

# USE OF SOCIAL MEDIA AND WORK COLLABORATION

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## USE OF SOCIAL MEDIA AND WORK COLLABORATION

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The study objective <sup>15</sup> is to determine the influence of social media usage on sharing of knowledge, absorptive capacity as well as work collaboration of state civil apparatus (ASN). This was a quantitative descriptive study with a survey method conducted among employees in the Central Java Provincial Government. The results showed that sharing of knowledge, absorptive capacity and work collaboration in organizations would be improved due to social media usage. Thus, strengthening social media usage in work organizations is crucial. In addition, certain rules are required since the use of media can encourage collaboration and organizational performance. The limitation of this study was regarding the samples of state civil apparatus of the Central Java Province, generally in all kind of departments. For the future agenda, it is necessary to conduct a study in more specific fields or departments.

**Keywords:** Social media usage, sharing of knowledge, absorptive capacity, collaboration

### Introduction

The outbreak of coronavirus disease 2019 (Covid-19), has forced workers, private employees and state civil apparatus (ASN) to carry out work from home (WFH) activities. Such type of work can be done since there are many supporting media, including email channels, web channels, mobile channels, and social media. Social media can encourage users to contribute and/or participate in any activities (Karjaluoto, 2010). In general, social media has an open characteristic

among participants or members. Managers can reorganize social media and even the communities involved can change the media. The quick information processing using social media can be applied for positive activities in the form of knowledge and other information sharing. According to Tobing, (2011), sharing of knowledge is "an integrated process of multidimensional distribution and dissemination of knowledge among individuals or between organizations through various media or methods".

By sharing knowledge, employees are expected to gain more knowledge, increase absorptive capacity and work collaboration. Absorptive capacity is a dynamic ability that integrates different capacities and supportive <sup>12</sup> knowledge in four (4) dimensions: acquisition; assimilation; transformation; and exploitation (Engelmen, 2014). Meanwhile, collaboration is cooperation between individuals with similar interests and goals, and a shared commitment to explore new ideas to find solutions (Rank, 2008).

In several previous studies regarding social media, for example a study conducted by Naim and Lenka (2017), it was found that visionary and development-oriented strategic leaders could strengthen competency development by using social media. Such social media offer enormous capabilities to support internal communication, sharing of knowledge, and relationship development, which in turn will facilitate work collaboration. Meanwhile, according to Zeiller and Schauer (2011), social software can support employees as well as <sup>32</sup> team members to work collaboratively regarding cognitive tasks and to perform knowledge and information sharing. Social media provides an efficient and easy

way to encourage team members who are working together on a common object, to perform collaborative tasks within such team. In contrast, a study conducted by Cardon and Marshall (2015) provided a different finding that conventional communication methods were considered more operative and were used more often <sup>37</sup> for team communication. However, the results also showed that in the future, <sup>21</sup> business professionals in Generation X and Y were expected to consider social media as the dominant medium used in team communication.

So it is important for institutions to develop a culture of sharing of knowledge, improve absorptive capacity and work collaboration to achieve certain organizational goals. Based on this background, the study objective <sup>15</sup> is to determine the influence of social media usage on sharing of knowledge and absorptive capacity for collaborative work among state civil apparatus in the Central Java Provincial Government.

## **Literature Review**

### **1) Social Media**

According to Rohmadi (2016) social media is a "media that allows" users to socialize and interact with each other, share information and establish cooperation". Karjaluoto (2010) revealed that social media made it easier for users to participate and contribute. The users can have dialogue with each other openly and discuss and express opinions on an issue interactively. Due to its interactive nature, many organizations build and improve media displays for the

general public in order to improve services and build online networks with the community (Parveen & Ainin, 2016).

