ANALYSIS OF USER RATINGS ON THE BUBBLE LYSN APPLICATION USING THE SYSTEM USABILITY SCALE (SUS) METHOD

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ABSTRACT

Artists from the agency. In 2020 Dear U launched a bubble feature that can send messages between fans and artists in the form of text, video, photos, or voice notes with a live broadcast system where these messages will reach users who subscribe and vote for the artist they like. This feature also has an attractive appearance with two-way communication where users can also reply to messages sent by the artist. So this feature allows users and artists to feel closer to each other. This study aims to analyze the usability of the bubble lysn application based on the user's experience.

*Keywords***:** Bubble Lysn, Usability Testing, SUS, System Usability Scale.

1   INTRODUCTION

Along with the rapid development of the era, there are finally many ways and ideas to make it easier for humans to communicate, including making it easier for idols and their fans to share. So to facilitate this communication, a bubble lysn feature was created. The bubble lysn application from South Korea is specialized in the K-pop industry, where K-pop idols can interact in real-time with their fans anywhere and anytime without time and space restrictions.

This app was launched in 2018 and is free to use. There is also a paid fan club membership available, with many interactive features such as announcements, news, events, music program schedules, and cheering posts from SM artists. In February 2020, they launched Dear U Bubble, which gained immense popularity by adding a mobile message reply function that allowed artists and fans to communicate quickly and easily. This service also offers a translation feature from Korean to Indonesian and other languages to make it easier for its users.

2   LITERATURE REVIEW

2.1   Usability

Usability comes from the word usable, which means it can be used properly. Something can be good if failures in its use can be eliminated or minimized and provide benefits and satisfaction to users.

Usability evaluation is carried out to evaluate the interaction between technology products and users. Nielsen defines usability as having five components, namely:

1. Learnability (convenience) measures user ease in using the system and the ease of use in carrying out a function.

2. Efficiency (efficiency) is defined as the resources expended to achieve the accuracy and completeness of objectives.

3. Memorability (easy to remember) is how the user can retain knowledge after a certain period.

4. Errors, how many, and what errors are made by the user. The user's mistakes include discrepancies between what the user thinks and the system presents.

5. Satisfaction, what are the responses and feelings of the user towards the product design as a whole after using the product?

2.2　System Usability Scale (SUS)

A system usability scale is a tool used to measure the usability or usability of a system, product, or service. SUS is a popular assessment method used extensively in user interface development and user experience research.

SUS was developed in 1986 by John Brooke to measure user satisfaction with software systems. It is enough to consist of 10 statements that have a Likert scale of 1-5.

Table 1. SUS Statements

Number	Statements	Scale
1.	I feel the bubble lysn application is easy to use and learn.	1-5
2.	I need help from other people in using the bubble lysn application.	1-5
3.	The bubble lysn application has a system that works effectively and efficiently.	1-5
4.	I feel the features in the bubble lysn application are working correctly.	1-5
5.	I find it easy to remember the features of the bubble lysn application.	1-5
6.	I find it easy to remember how to use the bubble lysn application after not using it for a while	1-5
7.	I've never encountered an error when using the bubble lysn application.	1-5
8.	I feel there are a lot of inconsistencies in the bubble lysn app.	1-5
9.	I feel the bubble lysn application has an attractive appearance.	1-5
10.	I feel comfortable using the bubble lysn application.	1-5

Respondents must choose one answer from the five scales starting from strongly disagree (STS) with a score of 1, disagree (TS) with a score of 2, neutral (N) with a score of 3, agree (S) with a score of 4, strongly agree (SS) with a score of 5.

