

ANALYSIS OF APPLICATION OF ONLINE WORK EXCHANGE USING TECHNOLOGY ACCEPTANCE MODEL AND INNOVATION DIFFUSION THEORY

¹ MOCHAMMAD HALDI WIDIANTO

1

¹ Informatics Departement, School of Computer Science, Bina Nusantara University, Jakarta, Indonesia, 11480

E-mail: ¹ mochamad.widianto@binus.ac.id

ABSTRACT

The progress of the information system is growing rapidly, it has an impact on various aspects, one of which is the aspect of hiring in various institutions. One of the challenges for tertiary education managers, especially human resource management, is to be able to produce graduates who are competent in their respective fields. This research was conducted in Bandung. In this case, the paper will study in one of greatest education in Bandung that was necessary to manage an information system service for the human resources administration unit, has a place to channel labor, namely BTK (Labor Market in Indonesia) or called which has been managed online. This BTK has a vital role in the distribution of employment for graduates and job creation. The use of the TAM (Technology Acceptance Model) and IDT (Innovation Diffusion Theory) models is based on the fact that so far, TAM is a concept that is considered the best and suitable in explaining user behavior towards information technology systems. This research tries to combine these methods with variables on TAM, such as Perceived Usefulness, Perceived Ease of Use, Attitude Towards, Behavioral Intention. And also, variables from IDT such as Relative Advantage, Compatibility, Complexity, Trialability, Observability. The equation model used in this study is the SEM (Structural Equation Model) using the SPSS AMOS 22 application. The SEM model is used because, in this study, there are several variables or multiple variates. The results of this study show that BTK can be well received among students and graduate education program in Bandung. Listed with the results of hypothesis testing, which findings are quite significant. And with the results of this research, it tends to be reasoned that the labor market in the education program can help students and alumni or graduates in finding suitable jobs.

Keywords: *Online education, Vocational training of educators, Resistance to distance learning, Higher educational institutions.*

1. INTRODUCTION

The progress of the information system is overgrowing. It has an impact on various aspects, one of which is the aspect of hiring in multiple institutions. The development of the information system can provide convenience in data collection, data processing, and access to the labor market itself. The use of appropriate information systems will also have an impact on the ease of achieving institutional goals.

The goals of the institution are comprehensive and are divided into various fields within it. In an organization or institution, several elements have an important role, one of which is human resources. Human resource management becomes the artery of the institution because the human factor being managed becomes the

determinant of the path or stagnation of the institution's activities. The human resource management of this institution dramatically influences many aspects of the determinants of the work success of the organization. If human resources can be well organized, it is expected that this organization can carry out all organizational activities well. Higher education human resource management is part of the control of the entire academic community. One of the challenges for tertiary education managers, especially human resource management, is to be able to produce graduates who are competent in their respective fields. And as an educational institution that cooperates with various companies in the distribution of labor, it needs a place to

accommodate and distribute students to the company.

The educational institution that is part of higher education institutions in Indonesia to provide quality education and employment development. In this case, it is necessary to manage an information system service for the human resources administration unit. The education program in Bandung has a place to channel labor, namely BTK (Labor Exchange), which has been managed online. This education BTK has a vital role in the distribution of workforce to graduates and job creation, which makes graduates superior with the increasing number of companies that work together in accepting graduates in the workforce, as can be seen in figure 1.

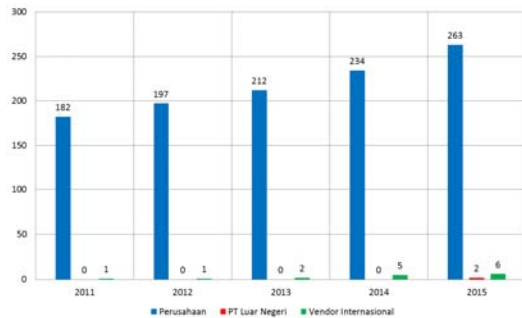


Figure 1. Education Program Collaboration with the Company

With the increasing cooperation between education programs, companies, international vendors, and foreign universities, BTK is an appropriate place for companies to recruit the best education program graduates in Bandung. With the presence of BTK (Labor Market) online, students and graduates can look for job vacancies that are by their individual choices. While companies can receive workers by the required criteria

To find out the acceptance and utilization of technology from BTK it is necessary to measure the extent of the success of the application of an information system, especially at the Labor Exchange education program in Bandung. The use of the TAM (Technology Acceptance Model) [1],[2], [3] and IDT (Innovation Diffusion Theory) [4], [5], [6] model is based on the fact that so far TAM is a concept that is considered the best and suitable in explaining user behavior towards information technology systems

2. STUDY LITERATURE

2.1 IDT (Innovation Diffusion Theory)

According to [1], [7] said that corporate advancement could create R&D (Research and Development), generation and promoting approaches, and at last lead to the commercialization of these developments. Progress is the way toward understanding another thought, which is not the same as the past, by methods for the creation or by making it work out as expected, where development incorporates the age of assessments, new ideas, and usage. It is the utilization of new and various techniques and advancements to improve the nature of expenses or lower, to meet or surpass organization targets.

Innovation is the earliest stage of a diffusion processor that can be called a trigger for the process to take place. Whereas the communication channel refers to a media that is used to convey information to each other so that it can bring up the same understanding of one thing. The following is an overview of diffusion theory or IDT as shown in Figure 2



Figure 2. Innovation Diffusion Theory

Other distinctions between the final format and the submission templates are made for the convenience of authors and referees. The most important of these is the citation and referencing style used.

