The Role of Perceived Enjoyment on Motivating the Internet Use

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ABSTRACT

There are many advantage of the usage of internet, as new technology. Although there is anyone is not willing to use it, it just caused by other factors wich influence it. According to perceived enjoyment literature, as an intrinsic motivation and later also extrinsic motivation, it is important factor in motivating the usage of information system. Perceived enjoyment, with perceived usefulness ang perceived ease of use – in accordance to internet technology, will influence individual behavior in motivating the usage of internet. Technology Acceptance amodel (TAM) theory indicates that individual acceptance toward the information system is motivated by their perception perceived usefulnessand perceived ease of use that still need other variables to enlarge the understanding toward individual behavior in motivating the usage of system, e.g. perceivedenjoyment.

The purpose of this research is to test the role of perceived enjoyment, also perceived usefulness and perceived ease of use, in motivating the usage internet. The sample of the research are 226 respondents. The metode that is used to test hypothesis is by Structural Equation Modeling (SEM).

The result of the research show that there is positif influence between perceived enjoyment toward perceived usefulness and perceived ease of use in motivating the usage internet. Perceived usefulness and perceived ease of use are not influent in motivating the usage of internet. The resul of the research also indicates that perceived enjoyment has an important role as an intrinsic motivation in the usage of internet but perceived enjoyment is not influence positively in the usage of intrnet in wich it is mediated by perceived usefulness and perceived ease of use.

Key Word: Technology Acceptance Model (TAM), intrinsic and ekstrinsic motivation, perceived enjoyment, perceived usefulness, perceived ease of use, Structural Equation Modeling (SEM).

1. Introduction

1.1. Background of the study

One of a research on information systems that always used as a research is Technology Acceptance Model (TAM). This model is developed by Davis et. al., (1989). It is used to predict and to describe a system used and individual acceptance toward computer in the office by using perceived usefulness and perceived ease of use constructions. These constructions are important and fundamental (motivation factor) in deciding individual acceptance and usage toward information technology. There are many studies lead to TAM in order to evaluate and to describe the usage of computer as a dependent variable with a chief predicator, perceived usefulness and perceived ease of use (Adams et. Al., 1992; Davis, 1989; Lederer et. al., 2000; Stranb et. Al., 1997). Both constructions have been accepted by information system researchers as a valid construction to predict individual acceptance toward any industrial information technology (Mathieson).

Most of technology acceptance researches are conducted from extrinsic motivation perspective. Davis et. al., (1992) searched the influence of extrinsic and intrinsic motivation relativities toward computer usage intention in the office. They described perceived usefulness as an

extrinsic motivation whereas perceived enjoyment as an intrinsic motivation. They found that perceived enjoyment and perceived usefulness mediate the influence on perceived ease of use toward computer usage intention. The result is that the usefulness will lead a main decision deals with individual support to use computer in the office. Enjoyment will describe the significance toward the usage motivation beside its enjoyment.

Another researcher, Venkatesh, 2000 explained that enjoyment as an antecedent in ease of use. It influences a user in order to get experience toward a system. Moon and Kim (2001) had conducted on the study but he used different intrinsic motivation, i.e. playfulness as anteceded the usage of WWW and he described intrinsic motivation as a determination the use of information system based on the web.

Internet is one of a new technology issue, which is different from other traditional technologies. It has changed potentially to one on the way to access information and to change business strategies on the organization. The usage and access of Internet has an important economical ratio, educational implication and social implication (Dinev, 2002). Dinev said that internet usage will give advantages for the user on work, education, information access, sophisticated technology, social affiliation and professional. Day by day the Internet user will understand that internet will improve business power, e-commerce, and will connect to the customer. By the way, there are also many people that are not willing to use it in their job. One of the reasons may be because of their anxiety and efficacy (Divnev, 2002).

In this case the researcher is doing the research dealing with the user acceptance toward Internet use by using constructions. The aims of the research are to improve the understanding toward individual motivation using Internet and to show how this factor influences individual acceptance in Internet usage. The result of Teo et. al., (1999) research was that perceived ease of use can influence the internet use that is mediated by perceived usefulness and perceived enjoyment. He also said that the easier system used will increase and will determinate the user so that it will increase the use and increase intrinsic motivation that affect enjoyment during the activity.

