

Evaluating Social Technology Utilization on Employee Performance Using Positivism Paradigm

M. Qomarul Huda¹, Romi Irawan², Nia Kumaladewi³, M. Yaqoob Koondhar⁴

Abstract— Employees who are performing are assets in an organization to improve effectiveness and efficiency of work. The use of Social Technology has experienced a significant increase in the context of the company to help employee performance. This study proposes a model of employee performance measurement in terms of the use of Social Technology. The method used is a quantitative method with an extended Social Technology model. This model has seven variables: collaboration, communication, frequency of access, resource sharing, usefulness as independent, employee performance as dependent and social technology use which is the mediator. In its testing using PLS-SEM data analysis technique with SmartPLS 3.0. The test results show that there are six hypotheses tested, with five hypotheses accepted or influential and one hypothesis not accepted. Five accepted hypotheses prove that collaboration, communication, resource sharing, and usefulness have a significant effect on the use of Social Technology use and the use of Social Technology use which has a significant relationship to employee performance.

Index Terms—Social Technology, Utilization, Employee Performance.

I. INTRODUCTION

The progress of the digital is experiencing very rapid development today. The use of technology is a necessity to solve problems. Both in terms of community life and individual life. Over the past three decades, the internet has become an alternative media for delivering information. This is because using the internet, information can be accessed quickly

anywhere and anytime so that many people prefer to become internet users.

The internet is also part of a partnership from the Social Technology application so that it can run well. Social Technology is a technology created to make communicate and connect one person to another easier in social relations [1].

Generally, Social Technology has been used by the young generation (millennial) [2]. But the use of Social Technology continues to evolve to suit all ages. The use of social technology has become a part of everyday life of everyone. Nowadays people ask for email addresses or cellphone numbers to be able to communicate with each other over long distances [3].

Social Technology is not only useful for individuals but also groups and organizations, who use Social Technology for professional benefits. According to [4], there are many benefits that organizations get by using Social Technology, especially for commercial organizations to help employees. But behind the many positive impacts obtained from Social Technology, there are negative impacts that follow its users. The tendency to always use social media without knowing time is a very vulnerable negative impact. For an employee who is supposed to work become too busy with social media such as posting status, checking friends and family, streaming and downloading music or videos, and so on. This activity will spend a lot of time on employees compared to completing their work.

The success of an organization or company depends on the quality of employees. Employee quality is supported by an employee performance which is the most valuable asset for an organization, because they are able to create the value and benefits of the organization itself [5].

Organizations are very dependent on the productivity of their employees, this will have an impact on the performance of the employees themselves. If the level of productivity is high, the employee's performance is getting better. However, if the level of productivity is low due to the time they spend on social media, then the performance of employees is getting worse.

With the use of Social Technology, many positive impacts are obtained such as enabling new relationships, expanding communication with colleagues, and even making it easier to obtain information needed to improve company performance

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¹M. Qomarul Huda, Dept. of Information Systems, Syarif Hidayatullah State Islamic University Jakarta (e-mail: mqomarul@uinjkt.ac.id)

²R. Irawan, Metrodata Electronics, Tbk (e-mail: romiirawan15@gmail.com)

³N. Kumaladewi, Dept. of Information Systems, Syarif Hidayatullah State Islamic University Jakarta (e-mail: nia.kumaladewi@uinjkt.ac.id)

⁴M. Yaqoob Koondhar, Information Technology Centre Sindh Agriculture University Tandojam Pakistan (e-mail: yaqoobkoondhar@gmail.com)

[6]. However, along with the increasing use of this application, there will be risks that can have a negative impact on the organization. The most negative aspect of Social Technology is the lack of information control [7].

II. LITERATURE REVIEW

A. Social Technology

Generally, Social Technology is implementation of technology to make socialize easier with use ICT (Information Communication Technology) components for environmental [8], explain that perhaps Social Technology can be solution for social problem. But Social Technology is not only benefit for personal, for the group too. According [9], so many benefits for organization with use Social Technology, especially for commercial organization. The benefit that will be got by organization is increase operation and new opportunist in market

B. Social Technology Company

Companies increase their social technology mastery, use it to improve operations and take advantage of new market opportunities. According to [10], categorizing Social Technology includes social relevance, social media and social networks [11], explained that many global organizations are utilizing Social Technology. Social Technology implementation in large-scale organizational work processes in all types of corporate networks that will be integrated into the employee work process will have an impact on improving financial performance and expanding markets.

