Discovering the Correlation between Technology Acceptance Model and Usability

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Abstract

Since from the previous studies of technology acceptance model are focused on the perception of the user in terms of information technology. Since usability is about how easy user perceived our interface so it major focused on user perception of the user. Through our study, we have also developed the theoretical structure to discover the relation between Usability testing and Technology acceptance model user's opinion. Usability testing was led on late enlarged reality amusement Pokémon Go. Technology acceptance model information was gathered from the members for examining a conceivable relationship. The result and finding of the research show that there is a relation between the perceptions and finding of both the techniques.

Keywords:
TAM, Usability, Perceived Ease of Use, Perceived usefulness, Effectiveness, Efficiency. Satisfaction

1. Introduction

Numerous specialists utilize two imperative convictions of Technology Acceptance Model the one is Perceived Ease of Use (PEU) and another is perceived usefulness (PU) both the factors are used to study the user acceptance level regarding the technology. Perceived Ease of Use and perceived usefulness are utilized to translate, analyze, and gauge user mentality, expectation, what's more, conduct toward an IT (information technology). The investigation of Technology Acceptance Model typically requires that a review is led to quantify the subjective view of information technology with respect to the user perception. In any case, in all actuality, to gain accurate amount of expenditure awareness, user's necessity a complete feeling of the examined topic whereas noting problems.
Conversely, Usability or ease of use testing has turned into a typical practice to evaluate the convenience of UIs. In a research facility try, members are required to fulfill particular assignments utilizing an innovative application in an organized lab situation. This permits simple estimation of ease of use characteristics and translation of

outcomes with quantitative confirmation bolstered to show how fit users can utilize a particular innovation application. Since numerous reviews have utilized TAM to examine acceptance of new technology with respect to the user perception. Since same as Usability testing as it is about how well the user can use the current technology and product. Be that as it may, extremely constrained research has been led to investigate the connection amongst Usability Testing and Technology Acceptance Model. As recommended by Henderson and Divett, the connection between the subjective recognitions by the respondent of Perceived Ease of Use and perceived usefulness and target qualities of convenience testing ought to be additionally tended to [3,5]. The purpose of the study to initiate a framework which discovers the relationship between Usability Testing elements and Technology Acceptance Factors. To test the proposed approach, an Augmented Reality game is selected which help in building the relationship between the usability testing and technology Acceptance Model.

2. Theory and Research Hypothesis

A. Technology Acceptance Model Factors

In recent times [3] the information on technology acceptance has been analyzed by different hypothetical views by the researchers; for instance, Taylor and Todd have thoroughly examined and studied TAM along with theory of planned behavior to reach a conclusion regarding the practice that is better to predict user's behavior for IT usage [18]. TAM is assumed to be ideal for the stated purpose. According to Jiang et al TAM standouts amongst the most renowned hypothetical models present in today's era for prediction of user's behavior in IT [12]. In order to identify the relation between Perceived ease of use and perceived usefulness while using the interface or system, Davis identifies the relationship between them, assertiveness, and

communication purposes, for this he uses theory related to consistent accomplishment model as a hypothetical basis. A clear view is given of the required procedure and the significant factors by the model [6]. PU and PEU are the major key elements of technology approval are characterized by him as.

According to Davis [7].

"*Perceived Usefulness is defined as in order to improve job performance while using the application, user should trust that application framework*".

While,

"*Perceived Ease of Use is how much a user trusts that using a specific technology is free of exertion.*"
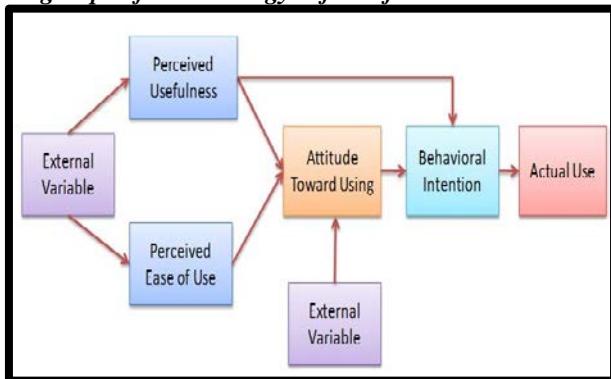

