Evaluation of Uses and Gratifications on Online Otome Games

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Abstract

In this advanced world of technology, games have become a fun entertainment that is loved by the people. This study aimed examine online otome game, which in this case study is Tears of Themis, using uses and gratification theory-based model that consists of enjoyment, fantasy, escapism, social interaction, social presence, achievement, self-presentation and also age moderation variable which affects the continuance intention to play Tears of Themis. The analysis testing and model development were performed using PLS-SEM method on 135 respondents who were Tears of Themis players from Indonesia. The results revealed that enjoyment and achievement have significantly affected the continuance intention of playing Tears of Themis. Meanwhile, the moderation test results showed no relation between all independent variables and continuance intention. But based on the age sub-groups, 16 - 19 years old subgroup are affected by enjoyment on Tears of Themis continuance intention and 20 - 24 years old subgroup are influenced by enjoyment on Tears of Themis continuance intention. These results can be used as insight for development of online otome games to improve the quality of games in the future.

Keywords: UGT, Online, Otome, Games, Tears of Themis.

I. INTRODUCTION

In this advanced and developing world of technology, games have become a fun entertainment that is loved by the people besides music and movies. Based on the research from *Asosiasi Penyelenggara Jasa Internet Indonesia* (APJII), in 2020 or during the Covid-19 pandemic, 16.5% of Indonesians chose online games as stress-relieving entertainment, and Statista noted that as many as 50.8 million people in Indonesia played mobile games in the same year [1], [2]. Also stated by The Global State of Digital in April 2023 (Figure 1), Indonesia was ranked second in the most of internet users aged 16 to 64 who play video games on any device in the world [3].





The pandemic is also the main reason why the mobile game market has increased very rapidly, ranging from casual games, puzzles, adventures, simulations, action, strategy, sports, to role-playing in the gaming world rather than PC (Personal Computer) or console games [4]. However, as the technological era progresses, some of game companies are starting to release their games as online games that can be played as free-to-play and/or pay-to-play games on the Android and iOS platforms because more and more people prefer to play various types of games on mobile phones, including otome games which can be proven by the results of a survey which stated that 46% of Indonesian players switched to mobile platforms for the first time, and the number of Indonesian mobile players doubled from January 2020 to January 2021 [5], and also from a research from Google and Niko Partners which conducted at the end of 2019 [6], revealed that 49% of the total mobile game players in Indonesia are women.

Otome Game (乙女ゲーム) or can be interpreted as Maiden's Game, is a term for video games developed and marketed specifically for female players where the game provides the concept of romance simulation between the player as heroine with the male characters as the main attraction of the game [7]. Otome games themselves have a wide variety of specific genres, such as role-playing, dating simulations, to visual novels. Dating simulation is a subgenre of simulation

games that contains romance elements, while visual novel is a subgenre of adventure games featuring narrative text-based stories supported by two-dimensional static visuals [8]. Tears of Themis is a one of online free-to-play otome game that has a mystery, adventure, and female-targeted romance genre for teenage girls that launched by Mihoyo or HoYoverse on July 30, 2020 in China and has released its worldwide server in 2021. Tears of Themis talks about the investigation team NXX (Noxious X Xeno-gene), consisting of the heroine as a new attorney along with 4 male characters with their respective fields of expertise, who work together to solve various kinds of bizarre cases and restore the truth in the Stellis City. In this game, players as heroine can investigate a mysterious case and then bring them to court trial, conduct debate sessions using decks of cards that player collected through a random prize system or gacha, go on dates, receive phone calls, video calls, and messages from one of the 4 male characters in the game [9]–[11].

The more online otome games released on the gaming market, the more diverse the interface, gameplay, story concepts, charming male characters, and interesting event contents are presented by games of the same genre for the players. However, competition between online otome games is getting tougher and there are also players who didn't enjoy and then quit the game because they are quickly get bored of the game's monotonous content or any other problem while playing the game, making it difficult for game developers or game service providers to retain their loyal players and the long-term sustainability of the game itself with the result that some online otome games were forced to shut down its servers. In order to avoid that and create a solution for that user's engagement problem, we need to identify the factors that make players continue to play or influence the players' continuance intention to play the online otome games using uses and gratification theory approach in the hope that the results of this study can also become a reference for otome related game developers or in other fields who are designing mobile games or need information in creating new innovations to be able to continue to compete with other game developers.