Table 2. Choice of Likert Scale Statement

Scale	Choice of statement scale
1	Totally disagree
2	Don't agree
3	Neutral
4	Agree
5	Strongly agree

3　RESEARCH METHOD

The research method is the stages and steps carried out during the research. The locations carried out are from planning to completion. This type of research is descriptive quantitative, the scene describing, analyzing, and explaining something studied as it is and concluding phenomena that can be observed using numbers. The process carried out in the research stage is as follows:
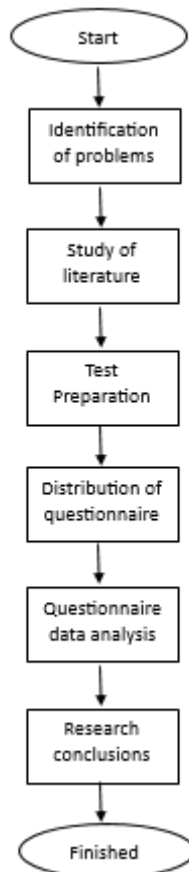
Figure 1 Research Method

4   RESULT AND DISCUSSION

4.1   Respondent Description

After distributing the questionnaires with responses from 41 respondents, the next step is to describe the characteristics of these respondents in 3 different categories: gender, age, and occupation.

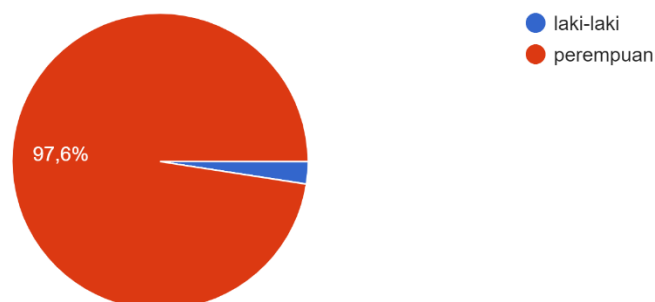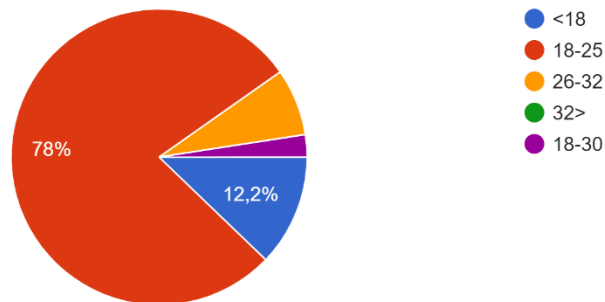### Description by gender

Jenis Kelamin
41 jawaban

Figure 2. Diagram of Respondents Based on Gender

It can be seen in Figure 2 that the dominant users of the Bubble Lysn Application are women, with a total of 40 people out of 41 respondents with a percentage of 97.6%, while there is only one man out of 41 respondents with a rate of 2.4%.

Description by age

Usia
41 jawaban

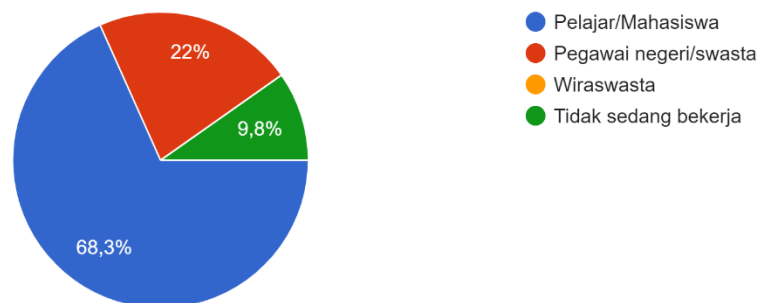- ● <18
- ● 18-25
- ● 26-32
- ● 32>
- ● 18-30

78%

12,2%

Figure 3. Diagram of Respondents Based on Age

It can be seen from Figure 3 that users of the Bubble Lysn application based on the age range are more dominant at the age of 18-25, with a proportion of 78% or the equivalent of 32 respondents. Under 18 years, there were five respondents, and with an age range of 26-32 years, there were three respondents with a proportion of 7.3%.

Job-based description

Pekerjaan
41 jawaban

- ● Pelajar/Mahasiswa
- ● Pegawai negeri/swasta
- ● Wiraswasta
- ● Tidak sedang bekerja

22%

9,8%

68,3%

Figure 4. Diagram of Respondents by Job

It can be seen in Figure 4 that users of the Bubble Lysn Application are based on the dominant occupation of a student or student with a percentage of 68% or as many as 28 respondents. Nine civil servants/private employees and four respondents needed to be fixed.