Furthermore, the theory put forward [8], [9] has noteworthy significance and contention during the time spent essential development leadership. The hypothesis, among others, portrays the factors that influence the pace of appropriation of the development just as the phases of the advancement necessary leadership process. Factors that impact the stage of development dispersion incorporate advancement qualities (saw properties of progress), kinds of advancement choices (sorts of development choices), correspondence channels (correspondence channels), social framework conditions (nature of social frameworks), and the job of progress specialists (change operators).

The characteristics of IDT, according to [8], [9] are divided into five attributes of innovation such as:

1. Relative Advantage

The level of an excess of progression [10], is it superior to past developments or from things that are typically done. Typically estimated as far as financial matters, social accomplishment, solace, and fulfillment. The more prominent the relative advantages felt by the adopter, the quicker the advancement is received. In light of the clarification above:

- With communication benefit values and belief.
- The distribution has benefit values and beliefs.
- The amount of time savings.
- It is providing secure access value.
- Expressed in economic profitability

2. Compatibility

On the off chance that the development [10] is conflicting or not by the conditions and standards embraced by the adopter, the advancement can't be received effectively by the adopter. In light of the clarification above.

3. Complexity or complexity

Is the level of complexity of an innovation to be adopted, how difficult it is to understand and use change. The more comfortable an innovation is to be understood and understood by adopters, the faster the innovation is adopted.

4. Trialability or liability

Degree of congruity of advancement. On the off chance that the development is conflicting or not by the qualities and standards embraced by the adopter, the promotion can't be received effectively by the adopter. In light of the clarification above

5. Observability (observable)

the degree of how the aftereffects [11]. The simpler an individual sees the consequences of development. The more probable the advancement is embraced by an individual or gathering of individuals.

2.2 Technology Acceptance Model

TAM is an adaptation of TRA, which was introduced by Davis in 1986. The purpose of TAM is more devoted to explaining the behavior of computer users (computer usage behavior). TAM uses TRA as a theoretical basis for specifying a causal relationship between two fundamental beliefs, namely Perceived Usefulness and Perceived Ease of Use. [12]. More explicit than TRA because TAM is proposed uniquely for the conduct of the utilization of PC innovation. This TAM model isn't just ready to foresee yet can likewise clarify so specialists and professionals can recognize why a factor isn't acknowledged and give the correct potential advances.

The principle reason for TAM is really to give a fundamental advance of the effect of an outside factor on inner convictions, frames of mind, and goals. Cap is intended to accomplish these goals by distinguishing a few fundamental factors proposed in past investigations that concur with factors that influence psychological and full of feeling PC acknowledgment and use TRA as a possible reason for deciding the model of the relationship of research factors. Cap positions two convictions, in particular, see the convenience and perceived usability as the fundamental elements of PC acknowledgment conduct, as appeared in Figure 3.

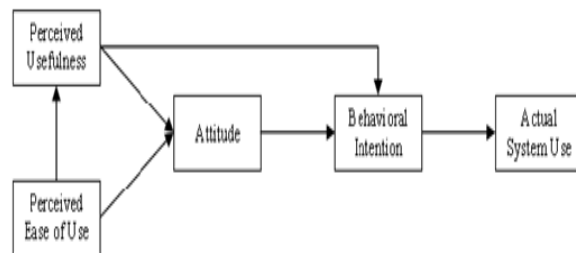


Figure 3. Technology Acceptance Model (TAM)

In light of the deliberate audit of the writing, different works have been found that strengthen the areas of knowledge processing and representation. The branch that is responsible for the processes of knowledge representation in Artificial Intelligence, to achieve this, it is necessary to group situations that have similar characteristics or properties instead of making individual representations.

2.3 Research Literature

Apart from the explanation of several theories that have been explained previously, as in table 1.

Table 1 Similar studies

Research	Variable	Result
[13]	<i>Enjoyment, Self-Efficacy, Ease of Use, Usefulness, Attitude, Corporate Image, Attractiveness</i>	This study revealed a significant relationship between perceived satisfaction, ease of use, technological self-efficacy, and attitudes toward Web sites and corporate image.
[14]	<i>Compatibility, Complexity, Relative Advantages, Observability, Trialability, Perceived Usefulness, Perceived Ease of Use, Behavioral Intention To Use</i>	The results showed that five perceptions of the characteristics of innovation were influenced by e-learning systems of employee behavioral intentions. The effects of compatibility, complexity, relative advantage and trialability on perceived usefulness are significant. In addition, the effects of the complexity, comparative advantage, trialability, and multifaceted nature of saw convenience has an impressive effect.
[15]	<i>Relative Advantage, Observability, Complexity, Compatibility, Trialability, Attitude to e-recruiting, Intention to Use E-recruiting</i>	Comparative advantage, Complexity, Observability, Trialability, and Compatibility are significantly positively related to the attitude to recruiting online with the latter as the dependent variable. Also, attitude

Research	Variable	Result
[16]	<i>Quality of Website, Perceived of Usefulness, Perceived Ease of Use, Behavioral Intentions</i>	determines the intention to use online recruiting. The relationship with website quality, behavior is taken from configurational acceptance behavior online recruitment framework emphasizes the relationship between website characteristics, perceptions, and behavior.
[17]	<i>Perceived Usefulness, Perceived Ease of Use, Behavioral Intention</i>	Shows that ease of use and perceived benefits significantly influence on the candidate's intention to apply. Furthermore, significant differences were found between male and female candidates in terms of intention to apply.
[18]	<i>Perceived ease of use, Perceived enjoyment, Perceived usefulness, and Attitude towards using, intention to use e-recruitment</i>	Show that satisfaction, convenience, and ease of use are significantly correlated with them. Demographic variance found that age, education, and internet experience did not have statistically significant differences, while gender and occupation had statistically significant differences.