Figure 1: TAM Model

A thorough analysis of TAM reveals that TAM is able to reliably determine a significant extent of the change (approximately 40 %) in user's goal, behavior or intention. PU has been reliably being a powerful factor in determining usage goal with common consistent regression coefficients of approximately "0.6" [2]. After reviewing acceptance of handheld devices Bruner and Kumar state that "Users intentions cannot have determined Perceived Usefulness". The user finds an additional comfort in handheld gadgets but still, this sense of comfort apparently does not suffice to motivate them to use technology. Surprisingly PEU shows a less steady impact on user's intention [5]. Davis et al confirmed this statement by saying that "Pease usefulness and ease of useless influence mind state" [7]. Thus, the assertiveness of the user is removed from this model. The PU and PEU determine user's attitude as well as behavior as they significant declares the attitude. Furthermore, Users intentions have a significant impact on user attitude and user attitudes act as a mediator for his perceptions [15]. The following Hypothesis is presented based on the discussion:

H1a: Intention to use the technology has a significant impact on PU (perceived usefulness) as it directly effects on behavior.

H1b: Attitude while using the technology directly effects the PU (perceived usefulness).

H2a: Attitude while using the technology directly effects the PEOU (perceived ease of use).

H2b: Perceived usefulness has a significant impact on PEOU (perceived ease of use).

H3: Attitude while using the system has a straight effect on purpose or Intentions to practice the technology.

Figure 1 summarized all the above definitions and theories.

B. Usability testing Elements

International Standards Organization defines Usability is defined as the extent to which user easily used the specific interface to chieve the targeted goal with success, proficiency, and contentment in an identified circumstance of use''. Holzinger states fundamental usability elements that will be reviewed are "efficiency, learnability, memorability, and error" [10]. Learnability emphasizes on how efficiently a user can complete the task successfully while utilizing an application surprisingly as shown in Figure 26.

The essential contrast between effectiveness and learnability is, previously assessing effectiveness and efficiency, a user ideally has some basic knowledge of the interface. Memorability refers to the phenomenon of the user's understanding of how to use the application without learning any data or steps [17].
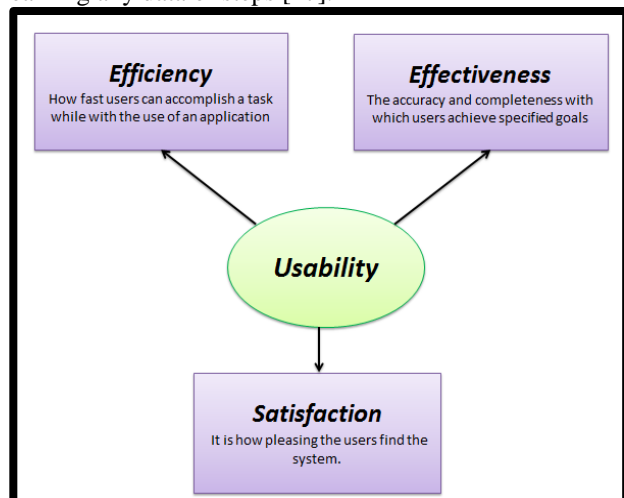

Figure 26: Usability Factors'

It basically means that the application should be so self-explanatory that a user doesn't have to learn anything for using it. The main goal is not to put any strain on user's memory. The error indicates a mistake, problem or flawed step taken by the user while using the application [2]. In the proposed methodology numbers of errors are included in the learnability attribute because they play a role in it and therefore the rate of errors is not used as a separate factor.