Social media makes it easier for users to interact with each other provide information, discuss, create content, including blogs, facebook, whatsapp. Such new things are very interesting for users since they can share and interact easily with many people. Communication through social media can be done anytime, according to spare time and also with the preferred theme. Commonly used social media include blogs and wikis. Furthermore, social media can also be defined as online media that facilitates social interaction through web-based media that shifts communication into interactive discussions between members (Marsal & Hidayati, 2018). Based on the above definitions, it can be interpreted that social media is a platform where the public can interact with one another, both individually or in groups, and it can be used as a means of sending messages quickly when compared to other media since it is connected to the internet network. Parveen and Ainin (2016) define social media as a repository of information in education as well as a means of disseminating information, thereby increasing willingness to teach or share knowledge. In addition, Mayfield (2008) argues that indicators of social media usage include open dialogue and conversation, member participation, and a connected community.

## **2) Sharing of Knowledge**

According to Tobing (2011) sharing of knowledge "is an integrated process of multidimensional distribution and dissemination of knowledge among

individuals or between organizations through various media or methods". Meanwhile, Hooff and Weenen in Lin (2008) explain that the forms of sharing of knowledge include: first, knowledge donation, namely the behavior of individuals or groups to convey knowledge and intellectual models owned to other parties; second, the collection of knowledge, namely individual or group behavior wherein one another communicates or consults so as to obtain knowledge or intellectual models from others.

Sharing of knowledge is one of the crucial factors for success in collaboration. Sharing of knowledge may encourage creativity and innovation since employees gain knowledge accumulation in the organization. With the accumulation of knowledge and positive sharing of knowledge, knowledge integration will occur, and it will lead to job satisfaction. In short, it is also impossible that creativity and innovation may occur without sharing of knowledge. Sharing of knowledge is an important element in increasing human resource capacity and growing innovation. <sup>25</sup> With the development of a culture of sharing knowledge within the organization, apart from increasing creativity and innovation, sharing of knowledge will make the organization confident since individual knowledge stored in each person will become knowledge stored in the organization (Anna, 2009).

### <sup>39</sup> 3) Absorptive Capacity

Absorptive capacity is defined as dynamic ability that integrates different capacities and supportive <sup>12</sup> knowledge in four dimensions including acquisition, assimilation, transformation and exploitation (Engelmen, 2014). Acquisition is defined as the ability to seek and develop connections to external knowledge sources. Furthermore, <sup>9</sup> assimilation is defined as the ability to understand, interpret, and learn from <sup>9</sup> knowledge. Transformation is defined as the ability to internalize and convert external knowledge, <sup>41</sup> exploitation refers to the ability to use and apply new knowledge organizational structure, bureaucracy, responsiveness (Zahra & George, 2002). To obtain new knowledge as required, companies or organizations should understand where and how to find it, and further how to assimilate and integrate it through certain organizational structure. <sup>38</sup> In order to be able to access certain types of knowledge, companies are required to enhance the ability to learn, or so called 'sufficiency' (Cohen & Levinthal, 1990). Such ability can be achieved through the integration of previous knowledge through various learning modes. Meanwhile, the results of internal learning activities depend on the efforts performed by the company. In addition, the various types of knowledge the company are looking for will define the access to knowledge resources, along with the information regarding the availability.

An important factor regarding the access towards new knowledge is skill to interpret and explore knowledge sources. <sup>28</sup> Cohen and Levinthal (1990) argue that the capability to explore external knowledge is mostly influenced by the level of existing knowledge. This existing knowledge includes primary skills, shared

language as well as latest technology. It can be interpreted that in essence, existing knowledge provides the conceptual framework or basic reference required to understand another new knowledge. Existing knowledge may represent a group of problem-solving or learning abilities that may vary regarding the learning outcomes. As explained above, it can be understood that the development of absorptive capacity is a process to improve the ability of individuals or groups or organizations in order to achieve predetermined targets, goals, vision and missions.