II. RESEARCH METHODOLOGY

In this study, we adopted the research model based on the uses and gratification theory research model developed by Li et al. named hedonic information system [12], consists of three gratifications: hedonic gratification (enjoyment, fantasy, and escapism), social gratification (social interaction and social presence), and utilitarian gratification (achievement and self – presentation) that affects the continuance intention to play Tears of Themis. Users feel the enjoyment when they enjoy playing the game [13]. Users experience fantasy when they can perform activities that cannot be done in the real world, or fantasize about being someone else in the game [14]. Users feel escapism when the game can help them to escape from reality [15]. Then social interaction can be felt when players use the game as a social environment or use social media to interact with other players and players feel social presence when they

can build their personal relationships or making friends with other players as well as feeling as part of the game's community [13], [16]. Meanwhile, achievement involves players' achievements in collecting items or status in the game and competing with other players and self –presentation which can help the players to develop their self-image towards others [13], [17]. Based on this research model, the following hypotheses can be formed and proposed:

- H1: enjoyment has a positively impacts on CI to play Tears of Themis
- H2: fantasy has a positively impacts on CI to play Tears of Themis
- H3: escapism has a positively impacts on CI to play Tears of Themis
- H4: social interaction has a positively impacts on CI to play Tears of Themis
- H5: social presence has a positively impacts on CI to play Tears of Themis
- H6: achievement has a positively impacts on CI to play Tears of Themis
- H7: self presentation has a positively impacts on CI to play Tears of Themis



Figure 2. Research Model (adopted from [12])

In the Figure 2 above, we can see that H1-A to H7-A is for basic research path hypotheses, meanwhile H1-B to H7-B is for moderating effect path hypotheses. As also shown in Figure 3, in this study we only used age as moderating variable and removed gender from the research model because the majority of online otome game players, including Tears of Themis, were female players. On previous studies [12], [18]–[21], the researchers have investigated an online games, augmented reality games, multiplayer online battle arena games (MOBA), multiplayer video games, and digital games using the same research model from Li et al.[12]. So in this study, we using online otome games, especially Tears of Themis as our study case.

Next, we develop a questionnaire instrument that contains the demographic profile and the indicators that are based on uses and gratification theory which extracted from previous studies [12], [18], [19]. All variables' indicators use a 5-point Likert scale rating point starting from strongly disagree, disagree, neutral, agree, to strongly agree [22]. The sample used in this study was calculated based on Hair et al., which suggests using the ratio of the total number of indicators multiplied by five (5:1) [23]. Also, in the SEM method, the required number of samples is at least 5 times the number of indicators, the sample size for this study is as formula 1 follows:

Sample Size = Number of Indicators
$$\times 5$$
 (1)
= 27 $\times 5$
= 135

From this we can concluded that the total number of samples from the population is 135 samples. In addition, we use a random sampling method, where samples are taken randomly without regard to strata [25]. The criteria of samples or respondents in this study are female players who were playing Tears of Themis and residing in Indonesia with the population is from the followers of @Themisfess in Twitter, where that account is used as a community forum for Tears of Themis Indonesian players with a total of 10.3K followers as per October 2022. The reason we use that population because Tears of Themis is the game for young woman and most of Tears of Themis players' gender are female and also actively using Twitter as a place to ask or discuss about the game, find and interact with others who playing the same game as them. Before we collect the data, we conducted the fourth step which is questionnaire testing. There we found five indicators or measurement items that had a loading factor value below 0.70, those indicators are ES1, SI4, AC2, AC3, and AC4. Thus, AC4 was removed from the instrument because it had the lowest loading factor value and the other four indicators must be corrected before the questionnaire can be redistributed.

After we distributed the questionnaire again and the data is collected, we can process the data further to three stages of PLS-SEM analysis or evaluation: descriptive statistical analysis, measurement models, and structural models. Descriptive statistical analysis describes the respondent's characteristics and demographic profile, measurement model analysis is used to test the convergent validity, discriminant validity (Fornell-Larcker criterion and cross loading), and reliability of the variables, while structural model analysis is used to detect relationships between latent variables as well as test the predetermined hypotheses with path coefficient test. We also do the moderation effect test between all independent variable with continuance intention and do the subgroup analysis of basic research to age subgroup. Last, we discuss the test results that have been found and then come to a conclusion based on that discussion.

