was found that the usability of a system affects an interest in using the MOOC platform because, based on the results of the questionnaire that was distributed to several respondents, it was found that users would more often use the MOOC platform if the system was easy to use, the system could be learned quickly and the platform integrated well.

As for improvements to the Coursera web, they can be done in terms of system complexity, assistance in using the system, consistency in the system, ways to overcome difficulties or confusion in using the system, and solutions related to how to be able to adapt to system use. The solution from the author is that additional features are needed, such as pre-test and post-test of a course and also the need for a forum for users to provide feedback to Coursera.

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