#### **4) Work Collaboration**

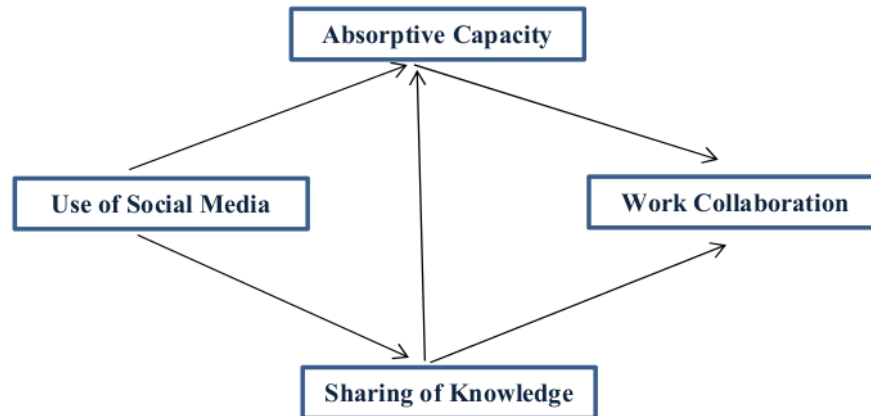
Collaboration is the cooperation of a group of people on a common object with the same goal and responsibility for the results (Riemer, 2007). Meanwhile, according to Rank (2008), collaboration is a shared commitment to explore new ideas in order to find solutions. Thus, collaboration is a positive interaction related to joint efforts with mutual advantageous expectati (Kozuch & Sienkiewicz-Malylurek, 2016). In a contemporary organization, collaboration can be developed in relation to relationship, communication and sharing of knowledge. But in contrast, with the existence of social media in organizations, collaboration can occur between different organizational units, departments, locations and areas of expertise. Furthermore, building networks may also create opportunities to obtain informal learning which is important in creating business value (Naim & Lenka, 2017).



Social media makes it easier to share knowledge and to improve skills capacity and collaboration. Collaboration can optimize earnings experience and practice skills, so as to increase the capacity of human resources. According to Simatupang and Sridharan (2005), dimensions in collaboration include: first, information sharing regarding the collection and distribution of current and important information in the planning process and controlling the course of action; second, aligning the decisions made that refers to joint decision making in the field of operational activities and third, adjustment of motivation which refers to risks, costs, and benefits.

### 1. Thinking Framework and Hypotheses

The basic theories described above, the thinking framework of this study is presented in the following Figure:



**Figure 1:**  
**Thinking Framework**

In light of the explanation of literatures and thinking framework, the study hypotheses can be formulated as follows:

- H1 : There is a positive effect of social media usage on absorptive capacity
- H2 : There is a positive effect of social media usage on sharing of knowledge
- H3 : There is a positive effect of sharing of knowledge on absorptive capacity.
- H4 : There is a positive effect of sharing of knowledge on work collaboration.
- H5 : There is a positive effect of absorptive capacity on work collaboration.
- H6 : There is a positive effect of social media usage on work collaboration.
- H7 : Sharing of knowledge is able to mediate the relationship between use of social media and absorptive capacity.
- H8 : Absorptive capacity is able to mediate the relationship between sharing of knowledge and work collaboration.
- H9 : Absorptive capacity is able to mediate the relationship between use of social media and work collaboration.
- H10 : Sharing of knowledge is able to mediate the relationship between social media usage and work collaboration.
- H11 : Sharing of knowledge and absorptive capacity are able to mediate the relationship between use of social media and work collaboration.

## 2. Study Methods

This was a quantitative descriptive study with a survey method. This study was conducted among employees in the Central Java Provincial Government. The the

Central Java Provincial Government was chosen since it is one of the institutions with internet network facilities to support employee performance.

**a. Study Population and Sample**

Non-probability model sampling was applied to collect study samples, in the form of snowball sampling started from a small number of respondents then became more and more based on the reference or choice of the theme (Ardial, 2014). In this study, the samples involved were 102 employees in the Central Java Provincial Government.

**b. Data collection technique**

This study involved primary data for analysis, which was generated by distributing questionnaires in the form of google form via whatsapp. Questionnaires were delivered to the state civil apparatus within the Central Java Provincial Government. Data were collected from google form media filled out by respondents who provided answers to questions containing performance indicators. Respondents' answers became descriptive data to further conduct tests on hypotheses and study models. The results can be applied for academic and practical purposes.

Likert scale model was used by giving scores with the range of 5 to 1. This scale was applied in the questionnaires to measure respondents' responses. The mean interval of question items is described in Table 1.