4.2　Sus Score Calculation

Table 3. Respondent's Original Score

Respondent	Original score									
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
R1	4	3	3	4	4	3	3	2	4	4
R2	5	1	4	4	5	5	4	2	4	4
R3	5	1	3	4	5	5	4	2	4	4
R4	4	4	4	4	4	4	3	2	4	5
R5	5	1	4	4	3	4	3	2	3	4
R6	5	4	5	5	5	4	4	2	5	5
R7	5	3	3	3	5	5	3	4	5	5
R8	4	1	4	4	4	4	4	2	4	4
R9	4	3	4	4	3	4	2	3	4	4
R10	5	2	4	4	4	4	3	2	4	4

| Respondent | Original score | | | | | | | | | |
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
R11	2	2	3	2	2	2	4	2	2	2
R12	4	2	3	3	4	4	2	2	4	4
R13	5	4	5	5	5	5	4	1	5	5
R14	4	1	4	4	4	4	3	2	3	3
R15	5	1	4	5	5	5	5	1	4	5
R16	5	4	4	3	4	4	2	3	5	5
R17	4	2	3	4	5	4	3	2	5	5
R18	4	3	3	3	5	5	3	3	4	5
R19	4	2	4	4	5	4	4	3	4	4
R20	4	3	3	4	4	4	4	2	4	4
R21	4	3	4	4	4	4	3	2	4	4
R22	5	3	5	5	4	4	3	2	3	4
R23	5	3	4	4	4	4	5	2	4	5
R24	5	3	4	4	5	5	5	3	5	5
R25	3	4	3	4	2	3	1	5	2	3
R26	5	2	4	4	5	5	4	2	3	5
R27	5	2	5	5	5	5	3	5	5	5
R28	4	3	4	4	4	3	3	2	5	5
R29	5	3	3	5	5	5	4	4	5	5
R30	3	4	4	4	4	2	2	2	5	5
R31	4	2	5	3	5	5	2	2	3	5
R32	5	3	5	5	5	5	5	1	5	5
R33	3	4	3	3	3	3	3	3	3	4
R34	3	3	4	4	3	3	3	2	4	4
R35	4	3	4	4	3	3	3	2	4	3
R36	5	2	4	5	5	4	5	1	5	4
R37	4	4	5	5	5	5	5	2	5	5
R38	5	1	5	5	5	5	5	2	5	5
R39	4	4	4	4	3	4	3	3	4	4
R40	5	1	5	5	5	5	4	4	5	5
R41	4	2	4	4	4	4	3	2	4	4

Calculate the original score with the SUS formula after sorting the respondents' answers' scores. To calculate the SUS score by giving each item a score ranging from 1-5. The provisions in the sus calculation are as follows:

1. For each odd-numbered statement 1,3,5,7 and 9, the original score is subtracted by 1.
2. For each even-numbered statement 2,4,6,8, and 10, 5 is reduced by the original score.
3. To obtain an overall SUS score, the total score that has been calculated is multiplied by 2.5. For more details, the formula for calculating the SUS score can be seen as follows:

Score R= ((Q1-1) + (5-Q2) + (Q3-1) + (5-Q4) + (Q5-1) +(5-Q6) + (Q7-1) + (5-Q8) + (Q9-1) + (5-Q10) * 2.5

And after doing the calculations, the results are as shown below:

Table 4. Calculated Score

| Respondent | Calculated Score | | | | | | | | | | | Value |
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	total	(Total x 2.5)
R1	3	2	2	1	3	2	2	3	3	1	22	55
R2	4	4	3	1	4	0	3	3	3	1	26	65
R3	4	4	2	1	4	0	3	3	3	1	25	62,5
R4	3	1	3	1	3	1	2	3	3	0	20	50
R5	4	4	3	1	2	1	2	3	2	1	23	57,5