1.2. Problem of the research

The problem of the research is that perceived enjoyment participated in motivating the individual in the internet use.

1.3. The purpose of the research

The purpose of the research is to evaluate the role of perceived enjoyment n motivating internet use. In order to get the aim of this research, the researcher evaluates variables that are used in the research by evaluating hypothesis proposed. These are whether perceived enjoyment influenced positively on perceived usefulness in motivating internet use. Whether perceived enjoyment influence

positively on perceived ease of use in motivating internet usage. Whether perceived usefulness influence positively in motivating the use of internet. Whether perceived ease of use influence in motivating internet use. Whether perceived enjoyment influenced positively in motivating the usage of internet that mediated by perceived usefulness and perceived ease of use.

2. Underlying Theory and Hypothesis

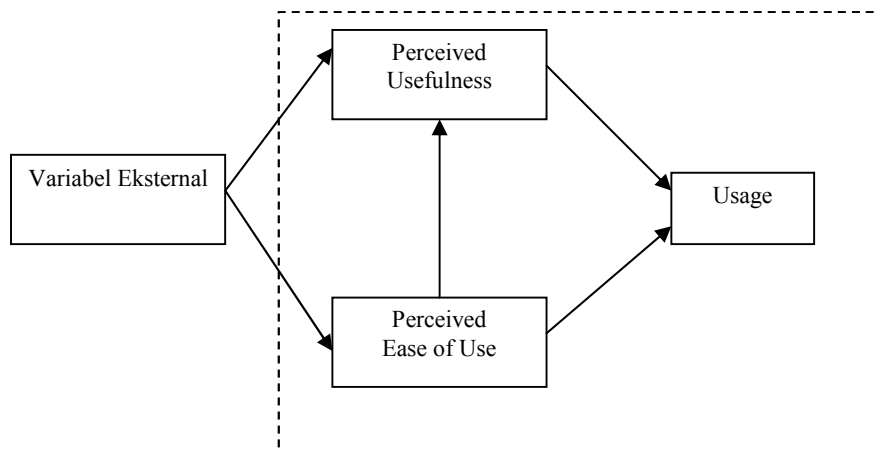### 2.1. Internet Information Technology

Information is one of an important need for one or group in deciding the final decision. An accuracy information is one of the main need that is used during the process of making decision. Jogiyanto (2000) said that the accurate information depends on three points, i.e. information, time and relevancy.

Internet is one of a means of communication, an information source, and an entertainment (Pardosi, 2001). Internet is a pile of information the entire world. By using the Internet, someone can get the news, do a business, have music, see a film and play a game, send a letter. Although there are many advantages that can be gain from Internet, it doesn't mean that someone will use it. There are many factors that influence it.

2.2. Technology Acceptance Model (TAM)

TAM is a good model to describe and to predict the individual acceptance toward information technology. TAM is introduced by Davis (Davis, 1989; Davis et. al., 1989) He searched a study toward students which focused on validation model using different setting (Lucas & Spitler, 1999). TAM theory describes that the use of system by individual depends on one's behaviour. TAM lies on Theory of Reasoned Action (TRA). Fishbein & Ajzen (1975) said that social behavior is motivated by individual attitude toward one's behavior, one's thought of behavior performance, and evaluation toward every performance value. Figur below shows Technology Acceptance Model:

Figur Technology Acceptance Model

Perceived
Usefulness

Variabel Eksternal

Usage

Perceived
Ease of Use

TAM describes that perceived usefulness and perceived ease of use is a dominant decision on the use of information technology. Most of studies on TAM are used to evaluate the use of internet as a dependent variable where as perceived usefulness and perceived ease of use as a main predicator (Adams et. al., 1992; Davis, 1989; Straub et. al., 1997).

2.3. Motivation

Motivation theory assumes that individual behavior is showed in the need of fulfilling the certain need and to get the aim (Davis et. al., 1992; Igbaria et. al., 1996; Teo et. al., 1999). Motivation theory is classified into two groups, extrinsic motivation and intrinsic motivation (Valerand, 1997). Extrinsic motivation is one's motivation in order to get the aim (appreciation), e.g. work ethic, salary, promotion, etc. (Deci & Ryn., 1987). In another word, extrinsic motivation is job activity in which it is used to get the food outcome.