**Table 1.**

**Average interval of question items by category**

Category Intervals	
4.20 – 5.00	Strongly agree/very good/very important
3.40 – 4.19	Agree/good/important
2.60 – 3.39	Moderately agree/rather good/rather important
1.80 – 2.59	Disagree/not good/unimportant
.00 – 1.79	Strongly Disagree/very bad/very unimportant

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**4. Results and Discussion**

**4.1 Characteristics of Respondents**

Characteristics of respondents involved in this study can be presented demographically as follows.

3

**Table 1.**

**Demographic Data of Respondent**

Variable	Criteria	N	Percentage
Gender	Male	42	41%
	Female	60	59%
Years of service as State Civil Apparatus (ASN)	Less than 2 years	8	8%
	2 – 5 years	2	2%
	6 – 10 years	13	13%
	11 – 15 years	31	30%
	Over 15 years	48	47%

Age	20-30 Years	4	4%
	31-40 Years	24	24%
	41-50 Years	45	44%
	51-60 Years	29	28%
Level of education	D3/Bachelor	68	67%
	Master degree	28	27%
	Doctoral degree	6	6%
Marital status	Unmarried	2	2%
	Married	97	95%
	Divorce	3	3%
<b>TOTAL RESPONDENTS</b>		102	100%

Derived from: Processed Primary Data.

Table 1 presents a general description of the respondents, including gender, years of service as ASN, level of education, age and marital status. Based on the data, most of respondents were women, namely 59% of the total 102 respondents. Regarding the years of service as ASN, the majority of respondents had more than 5 years of service as ASN (47%), so that it can be seen that the respondents had a fairly good working relationship with their co-workers. Regarding the age range, 44% of respondents aged 41-50 years. In such age range, respondents are considered to have sufficient understanding, familiar with social media, and open to do knowledge and information sharing.

Based on the level of education, <sup>8</sup> it can be seen that the majority of respondents had bachelor degree, namely 67% of the total 102 respondents. With the bachelor education level, it is expected that respondents had a higher level of knowledge and competence related to their duties and responsibilities. In addition, the majority of respondents were married (95%). Generally, someone who is married has more stable emotions and a mature personality so that he is expected to be able to encourage cooperation between employees.

#### 4.2 Descriptive Statistics

According to Rachbini et al., (2018) descriptive statistics refer to a statistical method applied for describing the data being observed into information. Descriptive statistics discuss, among others, the presentation of data and the size of data concentration, index numbers and the size of the data spread.

According to Sugiyono (2015), descriptive analysis is the perception of respondents to be studied using the range criteria with certain formula, namely the maximum value of the scale used minus the minimum value of the scale used, then the result is divided by 3 types of interpretation namely <sup>40</sup> low, medium, and high). The calculation of the range used in this study is as follows:

$$(5 - 1) : 3 = 1.33$$

Therefore, the interpretation is as follows:

$$1.00 - 2.33 = \text{low}$$

$$2.34 - 3.67 = \text{moderate}$$

$$3.68 - 5.00 = \text{high}$$

#### 4.2.1 Use of social media variable

In this study, 103 of 107 questionnaires were eligible since the respondents had filled out the questionnaires with the complete answers for further data processing. Social media usage variable was reflected by four (4) variable indicators or constructs <sup>3</sup> as shown in the following table.

**Table 2.**

**Description of social media usage Variable**

VARIABLE/CONSTRUCT INDICATORS		MEAN
X1.1	Permission on social media usage	4.689
X1.2	Ease of work by using social media	4.602
X1.3	Communication using social media	4.505
X1.4	Become part of social media group to access information	4.689

Derived from: Smart PLS 3.2.9 output

The table above presents the four constituent constructs of social media usage which obtained a high mean score of 4.621. This provides interesting information wherein respondents gave a positive and very good response to social media usage to facilitate work activities.

#### 4.2.2 Description of sharing of knowledge variable

In this study, the sharing of knowledge variable was reflected in four (4) indicators or constructs <sup>3</sup> as shown in the following table.