According to [11], executive organizations that feel the most increase in the use of Social Technology. They can more easily interact with their employees, especially for global companies that have a very large number of employees. In addition, Social Technology also helps corporate executives to communicate with suppliers, partners and customers. Such as providing services to complaints quickly.

C. Employee Performance

Employee performance is the extent to which an employee is able to fulfill all the demands set by the organization [12]. In other words, performance is the result that someone achieves according to the size that applies to the job in question. While the degree to which a person's success in carrying out his job is called Simamora's level of Performance [13], stating that employee performance refers to the level of achievement of tasks that form an employee's job. According to [14] that employee performance can be seen from several aspects such as: knowledge, ability, work motivation, and productivity.

D. Positivism Paradigm

Positivism paradigm is a hypothetical science model built with hypothesis verification tests and a priori experiments using variables. Where the results of hypothesis testing are used to inform and advance science. Positivism focuses on how to identify the relationship of variables through a quantitative approach with empirical findings from the sample used, as well as conclusions that can be generalized [15].

III. RESEARCH METHOD

A. Population and Sampling Technique

The population and the research technique carried out direct observations and then distributed questionnaires to the object under study and in conducting the cake questionnaire researchers used a random sampling technique to determine the number of samples taken using slovin techniques. The population of respondents of PT. Pegawai Gas Negara (Directorate of Human Resources and General) of Indonesia is 90 employees consisting of ICT, HCM, LFM.

B. Data Type and Data Collection

The type of data used in this study is primary data which is known by using a questionnaire to determine the responses of respondents related to the problem. Collecting this research data through three stages, namely the interview stage, literature study, and survey conditions in the field.

C. Research Procedure

The research procedure can be seen in Figure 1. Preliminary study is conducted first to capture the problem in research object. Then, authors built the model and composed the hypothesis. Next step, authors collected data with interview, observation, and survey. Authors developed instrument and testing. Data analysis is conducted after gather the questionnaire result. Finally, authors interpreted the result.

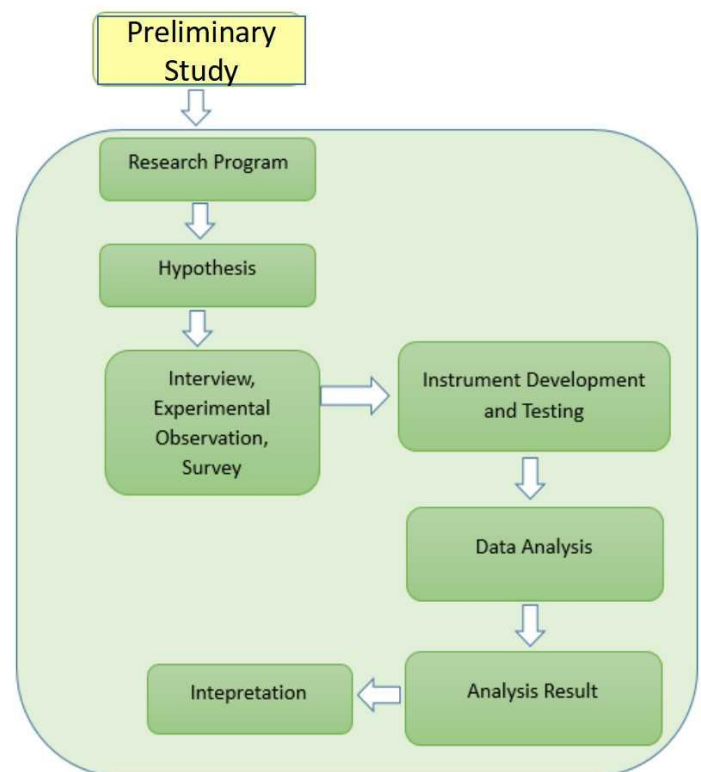


Figure 1. Research Procedure

D. Method of Analysis

After all the data collected, an analysis was performed using the Partial least square PLS-SEM method approach. Data is

processed using SmartPLS version 3.0 software. Figure 2 shows the Social Technology Use Extend Model with PLS-SEM before being analyzed by forming a reflective construct.