C. Discovering the Correlation among Factors of Technology Acceptance Model and Elements of Usability Testing

Since the usability testing is how well the user can use the technology or product. As the usability testing depend upon a lot of attributes but we have taken four major attributes on which proposed methodology is depend as shown in figure 2, these are the major core attributes which is used to measure the usability of any product. The frist is effectiveness is ''the accurateness and comprehensiveness of task with which users accomplish stated goals''. The second is efficiency which is characterized as by using the technology how quick users can achieve a task. Efficiency mainly measure completion time of the task . Satisfaction depend upon how agreeable the users discover the product. Some of the important usability attributes identify by the previous studies hat must be assessed as competence, effectiveness, learnability,efficiency, memorability, and last is error. Learnability concentrates on how users can without much of a stretch complete a task when utilizing an application surprisingly. The contrast amongst efficiency and learnability is that, beforehand assessing efficiency, users ought to have some involvement in utilizing a technology or product. Memorability related to the simplicity of application with which users can review how to use it after not using it for quite a while or it mainly depend upon while using the technology how successfully a user can

restore his aptitude. Error measure quantity of mistakes that happen while users accomplishing the task.
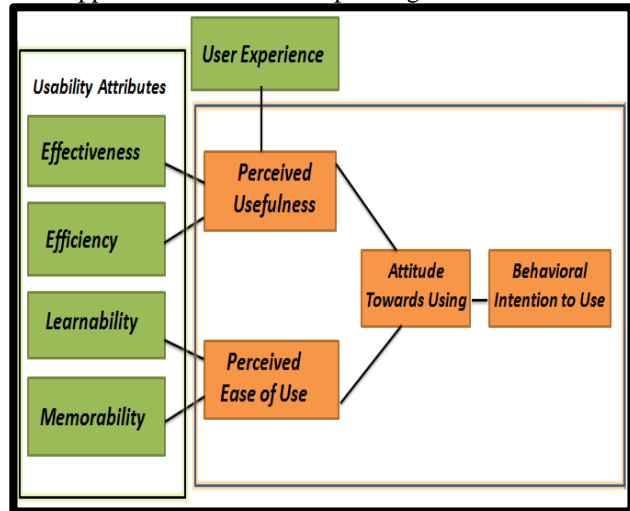

Figure 2: TAM Model for Usability Factors

To précis the correlation between view of accepting the technology and elements of usability, the rundown of extents of Technology Acceptance Model and associating usability elements is shown in table 1. With a specific end goal to investigate correlation between subjective TAM of user perception and objective usability testing user performance, the subsequent exploration questions are anticipated:

Table 1: Correlation between TAM Factors and Usability Factors

Usability Testing Attributes	Extents of Technology Acceptance Model	Paradigm of TAM
Learnability	Figuring out how to play the game would be simple for me	Perceived ease of use
	The game easy to play	
	It is simple to learn the features of the game	
Memorability	I would like to play the game again	
	It would be simple for me to wind up plainly apt at playing the game	
	When I again play the game I can easily recognized its features	
Effectiveness	Watching the virtual object just as natural as watching the real world objects.	Perceived usefulness
	The game actions were clear, obvious and familiar to use.	
	Playing the game would enhance and improve my effectiveness on the actions and controls.	
Efficiency	Playing the game would expand my proficiency.	
	Playing the game would empower me to finish errands rapidly.	
	Playing the game would provide a great experience with joy.	

E1: What is the correlation among effectiveness and PU (perceived usefulness)?
E2: What is the correlation among efficiency and PU (perceived usefulness)?
E3: What is the correlation among learnability and PEOU (perceived ease of use)?

E4: What is the correlation among memorability and PEOU (perceived ease of use)?
The proposed model which joins Technology Acceptance Model with four elements of usability which are internal variable as well they are
Effectiveness

Efficiency
Learnability
Memorability
While there is external variable which is:
User experience
All the above factor and elements are shown in figure 2. The main purpose of model is to identify the connection among TAM factors and Usability Elements.

D. Research Hypothesis

Learnability, Memorability, Effectiveness and Efficiency all are internal attributes while User Experience is external attribute as shown in Figure 2. While conducting the Usability Tests choice of test attribute is one of key issues. The user should have played the game before in order to assess how rapidly the user can complete the given task or scenario this will help us to measure the memorability and learnability. And to evaluate the ability to play the game again and efforts required playing the game [16]. To measure the efficiency and effectiveness of the game, the user should evaluate the response time, no of error and challenges occur while playing the game as shown in Figure 2.
To measure the User experience of the game, we evaluate performance and satisfaction of the user. Performance measures how well the user accomplishes the given task while satisfaction is how user feels while playing the game.