3 RESEARCH METHODOLOGY

3.1 Labor Market Education Program in Bandung

BTK Make it easy for students/graduates to apply for jobs through this

site, there is no need to come to campus to submit applications. BTK. It has several features that can make it easy for companies as parties who create jobs and also for students and graduates to find work. To find out more clearly about the appearance of the BTK site.

It turned out that the response from the business community to the BTK was extraordinary. Concrete evidence is the demand for graduates who continue to increase from year to year. It is noted that applicants for graduates reach more than 100 companies every month. Even the number of vacancies offered reaches more than 150 positions/month.

The qualifications of companies applying for workers who enter BTK are not only from national private companies, such as: PT. Indofood, PT. Fastrata Buana (Kopi Kapal Api Group), Yogya Group, Indomart Group, PT. Daya Adicipta Mustika (the largest Honda dealer in West Java), PT Sanbe Farma, Otto Pharmaceutical Industries, PT Mayora, Adira Finance, etc., but also from civil servants such as Plantation, Police, Army, Education, Finance, and so on, from Banking, from other universities and last from the textile / garment industry, etc. It clearly shows the growing trust of the business community.

Recognition from the government has also been achieved by obtaining the Trophy & Award Charter from the Department of Manpower & Transmigration, West Java Province 5 times, namely:

- "Exemplary in Productivity and Organizing a Special Job Fair for Alumni" on December 6, 1997.
- "The Best in Managing Productivity of the Labor Exchange for Alumni" on August 22, 2002.
- "The Best Labor Exchange in West Java" on 29 April 2006
- "The Best Job Fair in West Java" on 30 July 2009
- "The Best Job Fair in West Java" on January 28, 2012

3.2 Research Population and Samples

In this study, the populations that will be respondents in this study are final-year students and graduates. In general, for correlational studies the minimum number of samples to obtain good results is 30. According to [19] uncovered that an example size of more than 30 and under 500 is proper for most investigations, and if the

example is separated into subsamples (male/ladies, youngsters/seniors, and so forth.), a base example size of 30 for every classification is suitable.

[20] suggested the sample size for research that is in the event that in the examination will lead multivariate investigation (relationship or different relapse, for instance), at that point the quantity of test individuals is at any rate multiple times the quantity of factors considered. However, in other studies determining the number of representative samples according to [21] is dependent on the number of indicators multiplied by 5 to 10.

Then based on the results of these calculations, right now, were 48 factors. Therefore acquired a base number of tests of this investigation upwards of 240 respondents. The results are obtained from 48 multiplied by 5. In view of the testing method classified into two, called likelihood examining and non-likelihood inspecting. And for this research using nonprobability sampling with a derivative method, namely purposive sampling. Based on consideration, this method is considered more suitable to be applied in research, because this method conducts research considerations by assuming the desired elements already exist in the sample members taken.

3.3 Identification and Operational Variables

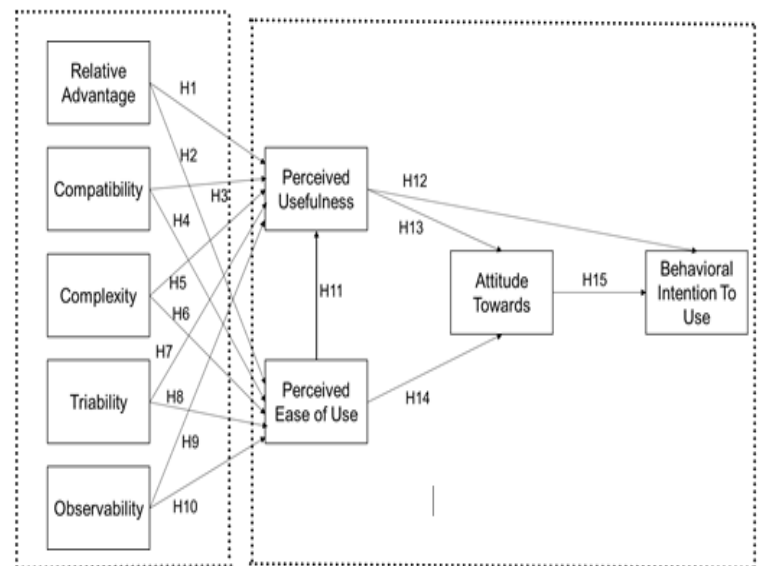


Figure 4. Research Hypothesis Design

To explain [22] the operational variables of this study constructs with variables that

describe behaviors or symptoms that can be tested and determined by the questionnaire to the respondents. The operational factors can be found in table 2.