IV. RESULT

The survey conducted on 75 respondents, it is known that based on gender, respondents were dominated by men as much as 59%. While female respondents were 41%. The differences between the two differ slightly so that it can be said that employees of male and female sex at PT. The State Gas Company is almost balanced. Based on age, respondents were dominated by respondents aged 39 years and over by 51%. This figure is far greater than respondents aged 31-38 by 27%, ages 23-30 by 21%, and age 22 and under by 1%. Based on employment status, respondents were dominated by 25% assistant manager positions. This amount is not much different from the manager's position of respondents at 24%. In contrast to respondents with assistant vice presidents at 20%, 8% supervisors, 8% senior staff, 8% staff, and 7% vice presidents.

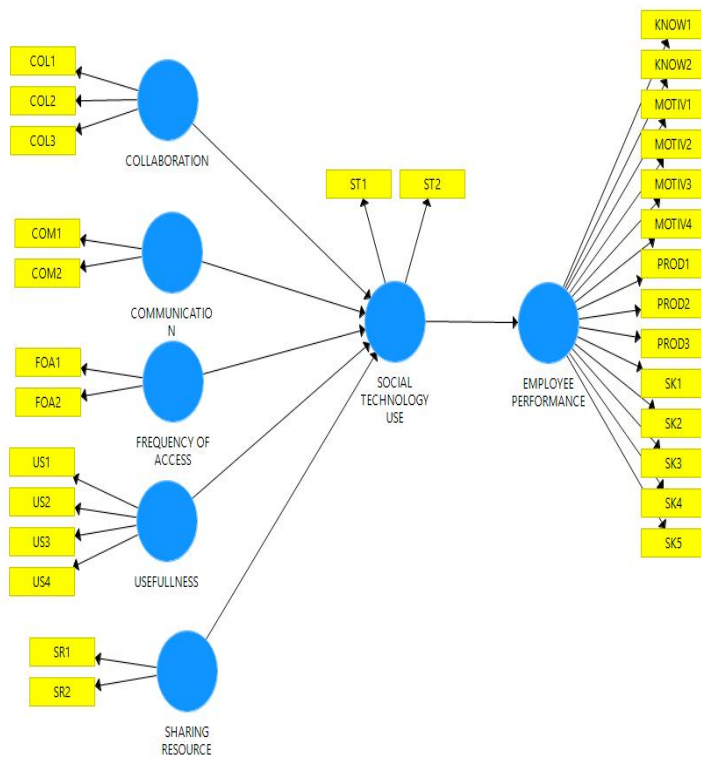


Fig. 2. Social Technology Extended Model

Based on the workplace division, respondents were dominated by respondents who worked in the HCM division by 45%. This amount is very far compared to the ICT division by 29% and LFM by 26%. Based on education background, respondents were dominated by an S1 education background of 57%. This figure is very far compared to respondents with a D3

educational background of 24%, S2 at 18% and S3 at 1% (Table 1).

Table 1.
Demography of respondents

Sex	Total	Percentage
Male	44	59%
Female	31	41%
Age	Total	Percentage
< 22	1	1%
23-30	16	21%
31-38	20	27%
39 >	38	51%
Job Level Status	Total	Percentage
Asisten Manger	19	25%
Asistant Vice President	15	20%
Manager	18	24%
Staff	6	8%
Senior Staff	6	8%
Supervisor	6	8%
Vice President	5	7%
Division	Total	Percentage
HCM	34	45%
ICT	22	29%
LFM	19	26%
Education	Total	Percentage
D3	18	24%
S1	43	57%
S2	13	18%
S3	1	1%

A. Measurement Model Results (Outer Model)

A construct can be said to be Valid and Reliable if it has a AVE value above 0.50, and Composite Reliability above 0.70. Can be seen in the Table 2, it can be seen that the least AVE value is 0.767 while the smallest Composite Reliability value is 0.901, so the variables used for this research are said to be Valid and Reliable or have fulfilled Convergent Validity and Reliability.