Relationship between Hypothetical External Factors and Technology Acceptance Model variables

In our scenario "Simplicity (ease of use) and Usefulness" might be the sufficient but we required other variable. Thus, when studying the related readings, the methodology suggests one external variable which is User experience, to measure the user experience of the game; we evaluate two factors; performance and satisfaction of the user [10]. Performance measures how well the user accomplishes the given task while satisfaction is how user feels while playing the game. Since both affects the PU and PEU. Thus the methodology proposes the following hypothesis:

H4a: Perceived usefulness has a significant impact on User's performance and satisfaction experience.
H4b: Perceived ease of use has a significant impact on User's performance and satisfaction experience.

Relationship between Hypothetical Internal Factors and Technology Acceptance Model variables

Davis list two imperative elements that source a user to admit or discard interface or technology. Initially, users tend to utilize or not utilize an innovation depending upon whether they trust it will help them play out their errand better.
Perceived Usefulness is measured as a first factor in TAM for evaluating effectiveness, efficiency and performance of the user. Efficiency depends upon the task success while effectiveness depends upon time on task. According to Nielsen "Efficiency refers to accuracy and completeness with which users achieve certain goals" [1]. ISO defines Effectiveness as "In order to achieve complete and accurate defined goals how accurate user perform on it". In context of usability attribute, Efficiency and effectiveness are related to the perceived Usefulness in Technology Acceptance Model and they are connected which and explains user perception toward using playing the game [3].

H5a: Response time of the game is positively effects Perceived usefulness.
H5b: The game layout and navigation positively effects Perceived usefulness.

Second, users may trust that the interface is excessively troublesome, making it impossible to utilize paying little respect to the likelihood that a given interface is profitable and required much endeavors to utilize. Utilization is conjectured as being affected by PEU. Since PEU is the second main factor in TAM, which depend upon the learnability and Memorability of the system. According to Nielsen "Learnability depends upon how quickly and easily user learn the system". To end up distinctly an able user, Nielsen recommends that the system for utilization of a particular amusement innovation ought to be anything but difficult to remember [1].

H7a: Playability of game positively effects Perceived ease of use.
H7b: While playing the game, the mental efforts required is positively effects Perceived ease of use.

3. Research Methodology

The review is quantifiable in nature and the tests were carried out in two ways: responses were collected from both novice users and expert users. We constructed questionnaires based on four-factor learnability, efficiency, effectiveness and memorability. These reviews were collect using Google Forms. The explanation behind making the structures on Google was to encourage the way toward getting reactions from the user (both expert and new or novice). Google Form can be effortlessly gotten to from the Chrome program, which is the most

widely recognized program utilized by the greater part of individuals. By making Google Forms, we could get them filled through email by the expert's users. For the tenderfoot users we made the structures accessible through Face Book to the IBA understudies and afterward directed sessions in our supervision were they were made a request to play the amusement and fill the studies.

A. Questioner Development

To accumulate user criticism about the amusement and to execute client encounter testing we have formulated a few examiners. The examiner is developed correctly and strategically to get the most out of the user tests and get the bits of knowledge that will help enhance the client encounter. For this amusement we have composed examiners remembering learner user thusly the phrasing utilized as a part of the examiner is straightforward we have abstained from utilizing industry languages like 'sub-route' and 'affordance'. The inquiries are shut finished to guarantee precise information investigation so that distinct outcomes can be created which can additionally help enhance the amusement [14].

The inquiries are kept to a base question to maintain a strategic distance from the client getting disappointed while filling the examiner. The scaling framework utilized is the likert scale and the semantic differential scale. Likert scales utilize set decision answer arranges and are intended to evaluate demeanors or conclusions. This scale measures level of assertion and contradiction. Semantic differential scale is utilized to quantify the demonstrative importance of things or ideas.