Table 2. List of Manifest Variables

Construct	Definition	Manifest Variable	Questionnaire
<i>Relative Advantage</i>	The level of excess of an innovation, is it better than previous innovations or from things that are usually done.	1. Providing communication benefits	a RA1
		2. Providing distribution benefits	b RA2
		3. Save time	c RA3
		4. Ease of access	d RA4
		5. Can try new things	e RA5
		6. Improve image	f RA6
		7. More economical	g RA7
<i>Compatibility</i>	The level of harmony of an innovation, whether considered consistent or in accordance with the values, experiences and needs that exist.	1. Suitability needs	a CP A1
		2. Flexible	b CP A2
		3. Easily accessible	c CP A3
		4. Increase added value	d CP A4
		5. In accordance with capabilities	e CP A5
<i>Complecity</i>	The level of complexity of an innovation to be adopted, how difficult it is to understand	1. Complete features	a CP L1
		2. Free from the complexity of the system process	b CP L2
		3. Completeness of facilities	c CP L3
		4. Integration	d CP L4
		5. does not make it complicated	e CP L5

Construct	Definition	Manifest Variable	Questionnaire
<i>Triability</i>	The degree to which an innovation can be tried first or must be bound to use it.	5. Easy to understand	a TR I1
		1. Can be tried first	b TR I2
		2. Give an interest to try the capabilities of the system	c TR I3
		3. Add experience using the system	d TR I4
		4. Try something new	e TR I5
<i>Observability</i>	The level of how others can see the results of using an innovation.	1. Improve image	a OB 1
		2. Increase productivity	b OB 2
		3. Develop performance	c OB 3
		4. Familiar	d OB 4
		5. Have integrity	e OB 5
<i>Perceived Usefulness</i>	The extent to which a person believes that using a technology will improve its performance.	1. Ease of access	a PU 1
		2. Helpful	b PU 2
		3. Increase productivity	c PU 3
		4. Improve performance	d PU 4
		5. Increase effectiveness	e PU 5
		6. Provide speed of settlement needs.	f PU 6
<i>Perceived Ease of Use</i>	The extent to which a person believes that using a technology will be free from effort.	1. Easy to learn	a PE U1
		2. Easy to understand	b PE U2
		3. Flexible	c PE U3
		4. Ease of use	d PE U4
		5. Gives an understanding of how to use the system easily	e PE U5
<i>Attitude Towards</i>	Evaluation of the user about his	1. Love to use	a AT 1
		2. Very helpful	b AT 2
		3. A pleasant experience	

Construct	Definition	Manifest Variable	Questionnaire	Construct	Indicator	Code	Explanation
<i>Behavioral Intention To Use</i>	interest in using technology	using the system	c AT 3	Compaltibility	More economical	RA7	program to outsiders.
		4. The wise decision to use the system	d AT 4				Dalam proses melamar pekerjaan dengan menggunakan BTK dapat lebih menghemat biaya.
		5. Gives positive thinking in the use of the system	e AT 5				
		1. The desire to use the system	a BI1				Job vacancies available at BTK suit my needs.
		2. The desire to update information using the system	b BI2				BTK sites can be accessed on various platforms and browsers.
	Interest (desire) someone to do certain behaviors.	3. The ability to use the system	c BI3	Easily accessible	CPA3	I can access BTK quickly and easily.	
		4. Dependence using the system	d BI4	Increase added value	CPA4	I get a positive value when applying for a job using BTK.	
		5. Become an active user	e BI5	In accordance with capabilities	CPA5	The ease of feature capabilities of BTK are in line with the capabilities of students and graduates.	
				Complexity	Completeness of features	CPL1	The features in BTK are very complete and everything works well.
					Free from complexity	CPL2	I do not find any difficulty and hassle in using various features in BTK

4. RESULT

4.1 Preparation of the Questionnaire

Table 3. Questionnaire

Construct	Indicator	Code	Explanation
Relative Advantage	Provide benefits	RA1	BTK helped me get a job.
	Provides distribution benefits	RA2	In my opinion, the implementation of BTK online makes it easy to distribute job applications.
	Saving time	RA3	The process of applying for a job is faster.
	Ease of access	RA4	In general, BTK sites are easily accessed anywhere and anytime.
	Can try new things	RA5	I gained new experience trying to apply for work online.
	Improve image	RA6	BTK gives a positive image of education

Construct	Indicator	Code	Explanation	Construct	Indicator	Code	Explanation
	Easy to understand	CPL5	well without any obstacles. Overall, the BTK site is easy to understand.		Familiar	OB4	job vacancies at BTK. BTK features are widely known and known by other people / companies.
Trialability	Can be tried first	TR11	Without having to be a BTK user, I can try various features on the BTK site		Have integrity	OB5	BTK continues to provide tangible evidence of success in creating jobs for students and graduates.
	Give an interest to try the capabilities of the system	TR12	With various features offered, I feel interested in trying to use BTK online.	Perceived Usefulness	Ease of access	PU1	Accessing BTK is so easy and fast..
	Add experience using the system	TR13	By using BTK, I gained new experience in applying for jobs online.		Useful	PU2	In my opinion, the application of BTK in the recruitment of workers is beneficial.
	Trying something new	TR14	I got a positive new experience that was felt when applying for a job using BTK.		Increase productivity	PU3	I became more productive in exploring knowledge and improving my ability to meet the requirements of the vacancies available at BTK.
	Provides the effect of trust in benefits	TR15	Before I tried, I had the confidence that BTK would provide benefits.		Improve the performance	PU4	I can improve my performance by finding a better and more suitable job using BTK
					Increase effectiveness	PU5	With the implementation of BTK, I can apply for a job and find out information that is available more quickly and easily.
Observability	Improve image	OB1	Being widely known by BTK by outsiders will enhance the positive image		Provide speed of settlement needs	PU6	BTK can answer the needs of companies and students as well as graduates in the workforce
	Improve Productivity	OB2	With the various facilities provided by BTK, students and graduates will be more productive and actively seeking suitable jobs.				
	Increase productivity	OB3	I became more motivated to develop performance in order to meet the requirements of				