On the other hand, intrinsic motivation is related to perceived enjoyment and perceived satisfaction from individual behavior (Valerand, 1997). As a result, perceived usefulness is the example of extrinsic motivation and perceived enjoyment is the example of intrinsic motivation (Davis et. al., 1989).

2.4. Perceived Enjoyment

Davis, et. al., (1992) said that enjoyment is a level where the activity of computer system can affect someone beside the value of a means itself. The other definition of enjoyment (Carroll & Thomas, 1988; Deci 1971; Malone, 1981) is a level of computer use activity which affect him. It does not depend on hi work that has known before.

Tao et. al, (1999) had evaluated about individual motivation toward the acceptance of information system in Singapore. He described that most of internet user were motivated by their perception toward internet usefulness in helping their task, and just for enjoyment. It can be said that it will be easier for them that those system will have perceived usefulness and perceived ease of use. As a result, it can cause enjoyment if the user uses those systems (Venkatesh & Davis 2000). Dealing

with internet technology, researcher assumes that there is a positive effect on the internet use between perceived enjoyment on perceived usefulness and perceived enjoyment on perceived ease of use.

Based on explanation above, the hypotheses of the research are as follows:

H1. On the internet use, perceived enjoyment has a positive effect on perceived usefulness.

H2. On the internet use, perceived enjoyment has a positive effect on perceived ease of use.

2.5. Perceived Ease of Use and Perceived Usefulness

Davis (1989) the pioneer of TAM said that there is an important variable in deciding the system use. The first someone who tends to use or not to use information application system depends on their conviction whether the application is able to conduct their work or not. Davis (1989) called it perceived usefulness. The second, although the user believes that system applications will be useful they often believe that a complicated system and the use will be a consideration to use it. Davis (1989) in this case called perceived ease of use.

Empirical research that bases on TAM, perceived usefulness is determine factor for the user to use the system information. The result of a research conducted by Davis el. al., (1989) perceived usefulness has a closely relation and assisted to the acceptance information technology if it is compared to other variables such as an attitude, satisfaction, and other perception criteria/norm. Davis (1989) on TAM said that perceived usefulness is influenced by perceive ease of use. It is caused by the principal that the easier information system use, the more useful of the system. Perceived ease of use on information system will cause to the user that the system is useful (Venkatesh and Davis, 2000). It takes the important role on predicting and deciding the user to use a certain information system (Davis et. Al., 1989) The user thinks that the system is easier to use, moreover they will get a knowledge and get more other advantages in conducting the system (Venkatesh, 2000).

Teo et. al., evaluated individual motivation toward the acceptance of information sytem of internet use in Singapore. He said that most of internet user were motivated by their perception of internet usefulness in their task and it could have an enjoyment and ease of use. Teo (1999) also said that the easier system used will improve their ability and determination for the user so that it will cause usefulness. The result of Teo's research (1999) is that perceived ease of use can influence the internet use that is mediated by perceived usefulness and perceived enjoyment.

Based on the data above, it can be hypothesized that:

H3: Perceived usefulness has a positive effect on the internet use.

H4: Perceived ease of use has a positive effect on the internet use.

H5: Perceived enjoyment positive effect on the internet use which mediated by perceived usefulness and perceived ease of use.

3. Research Methodology

3.1. Sample and Sampling Technique

The sample of this research is convenience sampling. According to Jogiyanto, (20003) convenience sampling is a sampling which is done by choosing free sample. This sample depends on the researcher. The total number of this research is 226 respondents. Respondents are the post graduate student of Gadjah Mada University in Yogyakarta and they are still active. Respondents are chosen because of they, at least, know and use internet in their study.

According to Hair et. al., (1989) the total number of sample using SEM is 100 up to 200 respondents. Hair et. al., suggested that the total number of sample at least 5 observations for every estimation.

Technique sampling in this research is a survey. In this case the researcher give the questions to the respondents. The questions should be answered directly and given the to the researcher. Data collecting was done on September up to December 2004.

3.2. Definitions and Measurement

Operational definitions of variables are as follows:

Perceived enjoyment, it is a level in which the activity of computer system use will be enjoyable to someone beside the value of a means itself.

Perceived usefulness, it is a level in which someone believes that the accurate of system use will support and be useful to their work.