**Table 3.**

**Description of Sharing of Knowledge Variable**

VARIABLE/CONSTRUCT INDICATORS		MEAN
X2.1	Information and sharing of knowledge with colleagues	4.437
X2.2	Enthusiasm to share knowledge and skills	4.573
X2.3	Do not hesitate to ask for information or knowledge	4.709
X2.4	Information exchange with colleagues	4.631

Derived from: Smart PLS 3.2.9 output

The table above presents the four constructs related to sharing of knowledge which obtained a high mean score of 4.588. Therefore, it can be seen that in general the respondents gave a very good response to the sharing of knowledge they performed.

**4.2.3 Description of absorptive capacity variable**

There were four (4) indicators of the absorptive capacity variable in this study, as shown in the following table.

**Table 4.**

**Description of Absorptive Capacity Variable**

VARIABLE/CONSTRUCT INDICATORS		MEAN
X3.1	Internet and social media facilities for easy access to information and knowledge	4.369
X3.2	Make it easy to learn and understand new knowledge	4.573
X3.3	Internalization of knowledge with social media	4.515
X3.4	Access to information and knowledge to improve performance	4.466

Derived from: Smart PLS 3.2.9 output



The table above presents the four constituent constructs of absorptive capacity which obtained a high mean score of 4.481. Based on this information, it can be seen that most of respondents provided a positive and very good response regarding the absorptive capacity they experienced.

#### 4.2.4 Description of work collaboration variable

The work collaboration variable consisted of four (4) constructs or indicators as shown in the following table.

**Table 5.**

**Description of Work Collaboration Variable**

VARIABLE/CONSTRUCT INDICATORS		MEAN
Y1.1	Up-to-date and important information in planning and work activities is easier to be conveyed through social media	4.485
Y1.2	Decision making will be adjusted by agreement with the team	4.485
Y1.3	Faster and more dynamic coordination implementation	4.515
Y1.4	Implementation of activities considers the benefits, costs and risks	4.592

Derived from: Smart PLS 3.2.9 output

The table above presents the four constituent constructs of work collaboration which obtained a high mean score of 4.519. <sup>31</sup> It can be seen that in general, the respondents gave a very positive and very good response to the work collaboration they performed.

#### **4.3 Results of PLS (Partial Least Square) Analysis**

SmartPLS 3.2.9 software was used to facilitate data processing. The use of Partial Least Square in data analysis begins with test on validity which consisted of convergent validity test as well as discriminant validity and reliability tests.

##### **4.3.1 Results of Outer Model (Measurement Model)**

To find out and assess the construct of latent variable measurement, outer model analysis was used. According to Ghazali (2009), test on validity is carried out to assess the ability of research indicators to reveal something that is measured (latent variable)". Therefore, this analysis aims to test the validity and reliability of certain indicators that determine the latent variables. Such validity test can be seen on the outer loading and discriminant validity (cross loading) of the indicators on the latent variables. The first test used the <sup>35</sup> outer loading (convergent validity test) as shown in table 6.

**Table 6.**

**Outer Loadings**

	<b>Use of social media</b>	<b>Sharing of knowledge</b>	<b>Absorptive capacity</b>	<b>Work collaboration</b>
<b>X1.1</b>	<b>0.783</b>			
<b>X1.2</b>	<b>0.794</b>			
<b>X1.3</b>	<b>0.879</b>			
<b>X1.4</b>	<b>0.795</b>			
<b>X2.1</b>		<b>0.702</b>		
<b>X2.2</b>		<b>0.786</b>		
<b>X2.3</b>		<b>0.724</b>		
<b>X2.4</b>		<b>0.728</b>		
<b>X3.1</b>			<b>0.126</b>	
<b>X3.2</b>			<b>0.813</b>	
<b>X3.3</b>			<b>0.812</b>	
<b>X3.4</b>			<b>0.855</b>	
<b>Y1.1</b>				<b>0.750</b>
<b>Y1.2</b>				<b>0.683</b>
<b>Y1.3</b>				<b>0.852</b>
<b>Y1.4</b>				<b>0.821</b>

Based on the test, it was revealed that there was one absorptive indicator capacity and one work collaboration indicator with a value of below 0.7 as the minimum limit for an indicator to be declared valid, while the other indicators

were valid. These valid indicators were then analyzed again using a cross loading table (discriminant validity test) to make decision regarding the variables to be hold and to be removed from the model. The discriminant validity or cross loadings are presented in table 7.