III. RESULTS

A. Respondent Characteristics

The data was collected in December 25th, 2022 – January 16th, 2023 by distributing the questionnaires via Twitter. From the 135 respondents who filled out the questionnaire, it revealed that most of respondent are the players who played Tears of Themis for a long time and just experience of playing online otome games lately, which means that some of respondent may have thought that Tears of Themis was their first online otome game. The detailed results of the respondents' demographic profile are shown in Table 1.

Table 1. Demographic Profile

Measures	Item	Frequency	(%)
	< 12	0	0
	12 - 15	7	5.2
	16 - 19	49	36.3
	20 - 24	51	37.8
Age	25 - 29	19	14.1
	30 - 34	9	6.7
	35 - 39	0	0
	40 - 45	0	0
	45>	0	0
	1 - 2 months	5	3.7
Time	2 - 3 months	4	3
period in	3 - 4 months	3	2.2
playing	4 - 5 months	4	3
Tears of	5 - 6 months	8	5.9
Themis	6 months - 1 year	20	14.8
	More than 1 year	91	67.4
F	Several times a day	79	58.5
	Once a day	37	27.4
r requency	Several times of week	11	8.1
Tears of	Once a week	0	0
Themis	Less than once a week	4	3
1 nenns	Once a month	1	0.7
	Less than once a month	3	2.2
	0 - 15 minutes	19	14.1
Time	16 - 30 minutes	54	40
duration	30 minutes - 1 hour	36	26.7
of playing	1 - 1.5 hours	14	10.4
Tears of	1.5 - 2 hours	4	3
Themis	2 - 3 hours	5	3.7
	More than 3 hours	3	2.2
Online	Less than 1 year	36	26.7
otome	1 - 3 years	51	37.8
games	3 - 5 years	26	19.3
playing	5 - 7 years	14	10.4
experience	More than 7 years	8	5.9

B. Evaluation of Measurement Model (Outer Model)

Based on the measurement models test results using SmartPLS 3, the validity test was measured by using two kinds of validity, convergent validity and discriminant validity. As can be seen in Table 2, we found that there was one indicator of the social presence that had a loading factor below 0.7. But according to Hair et al., the factor loading estimate should be greater than 0.5 and ideally greater than 0.7. In this case, SP4 has a loading factor of 0.642 which means that convergent validity on SP4 can be approved because its value is greater than 0.5 [26]. In the discriminant validity test that can be seen in Table 3 and Table 4, it is shown that each variable has Fornell Larcker criterion value higher than the correlation value of other latent variables and also each indicator has a cross-loading value higher than the other latent variables, indicating that all latent variables and their indicators are valid.

Table 2.	Convergent	Validity	Results
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Variable	Indicator	Measurement Item	Loading Factor	AVE	
Enjoyment	EJ1	I play Tears of Themis because this game is interesting or makes me interested to play it	0.762	0 672	
(EJ)	EJ2	I play Tears of Themis because it is enjoying	0.874	0.672	
	EJ3	I play Tears of Themis because it is exciting and not boring	0.819		
	FA1	I play Tears of Themis to feel or experience things that I cannot experience in everyday life	0.780		
Fantasy (FA)	FA2	I play Tears of Themis to pretend to be someone else (main character (MC)) or to be somewhere in the game	0.916	0.703	
	FA3	I play Tears of Themis to immerse myself or be a part of the lives of the game world	0.814		
	ES1	I play Tears of Themis when I feel frustrated or upset	0.765		
Facerian	ES2	I like to play Tears of Themis when I am having a bad day	0.828		
Escapism (ES)	ES3	I play Tears of Themis to relieve stress	0.892	0.651	
(ES)	ES4	Playing Tears of Themis is the best way for me to disconnect myself or temporarily leave my real-life activities from the real world	0.734		
	SI1	I have a network of friends that I made via playing Tears of Themis	0.802		
Social	SI2	Playing Tears of Themis games allows me to connect with my fellow players in real life	0.911		
Interaction (SI)	SI3	SI3 Playing the game Tears of Themis allows me to keep in touch with my fellow players in real life			
	SI4	I play Tears of Themis because it allows me to have a closer relationship like a best friend with my fellow Tears of Themis players.	0.858		
	SP1	I believe that other players in Tears of Themis environment will help me when I need help	0.624		
G • 1	SP2	I feel like I connected or made friends with other players	0.774		
Social Presence (SP)	SP3	In my interactions with other players in Tears of Themis environment, I can be myself and show other players/people what kind of player/person I really am	0.736	0.576	
	SP4	I feel like I am a member of Tears of Themis community during the game playing	0.880		
	AC1	I played Tears of Themis to reach the highest level	0.815		
Achievement	AC2	I play Tears of Themis to have more power or experience than other players	0.777	0.668	
(AC)	AC3	I play Tears of Themis to have items, cards, or invitations that allow me to reach a higher position than other players	0.858		
G 16	SEP1	I want other players in Tears of Themis to perceive me as someone who is easy to approach or likeable person.	0.900		
Self – Presentation	SEP2	SEP2 I want other players in Tears of Themis to perceive me as a friendly person who can easily make friends with anyone.		0.784	
(SEF)	SEP3	I want other players in Tears of Themis to perceive me as a skilled person who has the knowledge and ability to do something well	0.861		
Continuance	CI1	Tears of Themis is worth playing again in the future	0.865		
Intention (CI)CI2I am willing to play Tears of Themis in the near future		0.890	0.771		