Perceive of use, it is a level in which user hopes that the system will be easier to operate.

Internet usage, it is the use of information system for all kind of user's purposes.

3.2. Hypothesis tested

Hypothesis was done in order to know the relationship among construct search. Hypothesis technique in this research is Analysis of Moment Structure (AMOS) with structural Equation Modeling (SEM). SEM is multivariate technique which combines between double regress aspect and factor analysis to dependable relation simultaneously (Hair et. Al., 1995). The graph below shows a relationship among the variables:

Figur Research Model Path Graph
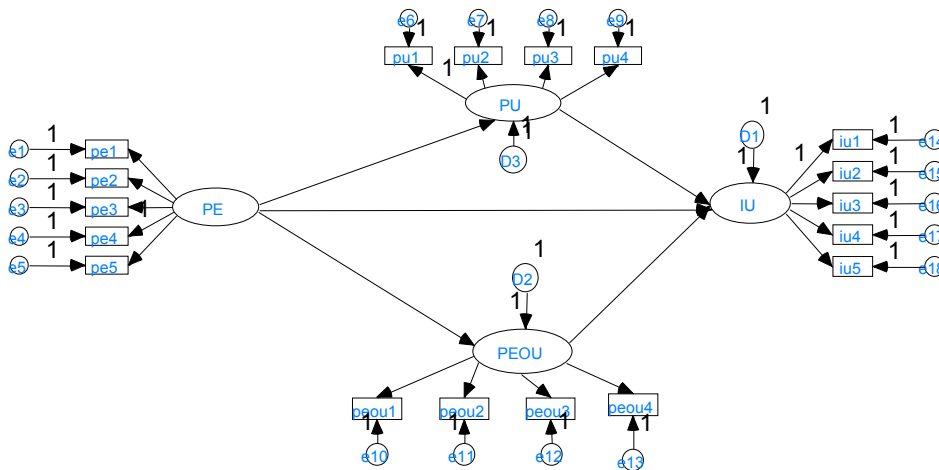
4. Data Analyses

4.1. The result of finding

The data collection was done by spreading out a questionnaire to respondent. The total number of questionnaire sheet was 300 pieces but 235 were returned. From the data collection, it was 266 (75%) which were appropriate for the test data. Data collecting was done by spreading out to the respondent and taking it back directly. The data collection was stated from August up to October 2004.

Table 4.1.
Characteristics of Respondent

Criteria of Respondent	Frequency	Percentage
Sex = Man = Woman = Total	 64 162 	 28% 72% 100%
Age = **21-25 years** **26-30** **31-35** **36-40** **41-45** **Over 45 years** **Total**	34 89 57 31 9 6 	15% 39% 25% 14% 4% 3% 100%
Education= S2 S3 Total	 188 38 	 83% 17% 100%
Internet Experience = 1- 6 months 7-12 13-24 over24 years Total	 28 81 93 24 	 12% 36% 41% 11% 100%

4.2. Structural Equation Modeling Analysis

This research is done by using SEM analysis. The analysis uses two steps in which supported by AMOS 4.01 program. According to Hair et. al., (1998) there are two steps in conducting SEM estimation. The first step is technique confirmatory factor analysis. This technique is designed to estimate the specific equivalence measurement model that is evaluated separately. The second step is technique of full structural equation modeling. This step is provided for evaluating a research model proposed.

4.3. Evaluation of Measurement Model

Reliability tested, reliability tested instrument uses item to count correlation and crobach's alpha. A measurement will be reliable if the item correlation more than 0.50 and Cronbach's alpha is more than 0.70 (hair et. al., 1998).

Based on the data provided, it can be seen that all of indicators has 0.50 score of item to the total correlation. It is also said that all of construct score of Cronbach's alpha are more than 0.70. This means proves a consistency.

Validity, instrument validity of this research uses factor analysis. Validity that will be tested is content validity and construct validity. The graph below shows the result of confirmatory factor analysis.