**Table 7.**  
**Discriminant Validity (Cross Loadings)**

	<b>Use of social media</b>	<b>Sharing of knowledge</b>	<b>Absorptive capacity</b>	<b>Work collaboration</b>
<b>X1.1</b>	0.783	0.446	0.558	0.481
<b>X1.2</b>	0.794	0.477	0.586	0.480
<b>X1.3</b>	0.879	0.474	0.542	0.420
<b>X1.4</b>	0.795	0.457	0.443	0.484
<b>X2.1</b>	0.499	0.702	0.508	0.517
<b>X2.2</b>	0.460	0.786	0.562	0.515
<b>X2.3</b>	0.368	0.724	0.646	0.384
<b>X2.4</b>	0.342	0.728	0.531	0.500
<b>X3.1</b>	0.179	0.154	0.126	0.043
<b>X3.2</b>	0.494	0.628	0.813	0.476
<b>X3.3</b>	0.553	0.566	0.812	0.602
<b>X3.4</b>	0.565	0.683	0.855	0.622
<b>Y1.1</b>	0.457	0.475	0.553	0.750
<b>Y1.2</b>	0.363	0.458	0.497	0.683
<b>Y1.3</b>	0.518	0.607	0.596	0.852
<b>Y1.4</b>	0.431	0.476	0.478	0.821

The discriminant validity analysis in the cross loading table revealed that correlation between the indicator constructs with each latent variable obtained the

highest value. However, there was one indicator construct with no correlation with the latent variable namely the first indicator of the absorptive capacity variable. Based on the results of validity test with outer loadings or so called convergent validity test and discriminant validity with the cross loading, the first indicator of the absorptive capacity variable was deleted because the data was invalid.

Furthermore, the results of reliability test are shown in Table 8. This test aims to determine the level of data reliability through the Cronbach's alpha, average variance extracted (AVE) and composite reliability values. Therefore, observation towards the convergent validity of the data was possible.

**Table 8.**

**Reliability and Validity of the Constructs**

	<b>Cronbach's Alpha</b>	<b>rho_A</b>	<b>Composite Reliability</b>	<b>Average Variance Extracted/AVE</b>
Absorptive capacity	0.773	0.778	0.868	0.687
Sharing of knowledge	0.717	0.718	0.825	0.541
Use of social media	0.829	0.831	0.887	0.662
Work collaboration	0.781	0.790	0.860	0.607

Derived from: SmartPLS 3.2.9 output

Based on the AVE value, it can be known whether the data is valid or not. If the AVE value is more than 0.5 the data can be declared valid. The data presented in table 4 showed that the constructs of the latent variables were valid. Thus the reliability test could be further conducted. Reliability can be interpreted from the Cronbach's alpha column and its composite reliability. If the results in the two categories have a latent variable scores of more than 0.7, it can be stated that the data is reliable. According to Ghazali (2009), reliability test aims to measure whether the questionnaire or indicators used in certain study provide consistent or stable results over time. Table 8 revealed that the four (4) latent variables had composite reliability and Cronbach's alpha values of >0.7. Based on the results, the outer model was good, thus further data processing of the inner model analysis could be conducted.

#### 4.3.2 Results of Inner Model (Structural Model)

Structural model or inner model test in this study used the Smart PLS 3.2.9 application. The output can be obtained from bootstrapping as shown in table 9.