Table 2.
Analysis Result

Relation between Variables	T Statistics ((O/STDEV))	P Values
H1 COL → ST	2.344	0.019

H2	COM → ST	2.405	0.017
H3	FOA → ST	0.279	0.780
H4	SR → ST	2.357	0.019
H5	ST → EP	30.067	0.000
H6	US → ST	2.361	0.019

B. Effect size value

At this stage, testing is done to determine the effect of certain variables on other variables in the structure of the model with a threshold value of about 0.02 for small influences, 0.15 for the middle mm, and 0.35 for the large influence of f^2 is calculated using the following formula:

$$f^2 = \frac{R^2_{included} - R^2_{excluded}}{1 - R^2_{included}} \quad (1)$$

Based on the values obtained by Collaboration on employee performance variables of 0.174. Communication to EP is 0.412, usefulness of EP is 0.430, resource sharing is EP of -0.060, frequency of access to EP is 0.028. The influence of variables Coll, com, use, SR, and FOA on the EP variable is not significant. This can be said to be Full mediation through the ST variable. Based on the provisions of [15] the value of the effect size: between 0.02-0.15 (weak). 0.15 - 0.35 (moderate), and > 0.35 strong. This mediation model has a moderate influence. The result can be seen in Figure 3.

H1: Does Collaboration (COL) influence Use Social Technology (ST) significantly?

Based on the results of the structural analysis model, that is, especially on the value of the t-test as can be seen in Table 4 shows that H1 relationship COL → ST is accepted, so it can be interpreted that COL has a positive influence on ST. besides that it is supported by the result of the path coefficient (β) value of 0.319 which means that COL has a significant effect on ST, with the coefficient of determination (R^2) where COL and ST have an influence of 0.743. This is in line with previous relevant research [16]. Furthermore, based on direct observations made by researchers, it shows that collaboration affects users in the use of Social Technology. So it can be concluded that H1 was accepted in this study.

H2: Does Communication (COM) influence Use Social Technology (ST) significantly?

Based on the results of the structural analysis model, that is, especially on the t-test value as can be seen in table 4 shows that H2 COM → ST relationship is accepted, so it can be interpreted that COM has a positive influence on ST. besides that it is supported by the results of the path coefficient (β) value of 0.245 which means COM has a significant effect on ST, with the coefficient of determination (R^2) value where COM and ST have an influence of 0.743. This is in line with previous relevant research [16]. Furthermore, based on direct

observations by researchers, it shows that communication affects users in the use of Social Technology. So it can be concluded that H2 is accepted in this study.

H3: Does Frequency of Access (FOA) influence Use Social Technology (ST) significantly?

Based on the results of the structural analysis model, that is, especially on the t-test value as can be seen in table 4 shows that the H3 FOA relationship → ST is rejected, so that it can mean that FOA has a positive effect but not significant to ST. besides that, it is supported by the result of path coefficient (β) -0,020 which means FOA does not significantly influence ST, with the coefficient of determination (R^2) value where COM and ST have an influence of 0.743. This is not in line with previous relevant research [16]. Furthermore, based on direct observations made by researchers, it is shown that frequent access to Social Technology does not affect users in the use of Social Technology.