Construct	Indicator	Code	Explanation	Construct	Indicator	Code	Explanation
Perceived Ease of Use	Easy to learn	PEU1	recruitment process. The features and system flow of the BTK site is easy to learn.	The desire to update information using the system The ability to use the system Dependency using the system Become an active user	BI2 BI3 BI4 BI5		thoughts about this system. I often check and see job vacancy information at BTK
	Easy to Understand	PEU2	The instructions, features and navigation on the BTK website are easy to understand and understand.				With the frequent use of BTK, the ability to use features and things about applying for a job has also increased.
	Flexible	PEU3	BTK makes it easy to update the things I want to change to support applying for a job.				I use BTK over and over again and cannot be separated from the use of BTK in finding work.
	Ease of use	PEU4	In general, I feel that using BTK is easy.				I became an active user using BTK in the process of applying for a job.
	Raises understanding of how to use the system easily	PEU5	BTK provided an answer solution when I had difficulty using this system.				
Attitude Towards	Likes to use	AT1	I like the use of BTK	4.2 Testing the Overall Research Model At this stage, [23], [24] the structural equation model testing is done using SEM. The data processing model in this study uses a confirmatory factor analysis model with SPSS AMOS 22 application tools as shown in figure 6.			
	Very helpful	AT2	The use of BTK helped me find a suitable job.				
	Nice experience using the system	AT3	I am quite happy to have the experience of using BTK.				
	A wise decision to use the system	AT4	By using this system, I have made a wise decision in applying for a job.				
	Generate positive thinking in the use of the system	AT5	After using BTK I feel satisfied and have positive thoughts about this system.				
Behavioral Intention To Use	The desire to use the system	BI1	After using BTK I feel satisfied and have positive				

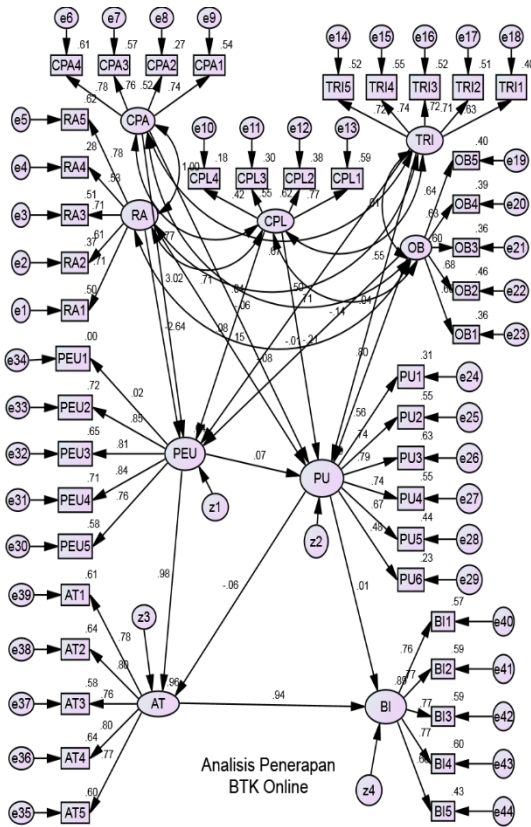


Figure 5. Structural Image Research

This model [25], [26] shows that the model consists of 9 constructs, namely: RA (Relative Advantage), CPA (Compatibility), CPL (Complexity), TRI (Triability), OB (Observability), PU (Perceived Usefulness), PEU (Perceived Ease of Use), AT (Attitude Towards), BI (Behavioral Intention). In this model, the interrelationships between constructs and the interrelationships between indicators are adjusted to the research hypothesis. The overall model test results using SPSS AMOS 22 produce the level of conformity as shown in the table

Table 4 Modification Structural Model Suitability Test Results

Model Fit	Result	Acceptable Level	Interpretation
CMIN (Chi Square)	1817.325	Between Saturated and Independence Model	Good Conformity
GFI (Goodness of Fit Index)	0.747	0 (unfit) s/d 1 (Fit)	Good Conformity

AGFI (Adjusted GFI)	0.715	0 (unfit) s/d 1 (Fit)	Good Conformity
RSMEA (Root mean square error of approximation)	0.066	< 0.080	Good Conformity
TLI (Tucker-Lewis Index)	0.833	0 (unfit) s/d 1 (Fit)	Good Conformity
NFI (Normed Fit Index)	0.741	0 (unfit) s/d 1 (Fit)	Good Conformity
CFI (Confirmatory Fit Index)	0.845	0 (unfit) s/d 1 (Fit)	Good Conformity
PNFI (Parsimonious Fit Index)	0.687	0 (unfit) s/d 1 (Fit)	Good Conformity

Source: SPSS AMOS 22

4.3 Hypothesis Testing with SEM

This test is done to see the relationship between the constructs that exist in the research model. The basis for decision making was taken by looking at the regression weights for the constructs related to the test results using SPSS AMOS version 22. If $p > 0.05$, then H1 is rejected, and if $p < 0.05$ or denoted by ***, then H1 is accepted as described in table 5.