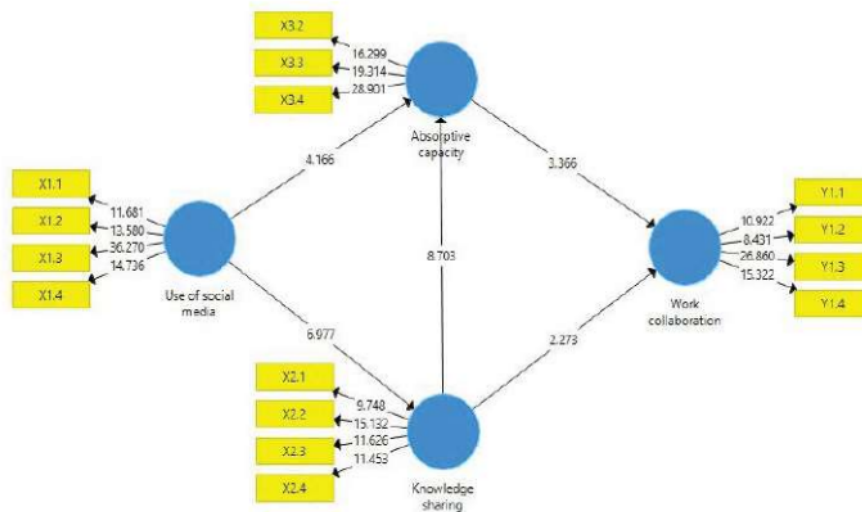
**Table 9.**  
**Path Coefficient (Mean, STDEV, T-Value, P-Value)**

	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Standard Deviation (STDEV)</b>	<b>T Statistics (O/STDEV)</b>	<b>P Value</b>
Use of social media → Absorptive	0.323	0.316	0.078	4.166	0.000**

capacity					
Use of social media → Sharing of knowledge	0.570	0.573	0.082	6.977	0.000**
Sharing of knowledge → Absorptive capacity	0.572	0.579	0.066	8.703	0.000**
Sharing of knowledge → Work collaboration	0.311	0.305	0.137	2.273	0.023*
Absorptive capacity → Work collaboration	0.452	0.467	0.134	3.366	0.001**
Use of social media → Work collaboration	0.471	0.481	0.072	6.502	0.000**
Note: **) significant at $p < 0.01$ ; *) significant at $p < 0.05$					

Derived from: SmartPLS 3.2.9 output, processed.

The analysis of the inner model produces information on the correlation between latent variables, the significance of the influence and also the individual and simultaneous effects of exogenous variables on endogenous variables. The size of this simultaneous effect is reflected in the R-Square value. The results of data processing regarding the significance test through bootstrapping are shown in Figure 2.



Derived from: Smart PLS 3.2.9 output

**Figure 2.**  
**Inner Model**

So, based on the regression coefficient obtained for each variable, the following regression equation was developed:

$$\eta_1 = 0,323 \xi_1 + 0,570 \xi_2 + 0,572 \xi_3 + \zeta \dots\dots\dots(1)$$

$$\eta_2 = 0,452 \eta_1 + 0,471 \xi_1 + 0,311\xi_2 + \zeta \dots\dots\dots(2)$$

Information:

B,  $\gamma$  = Regression coefficient

$\zeta$  = inner residual variable

$\eta_1$  = Absorptive capacity variable

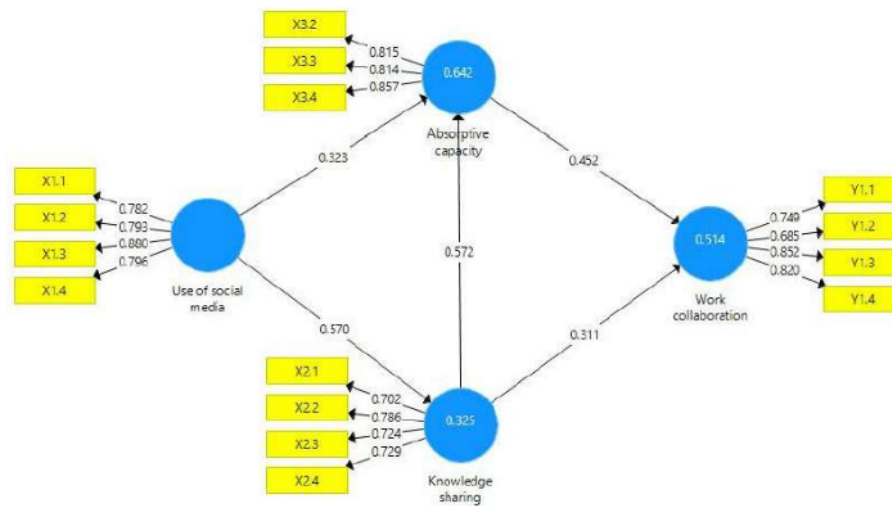
$\eta_2$  = Work collaboration variable



$\xi_1$  = Use of social media variable

$\xi_2$  = Sharing of knowledge variable

The results of data processing using this outer model are presented in Figure 3, which resulted in regression coefficient values as well as the validity values between variable indicators and latent variables.