Table 4.2.
The Result of Confirmatory Factor Analysis

Perceived Enjoyment	Indikator	Standarized Regression Weight	Critical Ratio
	Pe1	0.6368	10.0895
	Pe2	0.7496	9.6148
	Pe3	0.8970	7.8367
	Pe4	0.9395	5.5248
	Pe5	0.8287	9.0825
Perceived Usefulness	Pu1	0.8528	7.0086
	Pu2	0.8987	5.4335
	Pu3	0.7874	7.8964
	Pu4	0.8065	8.3586
Perceived Ease of Use	Peou1	0.7892	8.3000
	Peou2	0.8415	7.1358
	Peou3	0.7160	9.1501
	Peou4	0.8231	7.5515
Internet usage	Iu1	0.5372	10.3260
	Iu2	0.6795	9.8257
	Iu3	0.9663	2.6285
	Iu4	0.8260	7.9207
	Iu5	0.7081	7.9207

Convergent Validity and Discriminate Validity, Convergent Validity can be gained if the relation among loading factors in the construct is not zero. Convergent validity recommended is 0.70 on standardizing loading. Discrimination validity is counted by comparing the rest rate from variance extracted for two construct squares from correlation between two constructs with correlation among constructs square from correlation among constructs.

Table 4.3
Discriminant Validity

Korelasi antar Konstruk	Kuadrat dari Korelasi antar Konstruk	Rata-rata Variance Extracted Konstruk	Keterangan
Pe – Peou = 0.7025	Pe – Peou = 0.4935	Pe – Peou = 0.7662	Valid
Pe – Pu = 0.6891	Pe – Pu = 0.4748	Pe – Pu = 0.6939	Valid
Pe – Iu = 0.6503	Pe – Iu = 0.2345	Pe – Iu = 0.6541	Valid
Peou – Pu = 0.4841	Peou – Pu = 0.2799	Peou – Pu = 0.6662	Valid
Peou –Iu = 0.5282	Peou – Iu = 0.2799	Peou – Iu = 0.5364	Valid
Pu – Iu = 0.4867	Pu – Iu = 0.2369	Pu – Iu = 0.5621	Valid

Construct Reliability Test and Variance Extracted, the evaluation by using unidimensionality for all multi indicator construct should be done before testing the reliability. In order to have a test on this unidimensionality, Ferdinand suggested to use the evaluation toward construct. It is used to evaluate whether the indicators describe the construct or not. According to Hair (1998) the score rate suggested for construct reliability is 0.70 and for variance extracted is 0.50.

Table 4.4
Construct Reliability Test and Variance Extracted

Konstruk	Construct Reliability	Variance Extraced
Perceived Enjoyment	**0.9082**	**0.6683**
Perceived Usefulness	**0.9036**	**0.7013**
Perceived Ease of Use	**0.8117**	**0.6303**
Internet Usage	**0.8663**	**0.5735**

4.4. Structural Model tested

The total sample of the research is 226 samples. The minimum sample according to SEM using MLE is 100 samples. As a result, the total sample is qualified. The research also has 5 observations for every estimated parameter. The total estimated parameter is 45 so that the minimum qualified sample is 225 (5X45=225).

Normality Assumption

To evaluate the normality data which based on AMOS 4.01 program, it is accepted if z-score (critical ratio) is over 2.58. It means that normality assumption is rejected on probability level 0.01 (Hair et al., 1998).

The result of AMOS 4.01 output program is that the data collected is not normal. It is because the score of all CR is over univarietly and multivariable. By the way, if MLE test technique is used, next analysis can be done because this technique is robust enough, although the normality assumption is not available (Purwanto, 2000).

Goodness-of-Fit

Indexes which can be used are Goodness-of-fit GFI, RMSEA, TLI, NFI, and CMIN/DF. These indexes are used for testing a model that can be seen from the graph:

Tabel 4.5
Goodness-of-Fit Index Structural Model

Goodness-of-Fit Index	Nilai Kesesuaian	Indeks	Keterangan
Chi-Square - χ^2	**Rendah**	**226,256**	**-**
GFI	**≥ 0.90**	**0.9029**	**Good**
RMSEA	**≤ 0.08**	**0.0583**	**Good**
AGFI	**≥ 0.90**	**0.8682**	**Marginal**
TLI	**≥ 0.95**	**0.9585**	**Good**
NFI	**≥ 0.90**	**0.9252**	**Good**
CFI	**≥ 0.95**	**0.9658**	**Good**
CMNI/DF	**≤ 2.00**	**1.7639**	**Good**

The result of Hypothesis

Hypothesis test is done by path analysis. It shows the regression relation among constructs that form the model structure. Table 4.9 shows the result of standardized regression weight score from AMOS program. The hypothesis will be significant if critical ratio 0.05 > 1.96. Table 4.9 shows the causality relation among constructs and the result of hypothesis test.