Table 3. Discriminant Validity Fornell-Larcker Test Results								
Variable	AC	CI	EJ	ES	FA	SEP	SI	SP
Achievement (AC)	0.817							
Continuance Intention (CI)	0.289	0.878						
Enjoyment (EJ)	0.205	0.582	0.820					
Escapism (ES)	0.151	0.248	0.357	0.807				
Fantasy (FA)	0.155	0.235	0.203	0.260	0.839			
Self-Presentation (SEP)	0.332	0.274	0.261	0.257	0.216	0.886		
Social Interaction (SI)	0.102	0.164	0.233	0.202	-0.014	0.402	0.871	
Social Presence (SP)	0.197	0.150	0.236	0.179	0.141	0.467	0.656	0.759

Table 4. Discriminant Validity Cross Loading Test Results

Indicator	AC	CI	EJ	ES	FA	SEP	SI	SP
AC1	0.815	0.257	0.243	0.164	0.153	0.288	0.163	0.167
AC2	0.778	0.161	0.153	0.138	0.132	0.346	0.125	0.254
AC3	0.858	0.266	0.106	0.078	0.100	0.215	-0.018	0.102
CI1	0.262	0.865	0.465	0.232	0.185	0.355	0.156	0.164
CI2	0.247	0.890	0.553	0.205	0.227	0.137	0.133	0.102
EJ1	0.233	0.514	0.762	0.206	0.146	0.184	0.102	0.108
EJ2	0.121	0.442	0.874	0.393	0.165	0.224	0.286	0.269
EJ3	0.138	0.462	0.819	0.288	0.186	0.234	0.195	0.212
ES1	0.214	0.122	0.217	0.765	0.263	0.231	0.161	0.126
ES2	0.224	0.163	0.321	0.828	0.223	0.213	0.222	0.196
ES3	0.066	0.297	0.320	0.891	0.163	0.198	0.137	0.110
ES4	0.048	0.121	0.282	0.734	0.283	0.231	0.171	0.202
FA1	0.092	0.175	0.160	0.265	0.780	0.094	-0.159	-0.017
FA2	0.151	0.256	0.200	0.218	0.915	0.228	0.122	0.196
FA3	0.153	0.109	0.127	0.157	0.814	0.224	-0.090	0.160
SEP1	0.266	0.285	0.272	0.169	0.090	0.900	0.337	0.355
SEP2	0.286	0.195	0.193	0.262	0.210	0.896	0.383	0.451
SEP3	0.336	0.231	0.213	0.272	0.300	0.861	0.356	0.454
SI1	0.049	0.150	0.198	0.117	-0.028	0.340	0.802	0.619
SI2	0.075	0.119	0.154	0.205	-0.008	0.352	0.911	0.545
SI3	0.133	0.180	0.258	0.220	0.018	0.336	0.908	0.528
SI4	0.082	0.087	0.161	0.142	-0.050	0.391	0.858	0.617
SP1	0.088	0.059	0.185	0.187	0.115	0.376	0.390	0.625
SP2	0.096	0.055	0.187	0.148	0.086	0.365	0.635	0.774
SP3	0.145	0.079	0.094	0.228	0.098	0.334	0.596	0.737
SP4	0.203	0.176	0.229	0.087	0.124	0.385	0.493	0.878

Moreover, as shown in Table 5, all latent variables have Cronbach's alpha and composite reliability values above 0.70, which we can conclude that each latent variable is reliable.