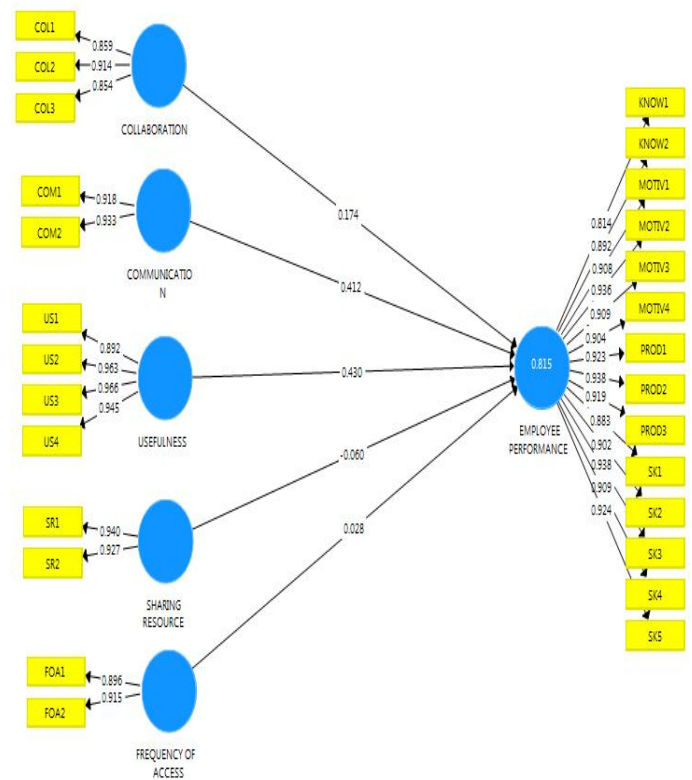


Fig. 3. Output Result without Mediating Variabel

Based on the results of the questionnaire analysis showed that 65% of respondents agreed if the reason for frequency of access had no effect because employees of PT. The State Gas Company is given solid duties and responsibilities. According to [17] if employees have solid duties and responsibilities from superiors, then they tend to focus more on how to complete their work. So that you don't have time to do other activities. These results are in line with previous studies according to [18] that frequent access to social media in this case the use of Social Technology for employees will increase Employee productivity and become Social Technology as a tool for communication. But the hedonic value and the value of the benefits coincide

with each other and in the study according to [18] prove that the results of the value of benefits and hedonic values keep on going. So it can be concluded that H3 was rejected in this study.

H4: Does Sharing Resource (SR) influence Use Social Technology (ST) significantly?

Based on the results of the structural analysis model, that is, especially on the t-test value as can be seen in table 4 shows that H2 relationship SR → ST is accepted, so it can be interpreted that SR has a positive influence on ST. besides that, it is supported by the result of path coefficient (β) 0.196 which means that SR has a significant effect on ST, with the coefficient of determination (R^2) value where SR and ST have an influence of 0.743. This is in line with previous relevant research [19]. Furthermore, based on direct observations made by researchers, it shows that sharing material or information affects users in the use of Social Technology. So it can be concluded that H4 is accepted in this study.

H5: Does Usefulness (USE) influence Use Social Technology (ST) significantly?

Based on the results of the structural analysis model, that is, especially on the t-test value as can be seen in table 4 shows that H2 USE → ST relationship is accepted, so it can be interpreted that USE has a positive influence on ST. besides that it is supported by the result of the path coefficient (β) 0.228 which means that USE has a significant effect on ST, with the coefficient of determination (R^2) value where SR and ST have an influence of 0.743. This is in line with previous relevant research [16]. Furthermore, based on direct observations made by researchers, shows that the use of Social Technology affects users in the use of Social Technology. So it can be concluded that H5 was accepted in this study.

H6: Does Social Technology Use (ST) influence Employee Performance (EP) significantly?

Based on the results of the structural analysis model, that is, especially on the value of the t-test as can be seen in table 4 shows that the relationship between ST → EP is accepted, so it can be interpreted that ST has a positive influence on EP. besides that it is supported by the result of path coefficient (β) 0.882 which means that ST has a significant effect on EP, with the coefficient of determination (R^2) value where ST and EP have an effect of 0.778. This is in line with previous relevant research [14] that social networking influences performance on 4 aspects of motivation, knowledge, ability and productivity. Furthermore, based on direct observations made by researchers, shows that the use of Social Technology affects users in improving employee performance. So, it can be concluded that H6 was accepted in this study.

V. CONCLUSION

Positivism is in line with the hypothetico-deductive paradigm of science, which relies on operationalizing variables and measures to verify a priori hypotheses and experimentation;

the outcomes of hypothesis testing are then utilised to guide and develop science. The positivist paradigm assumes that there is just one concrete reality, which can be understood, identified, and measured.

As empirical five of the six hypotheses in this study were accepted, namely: Collaboration has a positive and significant effect on the use of Social Technology. Communication has a positive and significant effect on the use of Social Technology. Resource sharing has a positive and significant effect on the use of Social Technology. Usefulness has a positive and significant effect on the use of Social Technology. The use of Social Technology has a positive and significant effect on employee performance. The use of Social Technology is part of Full Mediation for the use of extended social technology models.

The research limitation, it is necessary to increase the use of Social Technology in the future, especially by paying attention to the variables of collaboration, communication, usefulness, resource sharing, and frequency of access where companies have received and felt the benefits of using Social Technology. For future work, It is necessary to explore social technology indicators from various aspects.

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