B. Participants sampling technique

While it is hard to get reactions from an entire populace, inspecting is an endeavor to reach an inference in light of a little representation in a given populace. For my approach I pick arbitrary examining the motivation behind picking irregular inspecting technique is that it needs just a base learning of the review gathering of populace ahead of time, it is free from blunders in characterization, it is reasonable for information investigation which incorporates the utilization of inferential insights. Straightforward arbitrary inspecting is illustrative of the populace and it is thoroughly free from inclination and bias. In this review there were 66 arbitrary users. They users ought to utilize PDAs and have commonality with playing recreations on a touch screen [15]. The members were told to introduce the amusement on their advanced mobile phones and after that as needs be partake in the review. The members were made a request to give criticism on the ease of use and adequacy of the amusement's interface. The members were advised before they took the study to give legitimate input and consequently overviews were filled by just those users

who enthusiastically volunteered to take care of out the surveys with a specific end goal to gather perfect and important information.

C. Ethics

All participants involved were strictly required to follow the following ethical guidelines [19]:
- Participants were to round out the survey forms with trustworthiness and simply after they have introduced and played the amusement themselves.
- Participants were required to fill out the form separately and were made a request to give their name and right age.
- Participants were altogether advised about the reason for the overview with the goal that they could make an educated judgment about whether they need to take an interest in the survey or not.
- Volunteer based participation in the study
- Privacy regarding the response were guarantee to participants

D. Procedure of Data Collection and Method of Analyzing

While making the question there were five factors which is keep in mind that is related to user experience, efficiency, effectiveness, learnability and memorability. Efficiency focus on the areas related to task success, effectiveness is covering the factors related to time on task, learnability and memorability covering the factor related to playability of the game, usage of the game and no of errors. The method used for analyzing of result are based on two things first one are the graphs which we get Google forms and secondly the factors analysis results. Based on these analyses we make recommendation regarding the acceptance and rejection of hypothesis.

4. Finding and Result related to Acceptance of Hypothesis

A. Analysis of the Hypotheses related internal factors Efficiency and Effectiveness (PU)

The efficiency depends upon two things response time and task success, if the response time of the system is fast so user get good impact of the game otherwise user get frustrate by playing the game.
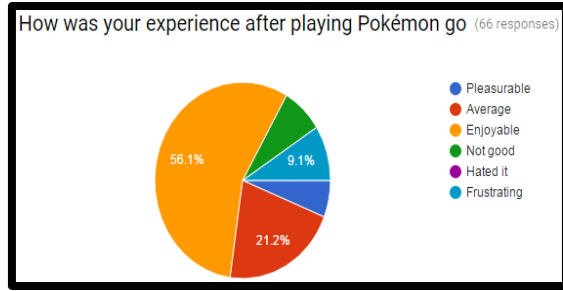
Figure 3: Experience of the user after playing game

The analysis indicated that about 56.1% of the users enjoy the game as they said it exploring game and their all overall experience is good while playing it as they get new perspective of the augmented reality object and 9.1% of user felt its frustration because it required mental efforts as shown in Figure 3.
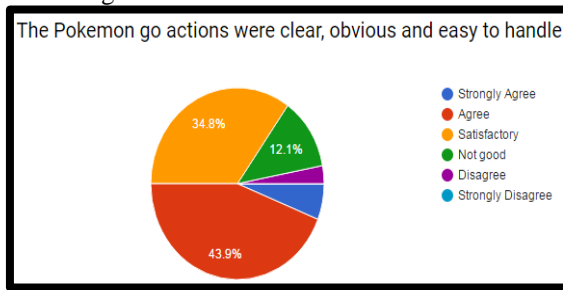

Figure 4: Feedback of the user on actions of the game

Effectiveness depend upon the layout of the system and mapping of the object and from the above analysis a conclusion is made that 43.9 % of the user found the screen not cluttered and some found the graphics and navigation are well design and outstanding with vibrant colors, fun sounds, and great responses as shown in Figure 4.
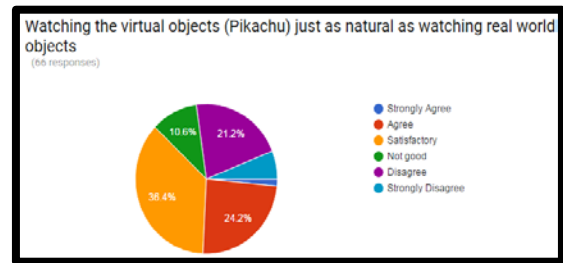

Figure 5: Feedback of the user on mapping of the object

Whereas 34.8% found the game confusing because at once they cannot identify how to use the different action of the game. 36.4% of the user feels that the game focuses on the natural mapping as shown in Figure 5.

