

# Exploring the Technology Readiness of Business Students in an E-learning Environment Business College

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**Abstract.** Recently business schools are offering classes online or classes using a mix face to face or online elements. Current technology use within a college classroom learning environment may include items like Microsoft's Power Point, E-mail, course web sites, multimedia, animation etc. However the technology readiness is the important thing of the success of business students.

Technological Readiness is a well established constructs that conceptualized by Parasuraman (2000). This construct consist of four dimensions: (1) optimism, (2) innovativeness, (3) discomfort (4) insecurity. The four dimensions are relatively independent of each other, therefore an individual could harbor both contributor and inhibitor feelings towards technology.

The aim of this research is to explore the relationship between technological readiness constructs and the demographics variables of business college students in Surabaya who majoring in accounting and management field. Another aim of this research is to know the level of technological readiness in STIE Perbanas College. For the measurement we use 32 items technology readiness index presented by Parasuraman.

The demographic variables used in this study included: gender, field of study, and the status of high school. We conduct an independent sample t-test to explore the differences between the demographic variable with the respects of technology readiness.

The result is that there are no differences on technology readiness of business students with the respect of demographic variables. Based on the demographic variable : gender, field of study and senior high school, The technological readiness among the student is not different. Limitation and Implications for the development of the implementation of technology in teaching and learning are provided also the suggestion of future research.

**Key word:** e-learning, technology readiness, business students

## I. INTRODUCTION

Today, e-learning more widely implemented in educational institutions. E-learning becomes a popular means to support the teaching and learning processes. There are some benefits of e-learning in supporting teaching and learning in Higher Education, i.e. e-learning organize the learning materials through various media. E-learning also provides benefits for learners in terms of ease of accessing material from various online sources like e-mail, chat, forum, assignment, quiz etc. In addition learners also can perform self-learning to encourage student involvement (student engagement) in teaching and learning (ling and Moi, 2007). Build a teaching system based on e-learning requires a substantial investment, therefore an educational institution must be sure that such system give the institution a lot of benefits.

Therefore, the implementation of the e-learning can not increase the quality of learning proses directly, Pituch dan Lee (2006). The benefit of e-learning can't be maximal until the learner use that. The disposition and the ability of students to use e-learning support the success of the implementation of e-learning system.

Some of research result found that technology readiness have impact on the extent of the e-learning used by the student.

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## II. THEORITICAL FRAMEWORK AND HYPOTHESES

Previous study shows that a combination of positive and negative beliefs about technology underlies the domain of

technology readiness. Dabholkar, 1994, said that individuals simultaneously have both positive and negative beliefs about technology. Also, positive beliefs cause a person to easily accept new technology, while negative beliefs make them difficult to accept new technology. Individuals with positive beliefs are more ready to use the new technology (Mick & Fournier, 1998). Parasuraman and Colby (2001) introduced the term technology readiness, which refer to the behavior process behind the adoption of technological products and services. According to them, that individuals who are ready to use technology are more likely to try it (Parasuraman, 2000).

There some concept for capturing the technology acceptance. Davis (in Elliot at all, 2008) developed the technology acceptance model (TAM). TAM measure the potential drivers and inhibitors of technology acceptance. In the other hand, Parasuraman (2000) proposed a Technology Readiness Index wich measures the “propensity to embrace and to use new technologies for accomplishing goals in home life and at work. Technology readiness index (TRI) can be divided into four constructs or dimensions, with two factors being motivators of new technology use and another two factors being inhibitors as following: (1) Optimism: the degree to which individuals believe that technology can benefit live and give them more control over their live, (2) innovativeness: a tendency to be the first in usinfg new technology, (3) Discomfort: a perception of lack of control over technology and feeling of being overwhelmed by it. and (4) Insecurity: distrusting of technology and skepticism about its ability to work properly (parasuraman 2000, Parasuraman and Colby, 2001).

This research use TRI, because several empirical satudies provide that TRI scale can capture the relationship between technology readiness and technology usage behaviour (Parasuraman and Colby, 2001). According to Paarasuramand and Colby (2001), technology readiness is an overall state of mind and not measured of technical competency or ability.

Although every individuals simultaneously have both positive and negative beliefs about technology, but the extent to which positive and negative attitudes they show will be different depending on several factors. In this research we examine whether a person's technology readiness will be different when seen from some of the demographic variables and to map the extent of technology readiness of students in STIE Perbanas Surabaya.

### III. RESEARCH METHOD

#### A. Research Deasign

Research design is a framework or blueprint as the main guideline in conducting the entire series of activities in research (Maholtra, 2006). Research design can be viewed from many different perspectives. Based on objective perspective, this research is explanation research. (Sekaran, 2006). According to the data collection method this research is survey research (Sekaran, 2006).

#### B. Population , Sample and Sampling

Population in this research is the students of STIE Perbanas Surabaya College. We use the non probability sampling to choose the respondent (purposive sampling). We set the sample member based on the criteria which is choosed by the researchers. The criteria is that the respondent has studied in STIE Perbanas Surabaya minimum for one yaear. There are 107 students involve as respondents.