Table 5. Reliability Test Results						
Variable	Cronbach's Alpha (a)	Composite Reliability (CR)				
Enjoyment (EJ)	0.754	0.860				
Fantasy (FA)	0.797	0.876				
Escapism (ES)	0.833	0.881				
Social Interaction (SI)	0.895	0.926				

Social Presence (SP)	0.789	0.843
Achievement (AC)	0.758	0.858
Self - Presentation (SEP)	0.864	0.916
Continuance Intention (CI)	0.703	0.871

C. Evaluation of Structural Model (Inner Model)

The structural model designed in this study is a model based on SEM-PLS which can be seen in the schematic model in Figure 3. To test or evaluate a model as well as the hypotheses contained therein, the alpha significance is set at 0.05 or 5%.



Table 6.	Path	Coefficient	Result
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Hypothesis (Path)	Original Sample (O)	Sample Mean (M)	Standard Deviation (SD)	T Statistics (O/STDEV)	P-value	Results
H1-A: EJ \rightarrow CI	0.507	0.495	0.080	6.360	0.000	Accepted
H2-A: $FA \rightarrow CI$	0.134	0.135	0.083	1.608	0.054	Rejected
H3-A: ES \rightarrow CI	-0.016	0.011	0.090	0.177	0.430	Rejected
H4-A: SI \rightarrow CI	0.080	0.060	0.098	0.809	0.209	Rejected
H5-A: SP \rightarrow CI	-0.098	-0.035	0.115	0.846	0.199	Rejected
H6-A: AC \rightarrow CI	0.167	0.172	0.068	2.461	0.007	Accepted
H7-A: SEP \rightarrow CI	0.057	0.055	0.089	0.648	0.259	Rejected

The path coefficient test results in Table 6 prove that enjoyment and achievement have a positive original sample value and p-value < 0.05. In this case, we can state that enjoyment and achievement significantly affected the continuance intention to play Tears of Themis. On the other hand, fantasy, escapism, social interaction, social presence, and self-presentation did not affect continuance intention of playing Tears of Themis because these variables have p-value > 0.05. Next, we tested moderation effect's path coefficient on Age as a moderator variable between enjoyment, fantasy, escapism, social interaction, social presence, achievement, and self-presentation with continuance intention of playing Tears of Themis. This age moderating variable is using the age of the respondents which are divided into nine age-groups consisting of under 12 years old, 12 - 15 years old, 16 - 19 years old, 20 - 24 years old, 25 - 29 years old, 30 - 34 years old, 35 - 39 years old, 40 - 45 years old, and 45 years old and over. The test results reveal that the age moderation effect of

all independent variables have p-value > 0.05, where enjoyment has p-value of 0.409, fantasy has p-value of 0.220, escapism has p-value of 0.469, social interaction has p-value of 0.343, social presence has p-value of 0.064, achievement has p-value of 0.322, and self – presentation has p-value of 0.071, which means that the player's age has no relation between enjoyment, fantasy, escapism, social interaction, social presence, achievement, and self-presentation with continuance intention of playing Tears of Themis.

Meanwhile, in the age subgroup analysis of the basic research model test, we found some interesting results. First, on the 16 - 19 years old subgroup, the enjoyment has p-value of 0.001 < 0.05 and self-presentation has p-value 0.048 < 0.05, which indicated that the players between 16 - 19 years old are affected by enjoyment and self – presentation on continuance intention of play Tears of Themis. Then on the 20 - 24 years old subgroup, we also found that the enjoyment has p-value 0.000 < 0.05, which indicates that the players between 20 - 24 years old are also influenced by enjoyment on continuance intention of playing Tears of Themis.