H5a: Response time of the game is positively effects Perceived usefulness.

H5b: The game layout and navigation positively effects Perceived usefulness.

Table 2: KMO and Bartlett's Test result related to PU factors

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.569
Bartlett's Test of Sphericity	Approx. Chi-Square	67.377
	df	21
	Sig.	.000

Table 3: Statistical analysis of the major components of game related to PU

Statistics								
		Experience_after_playing_Pokémongo	Using_Pokémongo_application_is_physically_strenuous	ThePokemongo_actions_were_clear_obvious_and_easytohandle	Virtualobjects_Pikachujust_as_naturalas_watching_re_alworld	Have_you_tac ed_unnatural_navigation	Rate_the_nav igation_ofthegame	I_feel_like_thePokémongo_app_needs_morefeatures
N	Valid	72	72	72	72	72	72	72
	Missing	0	0	0	0	0	0	0
Mean		2.36	1.89	1.74	2.51	.46	3.29	1.32
Std. Error of Mean		.163	.164	.108	.145	.059	.107	.135
Median		2.00	1.00	2.00	2.00	.00	3.00	1.00
Mode		2	1	1	2	0	4	1
Std. Deviation		1.387	1.390	.919	1.233	.502	.911	1.149
Variance		1.924	1.931	.845	1.521	.252	.829	1.319
Skewness		.785	.528	.332	.129	.171	-.505	.888
Std. Error of Skewness		.283	.283	.283	.283	.283	.283	.283
Range		5	5	4	5	1	4	4
Minimum		0	0	0	0	0	1	0
Maximum		5	5	4	5	1	5	4
Sum		170	136	125	181	33	237	95

Table 4: Component analysis of identify factors related to PU

Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.184	31.199	31.199	2.184	31.199	31.199	1.698	24.251	24.251
2	1.147	16.390	47.589	1.147	16.390	47.589	1.551	22.150	46.401
3	1.057	15.101	62.690	1.057	15.101	62.690	1.140	16.289	62.690
4	.926	13.234	75.924						
5	.765	10.930	86.854						
6	.580	8.288	95.142						
7	.340	4.858	100.000						
Extraction Method: Principal Component Analysis.									

The above factor analysis indicates the user experience, layout of the system and efforts required to play the game all are correlated, the Kaiser Meyer value is 0.567 as shown in Table 2, which mean these factor are acceptable, so according to components matrix as shown in Table 3 and other analysis we can conclude that the perceived usefulness has positively affected the response time and the layout (navigation) of the game. So the both the hypothesis is accepted.

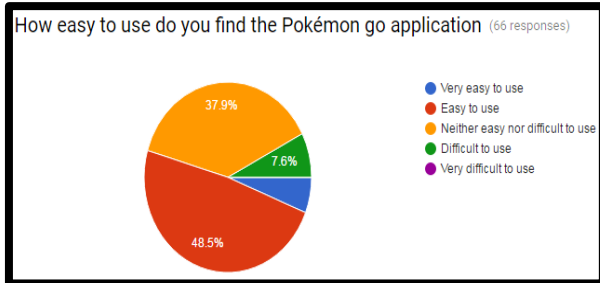## B. Analysis of the Hypotheses related internal factors learnability and Memorability (PEU)

Figure 6: Feedback of the user on how they find the game

The learnability depends upon two things playability and likeability of the game. Playability and likeability both are interrelated and depend upon the ease of use. From the above analysis a conclusion is made that 48.5% user found the game easy to use as they play similar game before and 37.9% user found the game neither game nor difficult as they are using for first time so they don't enjoy much as shown in Figure 6.
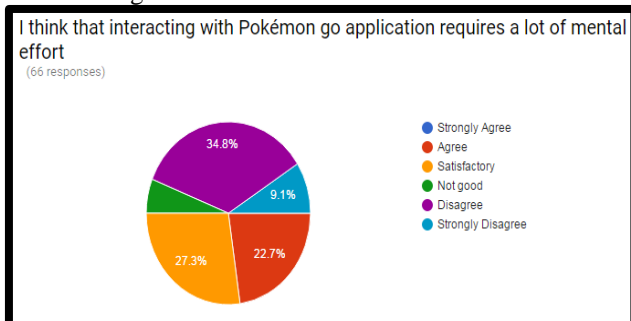