Table 5. Value of Regression Weight Modified Research Model

			Estimate	S.E.	C.R.	P	Label	Result
PEU	<-	RA	-2.936	8.671	-.339	.357	par_37	Insignificant
PEU	<-	CPA	3.203	8.715	.367	.137	par_39	Insignificant
PEU	<-	CPL	.133	2.315	.057	.459	par_41	Insignificant
PEU	<-	OB	-.010	.324	-.032	.47	par_43	Significant
PEU	<-	TRI	.495	.789	.627	.035	par_50	Significant
PEU	<-	RA	.160	1.551	.103	.189	par_36	Insignificant

			Estimate	S.E.	C.R.	P	Label	Result
P U	<- --	C P A	.043	1.48 6	.029	.39 7	par_38	Insignificant
P U	<- --	C P L	-.33	.668	-.528	.03 5	par_40	Significant
P U	<- --	O B	.706	.130	5.422	** *	par_42	Significant
P U	<- --	P E U	.063	.291	.215	.03 8	par_44	Significant
P U	<- --	T R I	-.036	.118	-.303	.26 7	par_49	Insignificant
A T	<- --	P U	-.061	.038	- 1.618	** *	par_45	Significant
A T	<- --	P E U	.941	.074	12.64 7	** *	par_47	Significant
B I	<- --	P U	.010	.044	.216	.29 8	par_46	Insignificant
B I	<- --	A T	.966	.080	12.03 3	** *	par_48	Significant

From the results of the analysis, there are 8 acceptable hypotheses and 7 rejected hypotheses.

Table 6. Summary of Research Hypothesis Testing Results

NO	Hypothesis (H ₁)	P	Noted
1	There is a significant relationship between <i>Perceived Ease of Use</i> with <i>Relative Advantage</i>	.357	H ₁ Rejected
2	There is a significant relationship between <i>Perceived Ease of Use</i> with <i>Persepsi Compatibility</i>	.137	H ₁ Rejected
3	There is a significant relationship between <i>Perceived Ease of Use</i> with <i>Complexity</i>	.459	H ₁ Rejected
4	There is a significant relationship between <i>Perceived Ease of Use</i> with <i>Observability</i>	.047	H ₁ Accepted

NO	Hypothesis (H ₁)	P	Noted
5	There is a significant relationship between <i>Perceived Ease of Use</i> with <i>Trialability</i>	.035	H ₁ Accepted
6	There is a significant relationship between <i>Perceived Usefulness</i> with <i>Relative Advantage</i>	.189	H ₁ Rejected
7	There is a significant relationship between <i>Perceived Usefulness</i> with <i>Compatibility</i>	.397	H ₁ Rejected
8	There is a significant relationship between <i>Perceived Usefulness</i> with <i>Complexity</i>	.035	H ₁ Accepted
9	There is a significant relationship between <i>Perceived Usefulness</i> with <i>Observability</i>	***	H ₁ Accepted
10	There is a significant relationship between <i>Perceived Usefulness</i> with <i>Perceived Ease of Use</i>	.038	H ₁ Accepted
11	There is a significant relationship between <i>Perceived Usefulness</i> with <i>Trialability</i>	.267	H ₁ Rejected
12	There is a significant relationship between <i>Attitude Towards</i> with <i>Perceived Usefulness</i>	***	H ₁ Accepted
13	There is a significant relationship between <i>Attitude Towards</i> with <i>Perceived Ease of Use</i>	***	H ₁ Accepted
14	There is a significant relationship between <i>Behavioral Intention</i> for <i>Perceived Usefulness</i>	.298	H ₁ Rejected

NO	Hypothesis (H ₁)	P	Noted
15	There is a significant relationship between Behavioral Intention with Attitude Towards	***	H ₁ Accepted

NFI (Normed Fit Index)	0.758	0 (unfit) s/d 1 (Fit)	Good
CFI (Confirmatory Fit Index)	0.844	0 (unfit) s/d 1 (Fit)	Good
PNFI (Parsimonious Fit Index)	0.699	0 (unfit) s/d 1 (Fit)	Good

Source : SPSS AMOS

It can be seen that the model has fulfilled the model's eligibility requirements (Goodness of Fit). Retesting the research hypothesis based on the modified research model, this test is conducted to see the relationship between the constructs that exist in the research model such as the exposure in table 8

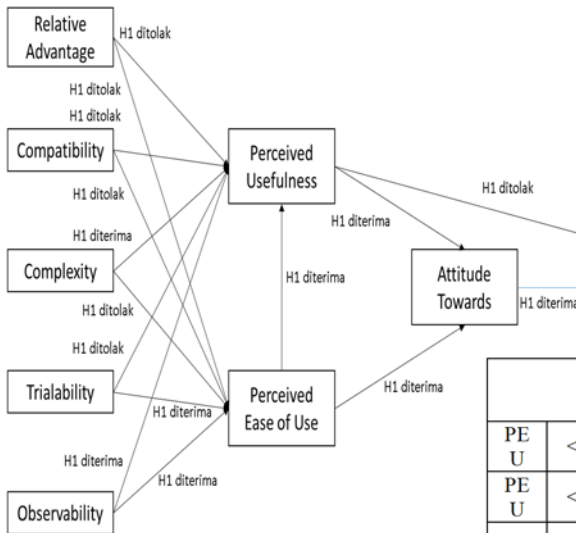


Figure 6. Research Hypothesis Model

Table 8 Value of Regression Weight Modified Research Model

			Estimate	S.E	C.R.	P	Label	Result
PE	<---	OB	-.022	.058	-3.82	.037	par_30	significant
PE	<---	TR I	.746	.087	8.527	***	par_37	significant
PU	<---	OB	.708	.110	6.412	***	par_29	significant
PU	<---	PE U	.086	.080	1.083	.027	par_31	significant
PU	<---	CP L	-.123	.142	-8.67	.038	par_39	significant
AT	<---	PU	-.062	.036	-1.704	.018	par_32	significant
AT	<---	PE U	.933	.074	12.552	***	par_33	significant
BI	<---	AT	.964	.081	11.938	***	par_34	significant