IV. DISCUSSION

Based on the test results that have been done and can be seen in Table 6 and Figure 3, we found that there is a significantly affected on H1-A which can encourage players to continue playing Tears of Themis. In this case, players feel the positive emotions or aura named enjoyment while playing Tears of Themis, such as when players successfully unlock and read storylines, when players doing a investigations such as collecting clues and evidences, when they are winning debate sessions against a certain opponents, when interacting with their favorite male characters, when playing limited-time events that are currently taking place in the game, and/or when obtaining the desired rare items with their own hard work. This result is supported by [12], [18]-[21], which stated that enjoyment has a positively affect continuance intention to play online games. On the other hand, the reason why H2-A has no influence on continuance intention is because the player plays the main female character who is a lawyer and also works in an office, cause several things or events experienced by the main female character such as working overtime or helping other people are events - events that players can found in real life, and there is lack of immersion is like being in a game world, which make some of players cannot feel the fantasy while playing the game. Then in H3-A, escapism also has no influence because some players do not only play the game when they are annoyed, frustrated, or have a bad day, but players also play Tears of Themis when they feel happy, happy, sad, looking forward to meet their favorite male character or to relieve stress by playing the game.

Next, as shown in H4-A and H5-A, social interaction and social presence (social gratification) did not affect continuance intention of playing Tears of Themis. This can be caused by several things, one of the reasons are because even though the most of online otome games, including Tears of Themis, have friend feature where player can view, add, confirm friend request, or send a certain material to their friends, these games do not provide in-game friend chat features, which makes players can only interact with other players via social media outside the game. And also, these games prioritize the experience of playing individually rather than socially together with other online players. Social interaction itself because some players only have the goal of finding fun or entertainment to relieve fatigue from everyday life with their favorite male character, it is not to find or build friendships with other players. Meanwhile in social presence, some players sometimes cannot be themselves due to social media restrictions where some players who do not like using their real names, will use their own created name or pseudonyms when playing in the Tears of Themis and/or interacting with other players on social media.

In utilitarian gratification, it was found that only H6-A had a significantly affected on continuance intention to continue playing Tears of Themis. This can happen because some players like to collect cards so they can have stronger card decks, collect visual images of the characters displayed on the cards, nor collect the story content on the cards. There are also some other players who also like to spend their money to get the cards they want via gacha system faster than other players and/or buy some paid items such as character outfits, limited edition invitations, special event cards, and paid card that cannot be obtained again after the limited time event ended, so they can feel satisfied and become like a high-class player by owning rare items and gain more experience than other players. Meanwhile for self-interaction in H7-A, some players do not force others to think of them as people who are easy to approach and people who can do good things so that the way other players see players has nothing to do with their playing activities, the same as what has been said by [19].

For the age moderation effect, it revealed that H1-B, H2-B, H3-B, H4-B, H5-B, H6-B, and H7-B did not have a relation that can affect continuance intention, which means that the player's age has no relation between enjoyment, fantasy, escapism, social interaction, social presence, achievement, and self-presentation with continuance intention to play Tears of Themis. However, the 16 - 19 years old and 20 - 24 years old subgroups are affected by enjoyment on continuance intention, meanwhile 16 - 19 years old subgroup also influenced by self-presentation on continuance intention of playing Tears of Themis. this could be interpreted that these users like to play Tears of Themis because they have a lot of free time after school and some of them want to be accepted as friendly, skilled, or likeable people by others.

V. CONCLUSION

This research was conducted to investigate and analyze the factors that impact continuance intention to play online otome games, especially Tears of Themis. Based on the results that have been found, it proves that the factors that significantly influence continuance intention in playing Tears of Themis are enjoyment and achievement. Furthermore, of the three types of gratification, only two gratifications (hedonic

gratification and utilitarian gratification) that have significantly affected continuance intention in a hedonic information system. Furthermore, the findings based on the moderating variable age state that the player's age has no relation between all the independent variables or the three gratifications with continuance intention. Even so, based on the findings on the age sub-group, 16 - 19 years old and 20 - 1024 years old subgroups are affected by enjoyment on Tears of Themis continuance intention and also 16 - 19 years old subgroup are influenced by self - presentation on Tears of Themis continuance intention. These results can be used as insight for the development of online otome games to improve the quality of games in the future. This research is inseparable from the limitations of the problem. First, the findings of this study are limited to an online otome game named Tears of Themis as this research's case study. Second, this research was limited to female Tears of Themis players who live in Indonesia and only used 135 samples with the number of followers of the @Themisfess twitter account as the population. To overcome the things mentioned above, it is possible to develop a similar case study which includes an online otome game with population from other gaming communities and/or other countries as well for future works.

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