Figure 7: Users feedback on mental efforts required on game

While 34.8% user felt that interacting with game required much mental efforts. So the game needs to improve its learnability as shown in Figure 7. As mental efforts affect user's behavior and satisfaction level.
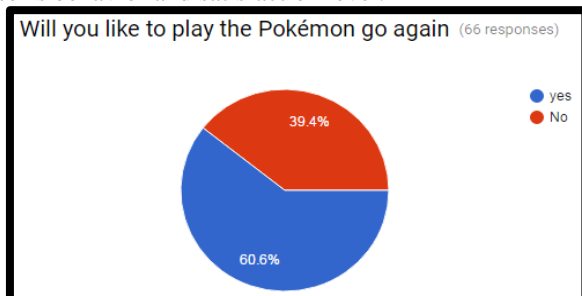

Figure 8: Users feedback on playability of game

The Memorability depends upon feeling of the user. From the above analysis a conclusion is made 60.6% said they

find the game very exploring so they play it again. While 39.4% find the game very confusing so they said they won't play again as they feel the game required learning as shown in Figure 8.

H7a: Playability of game positively effects Perceived ease of use.
H7b: While playing the game, the mental efforts required is positively effects Perceived ease of use.

Table 5: Statistical analysis of identify factors related to PEU

		Pokémongo_is	Like_toplay_thePokémongo_again	Interacting_with_Pokémongo_application_requires_alot_of_mental	Easy_touse_do_you_findthe_Pokémongoapplication	PokemonGo_willbe_multiplayer_provide_better_experience
N	Valid	72	72	72	72	72
	Missing	0	0	0	0	0
Mean		1.83	.57	2.68	1.54	1.15
Std. Error of Mean		.182	.059	.159	.093	.137
Median		1.50	1.00	2.00	1.00	1.00
Mode		0	1	4	1	1
Std. Deviation		1.547	.499	1.351	.786	1.159
Variance		2.394	.249	1.826	.618	1.343
Range		4	1	4	3	5
Minimum		0	0	1	0	0
Maximum		4	1	5	3	5
Sum		132	41	193	111	83

Table 6: Component analysis of identify factors related to PEU

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.524	38.097	38.097	1.524	38.097	38.097	1.515	37.886	37.886
2	1.042	26.042	64.139	1.042	26.042	64.139	1.050	26.253	64.139
3	.828	20.695	84.834						
4	.607	15.166	100.000						

Extraction Method: Principal Component Analysis.

Table 7: KMO and Bartlett's Test related to PEU factors

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.610
Bartlett's Test of Sphericity	Approx. Chi-Square	25.161
	df	10
	Sig.	.005

The above factor analysis indicates the ease of use, playability, mental efforts and likability all are correlated and the Kaiser Meyer value is 0.610 which mean these factor are acceptable as shown in Table 5, the Kaiser Meyer value is 0.610 which mean these factor are acceptable as shown in Table 6, so according to components matrix and other analysis we can conclude that the perceived ease of use has positively affected the playability and mental efforts required to play the game. So the hypothesis is accepted.

C. Analysis of the Hypotheses related external factors User experience

User Experience is how the user feels about the system. User Experience depend upon performance means "how the user interacts with the system "and Satisfaction means "how the user felt while using the interface" both two factors depend upon sub factors learnability, Memorability, Efficiency and effectiveness.

H4a: Perceived usefulness has a significant impact on User's performance and satisfaction experience.

H4b: Perceived ease of use has a significant impact on User's performance and satisfaction experience.