#### C. Measurement

We asses the Students' Technology Readiness using the Technology Readiness Index subscale modified by Parasuraman (Parasuraman and Colby, 2001) The Technology Readiness Index measures: four dimensions: (1) optimism, (2) innovativeness, (3) discomfort (4) insecurity. The instrument consist of 32 items where measured on a 5-point Likert style scale.

### IV. DATA ANALYSIS AND DISCUSSION

#### A Descriptive Statistical Analysis

Data analysis performed by descriptive statistical techniques and independent sample T test. We also measure the level of Technological Readiness of the student, by subtracated the negative attitude (discomfort and insecurity) towards the positive attitude (optimism and innovativeness).

The Respondents Profiles are:

Table 1: Respondents Profile

Demographic Charateristics	Frequency	%	
<b>Gender</b>	Male	37	34.36
	Female	70	65.4
<b>Age</b>	16 < x <= 17	1	.9
	17 < x <= 19	27	25.2
	19 < x <= 21	70	65.4
	> 21	29	8.4
<b>High School Status</b>	State	69	64.5
	Private	38	35.5
<b>High School Subject</b>	Social	59	55.1
	Science	48	44.9
<b>Field of Study</b>	Management	53	49.5
	Accounting	54	50.5

Source: Data Analysis

The respondents were 107 students in STIE Perbanas Surabaya College. 65.4% of respondents was female. The age of the students with is dominated by the student who age is

about 19-21. 55,1 of respondents have social background in senior high school. Then, 50,5% students choose accounting as field of study.

### B. Reliability Test

The Cronbach's alpha was computed to determine the reliability of 32 measurement item used in measuring Technology readiness dimension. Table 2 show The Cronbach Alpha . According to Nunnally (1978) the level of reliability are satisfactory (> 0.6)

Table 2 : The Cronbach's Alpha

TR Dimension	Cronbach Alpha
Optimism	0.82
Innovativeness	0.74
Discomfort	0.69
Insecurity	0.66

Tabel 2 shows that Cronbach's Alpha for Technology Readiness dimensions ranged from 0.66 until 0.82.

Based on Table 3, respondents show optimistic towards new technology with mean skor of 4. Respondent also show high Insecurity and moderatae innovativeness and discomfort. The overall TRI score is 3.58. Show Moderate Technology Readiness.

Tabel 3. Summary Statistics

TR Dimensions	Mean	St. Dev
Optimism	4.00	0.98
Innovativeness	3.29	0.54
Discomfort	3.36	0.50
Insecurity	3.68	0.46

### C. Mean Scores and t Test

The next step, we explore if there any differences between technology readiness and some demographic variable. The result show in following table 4 :

TR Dimension	optimism	Innovativeness	Discomfort	Insecurity
Mean male	3.8	3.30	3.4	3.67
Mean female	4.1	3.25	3.3	3.69
P-value	0.134	0.66	0.425	0.791
Mean state	4.0	3.3	3.39	3.66
Mean private	3.9	3.2	3.8	3.7
p-value	0.799	0.66	0.269	0.618
Mean sci	4.0	3.2	3.3	3.65
Mean sos	3.9	3.4	3.4	3.7
p-value	0.60	0.196	0.392	0.57
Mean mngt	3.9	3.4	3.5	3.8
Mean acat	4.0	3.2	3.2	3.6
p-value	0.73	0.062	0.002**	0.089

Based on table 4, there are significance differences between management student and accounting in discomfort variable. Another dimension of technology readiness are not different in some variables like gender, high school status, and the background of subjet in economy.,

### D. Discussion

Aim of this research is to explore the level of technology readiness of Student in STIE Perbanas Surabaya and whether there are differences in technology readiness of business students with the respect of demographic variables. some of demographic variable : gender, senior high school status, subject in high school and field of study. As expected, from the mean score the result show that dominantly the student have high level of technological readiness. In nowadays, people has a modern life, that make them very familiar with the use of new technology. In STIE Perbanas context, more than 60% respondent come from Java Island, the biggest and the most develope city in Indonesia, So it has impact on the technology readiness of the student. The high of Technology readiness index in turn will influence the adoption of e-learning by the student. Research which connecated the technology readiness and the acceptance model should elaborate in the future.

Another research result is that there are not a significance differences in technological readiness in respect of demographic variables, except for discomfort dimension, that has differences in term of the field of study. So we can say that management student feel discomfort when use technology more than accounting student. Globally, technology readiness is influenced by the experience in past, so the people who growth in environment that encourage the use of technology has a high technology readiness. This research has implication, that to become a succesfull student of higher institution, especially in e-learning context, the student must be prepared to have technology readiness. In the future, the next researcher could explore the impact of technology readiness to the Technology Acceptance Model (TAM) to examine the student acceptance of e-learning.

## V. CONCLUSION

The purpose of this research is to explore the level of technology readiness of Student in STIE Perbanas Surabaya and whether there are differences in technology readiness of business students with the respect of demographic variables. some of demographic variable : gender, senior high school status, subject in high school and field of study. As expected, from the mean score the result show that dominantly the student have high level of technological readiness. These

research result have implication that the development of e-learning system will be succesfull because the student have a high level of technology readiness. The board of leader must developed the e-learning system better in the future.

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