Table 4.6
The Result of Hypothesis test

Hipotesis	Hubungan	Standardized Estimate	CR	P
Pu<-- Pe	+	0.4847	8.9866	0.0000
Peou<-- Pe	+	0.4689	8.8382	0.0000
Iu<-- Pu	+	0.0956	0.9636	0.3353
Iu<-- Peou	+	0.0992	0.9478	0.3432
Iu<-- Pe	+	0.0126	0.1587	0.8739

The Result of HypoThesis Test 1

Based on AMOS 4.01 analysis program shows that critical ration is 8.9866. The total score is over critical ratio. It means that there is positive effect between perceived enjoyment and perceived usefulness significantly on internet use.

The result of the research is also consistent with the previous study which states that enjoyment is the key determiner for the intention in using computer (Davis, et.al, 1992). Webster (1988) found that enjoyment has an imprtant role as an instrinsic motivation to make use computers at workplaces. Malone (1981a, 1981b) also carried out studies on the role of enjoyment in the using of computers in the context of computer games; his results show that enjoyment serves as the main motivation for people who have intention in using computers in the context of computer games. Moon and Kim (2000) also stated that internet usage is motivated by the intention to have enjoyment. Furthermore, the study performed by Teo, et.al (1999) suggested that in using internet people are motivated by the function of the internet itself, except for that the using of such a technology will provide enjoyment.

Test Result on Hypothesis 2

The calculation shows that the value of critical ratio 8.8382 is higher that the critical value itself. It means that there is a positive and significant influence between the perceived enjoyment and the perceived ease of use for the use of internet. This result supports the one of a study carried out by Igbaria, et.al (1994), by Davis, et.al (1999), Moon, et.al (2001), and Webster (1989).

Test Result of Hypothesis 3

The result of AMOS 4.01 calculation shows a critical ratio value of 0.9636 less than it critical value; it means that the perceived usefulness does not positively influence the use of the internet. The finding is not in line with the result of a research carried out by Igbaria (1990) and Robey, et.al. (1989) who concluded that there is a positive relationship between the perceived usefulness and the frequency of the use of the information system. However, the result of this study supports what Brown (2002) has done on the factors prompting people to learn the web based technology because of

its easiness in the developing countries; he came to a conclusion that in such countries the perceived usefulness could not predict the use of internet. The reason behind the claim comes from the fact that people in the countries are not so confident, or they are afraid or worried in exploiting web sites. On that account, it can be concluded from the results, that the perceived usefulness is not the main motivation in the use of internet; there might be some other factors such as self-eficacy, anxiety, and so on. This is also in agreement with the respondents' characteristics that have been studied in Indonesia as a developing country.

Test Result of Hypothesis 4

The result of AMOS 4.01 calculation shows a critical ratio value of 0.9478 less than it critical value; it means that the perceived ease of use does not positively influence the use of the internet. The finding is not in agreement with what Davis, et.al. (1989) have done. They claimed that the perceived ease of use plays an important role in predicting and determining the decision for the users to use an information system. Put in other words, although using internet is thought as an easy task, people have low motivation in doing so.

Test Result of Hypothesis 5

The result of AMOS 4.01 calculation shows a critical ratio value of 0.1587 less than it critical value; it means that the perceived enjoyment does not positively influence the use of the internet which is mediated by perceived usefulness and perceived ease of use. Teo, et.al. (1999) suggest that the perceived ease of use can stimulate the use of internet mediated by the perceived of usefulness and the perceived enjoyment.

The previous study indicates that enjoyment as an intrinsic motivation plays as the intention determiner in using computer (Davis, et.al., 1992) and enjoyment as the determiner of ease of use (Venkatesh, 2000). Based on the findings of the previous researches as well as those of this study, it can be concluded that the perceived enjoyment and perceived ease of use are the main important factors in motivating the internet users; however, the perceived enjoyment positively influences the use of internet directly which is not mediated by the perceived usefulness and the perceived ease of use.