| Respondent | Calculated Score | | | | | | | | | | | Value |
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	total	(Total x 2.5)
R6	4	1	4	0	4	1	3	3	4	0	24	60
R7	4	2	2	3	4	0	2	1	4	0	22	55
R8	3	4	3	1	3	1	3	3	3	1	25	62,5
R9	3	2	3	1	2	1	1	2	3	1	19	47,5
R10	4	3	3	1	3	1	2	3	3	1	24	60
R11	1	3	2	3	1	3	3	3	1	3	23	57,5
R12	3	3	2	2	3	1	1	3	3	1	22	55
R13	4	1	4	0	4	0	3	4	4	0	24	60
R14	3	4	3	1	3	1	2	3	2	2	24	60
R15	4	4	3	0	4	0	4	4	3	0	26	65
R16	4	1	3	2	3	1	1	2	4	0	21	67,5
R17	3	3	2	1	4	1	2	3	4	0	23	57,5
R18	3	2	2	2	4	0	2	2	3	0	20	50
R19	3	3	3	1	4	1	3	2	4	1	24	60
R20	3	2	2	1	3	1	3	3	3	1	22	55
R21	3	2	3	1	3	1	2	3	3	1	22	55
R22	4	2	4	0	3	1	2	3	2	1	22	55
R23	4	2	3	1	3	1	4	3	3	0	24	60
R24	4	2	3	1	4	0	4	2	4	0	24	60
R25	2	1	2	1	1	2	0	0	1	2	12	30
R26	4	3	3	1	4	0	3	3	2	0	23	57,5
R27	4	3	4	0	4	0	2	0	4	0	21	67,5
R28	3	2	3	1	3	2	2	3	4	0	23	57,5
R29	4	2	2	0	4	0	3	1	4	0	20	50
R30	2	1	3	1	3	3	1	3	4	0	21	67,5
R31	3	3	4	2	4	0	1	3	2	0	22	55
R32	4	2	4	0	4	0	4	4	4	0	26	65
R33	2	1	2	2	2	2	2	2	2	1	18	45
R34	2	2	3	1	2	2	2	3	3	1	21	67,5
R35	3	2	3	1	2	2	2	3	3	2	23	57,5
R36	4	3	3	0	4	1	4	4	4	1	28	70
R37	3	1	4	0	4	0	4	3	4	0	23	57,5
R38	4	4	4	0	4	0	4	3	4	0	27	67,5
R39	3	1	3	1	2	1	2	2	3	1	19	47,5
R40	4	4	4	0	4	0	3	1	4	0	24	60
R41	3	3	3	1	3	1	2	3	3	1	23	57,7
						Score average						57,86585366
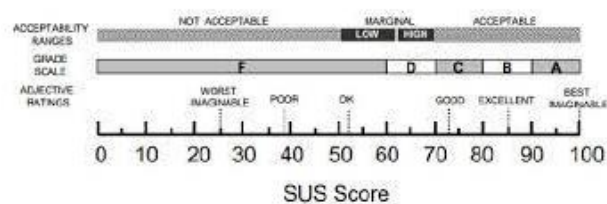
Figure 5. SUS Score

After calculating the SUS score, the results obtained were 57.865 from the 41 respondents who had filled out the questionnaire. With the final score accepted, it can be concluded with three aspects, as shown in Figure 4, namely:

1. Adjective rating or rating scale with a value range of 0-100. So, this study obtained a rating of 57, which included "OK."

2. The grading scale has five groups: A, B, C, D, and E. This study obtained the grade "F" from the five steps.

3. And acceptability range consists of not acceptable, marginal, and acceptable. So in this study, the marginals of the three fields were obtained.

5   CONCLUSION

After conducting research "analyzing user ratings on the bubble lysn application using the system usability scale (SUS) method" on 41 users or respondents, the results obtained the dominant users of the bubble lysn application were women with an age range of 18-25 with the majority being students or university students. Based on the calculated score, which gets a value of 57.865, the bubble lysn application indicates a system that needs to be improved again to provide a satisfactory user experience in using the application. This application is not so bad and not wrong and is still 'OK.' It needs some updates so that the application can attract the interest of many people when used. Although several good aspects were found, there is a need to improve the bubble lysn application to make it more effective and efficient. Based on the research that has been done, Dear, you can increase the usability of the bubble lysn application to increase satisfaction in the user experience.

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