Source: SPSS AMOS

Table 7. Re-Test Results of Conformity of Modified Structural Models

Model Fit	Result	Acceptable Level	Interpretation
CMIN (Chi Square)	1279.601	Between saturated and dependence Model	Good
GFI (Goodness of Fit Index)	0.772	0 (unfit) s/d 1 (Fit)	Good
AGFI (Adjusted GFI)	0.738	0 (unfit) s/d 1 (Fit)	Good
RSMEA (Root mean square error of approximation)	0.074	< 0.080	Good
TLI (Tucker-lewis Index)	0.831	0 (unfit) s/d 1 (Fit)	Good

Table 9 Re-Test Results of Conformity of Modified Structural Models

NO	Hypothesis (H ₁)	P	Information
1	There is a significant relationship between Perceived Ease of Use with Observability	***	H ₁ Accepted
2	There is a significant relationship between Perceived	.040	H ₁ Accepted

NO	Hypothesis (H ₁)	P	Information
	<i>Ease of Use with Trialability</i>		
3	There is a significant relationship between <i>Perceived Usefulness</i> with <i>Observability</i>	***	H ₁ Accepted
4	There is a significant relationship between <i>Perceived Usefulness</i> with <i>Perceived Ease of Use</i>	***	H ₁ Accepted
5	There is a significant relationship between <i>Perceived Usefulness</i> with <i>Complexity</i>	.029	H ₁ Accepted
6	There is a significant relationship between <i>Attitude Towards</i> with <i>Perceived Usefulness</i>	.019	H ₁ Accepted
7	There is a significant relationship between <i>Attitude Towards</i> with <i>Perceived Ease of Use</i>	***	H ₁ Accepted
8	There is a significant relationship between <i>Behavioral Intention</i> with <i>Attitude Towards</i>	***	H ₁ Accepted

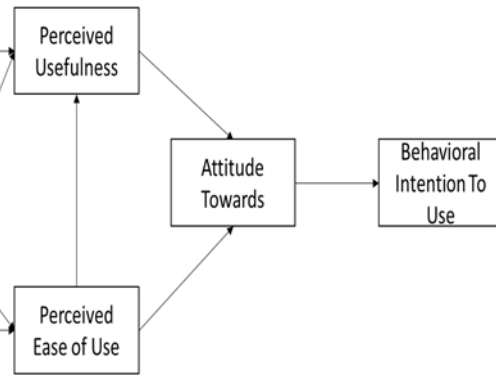


Figure 8. Modified Research Hypothesis Model

Among them are the Relative Advantage hypothesis with Perceived Usefulness and Perceived Ease of Use. This is apart from the use of BTK, which provides opportunities for education graduates and students to apply for jobs to companies that have collaborated. Various benefits and aspects of benefits are indeed felt by the presence of this BTK, but the work that is obtained or the opportunity to receive job applicants is still determined by the company.

Graduates and students also do not feel the influence of compatibility with the aspects of benefits and convenience, this happens as the development of information technology that makes accessing the internet through various media makes the BTK system less suitable because it cannot reach the mobile side.

The complexity of BTK was felt not to affect the aspect of ease, and trialability did not change the character of benefits. Because BTK is only intended for the academic community, so it can only be accessed by the wider community. And furthermore doesn't feel the impact of advantages on the goal to utilize, it is activated by the inclination of occupation candidates will quit searching for another activity if the individual has gotten a new line of work by desires.

5. CONCLUSION

In light of the aftereffects of testing impacting research directed on the usage of the BTK (Labor Exchange) using the TAM (Theory Acceptance Model) and IDT (Innovation Diffusion Theory) approaches processed using the SPSS AMOS 22 application, the following conclusions can be obtained:

1. Relative Advantage does no impact on Perceived Usefulness in the application of the Labor Exchange.

2. Relative Advantage does no impact the Perceived Ease of Use in the application of the Labor Exchange.
 3. Compatibility does no impact the Perceived Usefulness in the application of the Labor Exchange.
 4. Compatibility does no impact the Perceived Ease of Use in the application of the Labor Exchange.
 5. Complexity impact the Perceived Usefulness in the application of the Labor Exchange.
 6. Complexity does no impact the Perceived Ease of Use in the application of the Labor Exchange.
 7. Trialability does no impact the Perceived Usefulness in the application of the Labor Exchange.
 8. Trialability impact the Perceived Ease of Use in the application of the Labor Exchange.
 9. Observability impact the Perceived Usefulness in the application of the Labor Exchange.
 10. Observability impact the Perceived Ease of Use in the application of the Labor Exchange.
 11. Perceived Ease of Use impact the Perceived Usefulness in the application of the Labor Exchange.
 12. Perceived Usefulness does no impact on Behavioral Intention To Use on the application of the Labor Exchange.
 13. Perceived Usefulness impact Attitude Towards in the application of the Labor Exchange.
 14. Perceived Ease of Use impact Attitude Towards in the application of the Labor Exchange.
- REFERENCES:**
- [1] O. Mulero and M. Adeyeye, "An Empirical Study Of User Acceptance Of Online Social Networks Marketing," *South African Comput. J.*, vol. 50, no. 1, pp. 6–14, 2013.
 - [2] J. Cohen, J.-M. Bancelhon, and M. Jones, "South African physicians' acceptance of e-prescribing technology: an empirical test of a modified UTAUT model," *South African Comput. J.*, vol. 50, no. 1, pp. 43–54, 2013.
 - [3] T. B. Chiyangwa and E. Mnkandla, "Agile methodology perceived success and its use: The moderating effect of perceived compatibility," *South African Comput. J.*, vol. 30, no. 2, pp. 1–16, 2018.
 - [4] L. Syahadiyanti and A. P. Subriadi, "Diffusion of Innovation Theory Utilization Online Financial Transaction: Literature Review," *Int. J. Econ. Financ. Issues*, vol. 8, no. 3, pp. 219–226, 2018.
 - [5] H. Zhao and Q. Liu, "The practice and research on the promotion mode of MOOCs in higher education based on the innovation diffusion theory," *Proc. - 2018 7th Int. Conf. Educ. Innov. through Technol. EITT 2018*, pp. 198–203, 2018.
 - [6] C. Geng *et al.*, "Diffusion mechanism simulation of cloud manufacturing complex network based on cooperative game theory," *J. Syst. Eng. Electron.*, vol. 29, no. 2, pp. 321–335, 2018.
 - [7] W. M. Al-Rahmi *et al.*, "Integrating Technology Acceptance Model with Innovation Diffusion Theory: An Empirical Investigation on Students' Intention to Use E-Learning Systems," *IEEE Access*, vol. 7, no. c, pp. 26797–26809, 2019.
 - [8] F. Bakkabulindi, "A call for Return to Rogers' Innovation Diffusion Theory," *Makerere J. High. Educ.*, vol. 6, no. 1, p. 55, 2014.
 - [9] Q. Yu, Z. Yu, and D. Ma, "A Multiplex Network Perspective of Innovation Diffusion: An Information-Behavior Framework," *IEEE Access*, vol. 8, pp. 1–1, 2020.
 - [10] U. C. Bandara and T. S. M. Amarasena, "Impact of Relative Advantage, Perceived Behavioural Control and Perceived Ease of Use on Intention to Adopt with Solar Energy Technology in Sri Lanka," *Proc. Conf. Ind. Commer. Use Energy, ICUE*, vol. 2018-October, no. October, pp. 1–9, 2019.
 - [11] M. He, Q. Ge, and W. Liu, "Some Problems Analysis of Observability and Observable Degree for Complex Stochastic Systems," *ICARM 2018 - 2018 3rd Int. Conf. Adv. Robot. Mechatronics*, pp. 863–868, 2019.
 - [12] P. Lai, "the Literature Review of Technology Adoption Models and Theories for the Novelty Technology," *J. Inf. Syst. Technol. Manag.*, vol. 14, no. 1, pp. 21–38, 2017.

- [13] S. Cho, W. Lee, and J. Liu, "E-Recruitment: Effects of Enjoyment and Attitudes toward Web Sites on Corporate Image and Intention to Apply," *Int. CHRIE Conf. Track*, 2011.
- [14] T. Cam and T. Tran, "Adding Innovation Diffusion Theory to Technology Acceptance Model: Understanding Consumers' Intention to Use Biofuels in Viet Nam MAN SHIN CHENG," *Int. Rev. Manag. Bus. Res.*, vol. 6, no. 2, pp. 595–609, 2017.
- [15] H. N. Ozuru and J. E. Chikwe, "Electronic Recruiting (E-Recruiting) Strategy and Corporate Adoption in Nigeria," *Eur. J. Bus. Manag.*, vol. 7, no. 22, pp. 119–128, 2015.
- [16] N. A. Mahmood and N. F. Ling, "Theoretical Framework for Factors Influencing Job-Seekers' Intention to Use Online Recruitment Websites," *Int. J. Acad. Res. Bus. Soc. Sci.*, vol. 7, no. 11, pp. 479–487, 2017.
- [17] E. M. M. S. Ekanayaka and P. P. Gamage, "Factors Influencing Job Seeker's Intention to Use E-Recruitment: L Evidence from a State University in Sri Lanka," *Int. J. Manag. Stud. Res.*, vol. 7, no. 8, pp. 1–12, 2019.
- [18] Y. A. Alsultanny and M. F. Alotaibi, "Evaluating the Factors Affecting on Intension to Use of E-Recruitment," *Am. J. Inf. Sci. Comput. Eng.*, vol. 1, no. 5, pp. 324–331, 2015.
- [19] M. Murphy, "Population definitions for comparative surveys in education," *Aust. Counc. Educ. Res.*, no. January, p. 33, 2016.
- [20] Mohsin Alvi, "A Manual for Selecting Sampling Techniques in Research. University of Karachi, Iqra. University," *Munich Pers. RePEC Arch.*, no. 2016, pp. 1–56, 2016.
- [21] I. Etikan, "Sampling and Sampling Methods," *Biometrics Biostat. Int. J.*, vol. 5, no. 6, pp. 215–217, 2017.
- [22] T. A. B. Snijders, "Hypothesis Testing: Methodology and Limitations," *Int. Encycl. Soc. Behav. Sci. Second Ed.*, pp. 494–499, 2015.
- [23] S. Pradeep and Y. K. Sharma, "A Pragmatic Evaluation of Stress and Performance Testing Technologies for Web Based Applications," *Proc. - 2019 Amity Int. Conf. Artif. Intell. AICAI 2019*, pp. 399–403, 2019.
- [24] A. Touati *et al.*, "Scan-chain intra-cell aware testing," *IEEE Trans. Emerg. Top. Comput.*, vol. 6, no. 2, pp. 278–287, 2018.
- [25] J. Wu *et al.*, "Structural Uncertainty," vol. 22, no. 12, pp. 4892–4904, 2013.
- [26] F. Liu *et al.*, "SAR Image Segmentation Based on Hierarchical Visual Semantic and Adaptive Neighborhood Multinomial Latent Model," *IEEE Trans. Geosci. Remote Sens.*, vol. 54, no. 7, pp. 4287–4301, 2016.