Table 8: KMO and Bartlett's Test related to UE factors

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.657
Bartlett's Test of Sphericity	Approx. Chi-Square	177.184
	df	66
	Sig.	.000

Table 9: Principal Component Analysis related to UE factors

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.843	23.692	23.692	2.843	23.692	23.692
2	2.082	17.349	41.041	2.082	17.349	41.041
3	1.322	11.017	52.058	1.322	11.017	52.058
4	1.070	8.917	60.975	1.070	8.917	60.975
5	.958	7.982	68.956			
6	.767	6.389	75.345			
7	.691	5.755	81.100			
8	.604	5.037	86.137			
9	.564	4.703	90.840			
10	.438	3.654	94.493			
11	.361	3.011	97.504			
12	.300	2.496	100.000			

Extraction Method: Principal Component Analysis.

The above factor analysis indicate the user experience depend upon the four factors ease of use, playability of the game, experience of the user while playing the game and efforts required to play the game so all these factor depend upon PEU and PU as shown in Table 9. So both hypotheses got accepted.

From the previous research theories [2, 9, 11], a conclusion is made that PU and PEU in TAM are used to judge the user perception regarding using the innovation. PU and PEU are utilized for translate, analyze, and estimate user demeanor, goal, and conduct toward a data innovation. The investigation of TAM as a rule requires that a study be directed to gauge the subjective view of a user in regards to data innovation. In similarity, usability analysis has turned into a typical exercise to survey UI convenience. The testing permits simple estimation of easy to use elements with the understanding of outcomes

with quantifiable proof bolstered which show the utilization of interface or technology according to the user. Lately, different reviews have made a conclusion that TAM is used to identify the perception of user while using the particular technology whether user will accept the technology or not. While Usability testing is focused on how well user utilized or perceived our system or technology. Very little research which shows the relationship between TAM and Usability testing has been made. Through our study we made a relation between the TAM and Usability Testing. While all the testing is done by choosing the game Pokémon Go, and by identifying the major attributes of the usability like learnability, memorability, efficiency and effectiveness and based on these attributes different questionnaire is made which includes its sub key attributes as well. Based on the result from the survey we concluded about on acceptance and rejection of hypotheses. Based on all the analysis we build a framework which related TAM and Usability.

5. Conclusion

Moreover, from the previous research theories related to Technology Acceptance Model [2,4,6,9] a conclusion is made that PU and PEU in TAM are used to judge the user perception regarding using the innovation. PU and PEU are utilized for translate, analyze, and estimate user demeanor, goal, and conduct toward a data innovation. The investigation of TAM as a rule requires that a study be directed to gauge the subjective view of a user in regards to data innovation. In similarity, usability analysis has turned into a typical exercise to survey UI convenience. The testing permits simple estimation of easy to use elements with the understanding of outcomes with quantifiable proof bolstered which show the utilization of interface or technology according to the user. Lately, different reviews have made a conclusion that TAM is used to identify the perception of user while using the particular technology whether user will accept the technology or not. While Usability testing is focused on how well user utilized or perceived our system or technology. Very little research which shows the relationship between TAM and Usability testing has been made. Through our study we made a relation between the TAM and Usability Testing. While all the testing is done by choosing the game Pokémon Go, and by identifying the major attributes of the usability like learnability, memorability, efficiency and effectiveness and based on these attributes different questionnaire is made which includes its sub key attributes as well. Based on the result from the survey we concluded about on acceptance and rejection of hypotheses. Based on all the analysis we provide a framework which related TAM and Usability.

Moreover, the main goal of this study is to identify the correlation and to examine our proposed model that define the correlation between perception of user regarding the acceptance of technology and elements of usability. The gathered information of TAM survey and ease of use credits were utilized to test our proposed speculations. To identify the connection between real performance and superficial views of users, through this study we tried identify the connection coefficient between core elements of usability which are efficiency, memorability, effectiveness and learnability and factors of Technology Acceptance Model which are Perceived usefulness and Perceived ease of use. Albeit all connection coefficients are not huge, the importance of their relationship should be additionally explored and from the investigation and results it is unmistakably appeared. In any case, perceived ease of use is in accordance with core elements of usability "Memorability" and "Learnability". The concentration of our proposed explore show was accomplished in distinguishing the causality amongst Perceived ease of use and Perceived usefulness and Usability. But still it need to explore more on other usability attributes as well.

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