5. Conclusion, Weaknesses and Research Implication

a. Conclusion

The results of the research show that there is a positive influence between the perceived enjoyment and the perceived usefulness in motivating the use of internet. This findings is in line with the previous studies which indicate that the users of such a system who got enjoyment would obtain the usefulness of the system so that they were motivated to use the internet.

The findings of the research also show that there is a positive influence between the perceived enjoyment and the perceived ease of use in motivating the use of internet. These results support those obtained by Venkatesh and Davis (2000) who stated that the feeling of enjoyment in using the system

of information increased the intrinsic motivation which would produce the ease in using the internet (perceived ease of use). From that statement, it can be claimed that the use of internet which gives enjoyment for the users will make them more easily in using such a technology system (perceived ease of use).

This study shows that the perceived usefulness does not positively influence the motivation of the use of internet. This is not in line with the researches carried out by Igbaria (1990) and Robey, et.al (1989) who concluded that there is a positive relationship between the perceived usefulness and the frequency of the internet use. However, the result of this study supports what Brown (2002) has done on the factors prompting people to learn the web based technology because of its easiness in the developing countries; he came to a conclusion that in such countries the perceived usefulness could not predict the use of internet.

The results of the study show that the perceived ease of use does not positively influence the use of the internet. The finding is not in agreement with what Davis, et.al. (1989) have done. They claimed that the perceived ease of use plays an important role in predicting and determining the decision for the users to use an information system. Put in other words, although using internet is thought as an easy task, people have low motivation in using the internet.

The results of the study also indicate that the perceived enjoyment does not positively influence the use of the internet which is mediated by perceived usefulness and perceived ease of use. The previous study suggests that enjoyment as an intrinsic motivation plays as the intention determiner in using computer (Davis, et.al., 1992) and enjoyment as the determiner of ease of use (Venkatesh, 2000). Based on the findings of the previous researches as well as those of this study, it can be concluded that the perceived enjoyment and perceived ease of use are the main important factors in motivating the internet users; however, the perceived enjoyment positively influences the use of internet directly which is not mediated by the perceived usefulness and the perceived ease of use.

b. Research Implication

To increase the motivation and enjoyment of the users in using the internet, the following attempts can be performed.

1. The provider of internet server should create a comfortable atmosphere and ease of use in providing the internet service, so the users are able to get the usefulness of using the internet in doing their jobs.

2. The information system practitioners should be able to invent or create systems which are related to the use of internet, for example creating software that can modify the enjoyment and the ease of the use of the internet, so the users are motivated enough in exploiting such a technology.

3. The internet users should be motivated in using the internet. On that account, they should realize that the technology is useful in increasing their productivity effectively.

4. University teachers should create a condition which can motivate the use of internet by increasing the understanding that the enjoyment is very important in using the internet. By getting the enjoyment, the users of the internet will get the ease because someone who gets enjoyment from the internet will get the ease in using it.

c. Weaknesses of the research and implication for further researches

The research is still far from being perfect; some weaknesses are found in parts of such a study. Therefore, further researches need to be conducted for the same topic with different settings. The weaknesses of the research are as follow:

1. The data were collected from a questionnaire, which bases on the respondents' perception. This might give problem when the respondents' perception does not represent the reality. The researcher was not personally involved in completing the questionnaire, so the responds were based only on their own perception.

2. The research location is the Postgraduate Program of Gadjah Mada University. The respondents were postgraduate and doctoral program active students. Therefore, generalization of the findings of the research needs different settings, for instance the users of internet at Warnet, or Cafenet by comparing the internet users on campus and those of off campus.

3. The test resultsof hypothesis 3 shows the inconsistency of the previous research which claimed that there is a positive relationship between the perceived usefulness and the frequency of the use of the information system. However, the result of this study supports what Brown (2002) has done on the factors prompting people to learn the web based technology because of its easiness in the developing countries; he came to a conclusion that in such countries the perceived usefulness could not predict the use of internet. The reason behind the claim comes from the fact that people in the countries are not so confident, or they are afraid or worried in exploiting web sites. On that account, it can be concluded from the results, that the perceived usefulness is not the main motivation in the use of internet; there might be some other factors such as self-eficacy, anxiety, and so on.