Derived from: Smart PLS 3.2.9 output

**Figure 3.**

### **Outer Model**

The size of simultaneous <sup>29</sup> effect of the independent variables on the dependent variable can be seen in Figure 3 (outer model) which is further described in table 10 below.

**Table 10.**

**R-Square Value**

	<b>R Square</b>	<b>Adjusted R Square</b>
Absorptive capacity	0.642	0.635
Sharing of knowledge	0.325	0.318
Work collaboration	0.514	0.504

Derived from: Smart PLS 3.2.9 output.

Figure 3 and table 10 provide information that the contribution of sharing of knowledge and social media usage variables to absorptive capacity was 64.2%, which meant that the other 35.8% <sup>36</sup> was influenced by different variables unspecified in this study. Meanwhile, the contribution of social media usage variable to sharing of knowledge was 32.5%, which meant that the other 77.5% was influenced by other variables outside this study. Then the last, contribution of social media usage, sharing of knowledge and absorptive capacity variables to work collaboration was 51.4%, which meant that the other 48.6% was influenced by other variables outside this study.

#### **4.4 Results of Hypotheses Test**

##### **4.4.1 Use of social media on absorptive capacity**

Hypothesis 1 (H1) was tested with a t test. Based on the path coefficient calculation, it was obtained a t statistic value of 4.166 > t table (1.968) with a

probability or p value of  $0.000 < 0.01$  (significance 1%), as shown in table 9.

Therefore, it can be concluded that H1 regarding a significant effect of social media usage on absorptive capacity was accepted.

#### **4.4.2 Use of social media on sharing of knowledge**

Hypothesis 2 (H2) was tested with a t test. Based on the path coefficient calculation, it was obtained a t statistic value of  $6.977 > t$  table (1.968), with a p probability or p value of  $0.000 < 0.01$  (significant 1%), as shown in table 9.

Therefore, it can be concluded that H2 regarding a significant effect of social media usage on sharing of knowledge was accepted.

#### **4.4.3 Sharing of knowledge on absorptive capacity**

Hypothesis 3 (H3) was tested with a t test. Based on the path coefficient calculation, it was obtained a t statistic value of  $8.703 > t$  table (1.968), with a p probability or p value of  $0.000 < 0.01$  (significant 1%), as shown in table 9.

Therefore, it can be concluded that H3 regarding a significant effect of knowledge on absorptive capacity was accepted.

#### **4.4.4 Sharing of knowledge on work collaboration**

Hypothesis 4 (H4) was tested with a t test. Based on the path coefficient calculation, it was obtained a t statistic value of  $2.273 > t$  table (1.968), with a p probability or p value of  $0.023 < 0.05$  (significant 5%), as shown in table 9.

<sup>2</sup> Therefore, it can be concluded that H4 regarding a significant effect of knowledge on work collaboration was accepted.

#### 4.4.5 Absorptive capacity to work collaboration

Hypothesis 5 (H5) was tested with a t test. Based on the path coefficient calculation, it was obtained a <sup>43</sup> t statistic value of 3.366 > t table (1.968), with a p probability or p value of 0.001 < 0.01 (significant 1%), as shown in table 9.

<sup>2</sup> Therefore, it can be concluded that H5 regarding a significant effect of absorptive capacity on work collaboration was accepted.

#### 4.4.6 Use of social media for work collaboration

Hypothesis 6 (H6) was tested with a t test. Based on the path coefficient calculation, it was obtained a t statistic value of 6.502 > t table (1.968), with a p probability or p value of 0.000 < 0.01 (significant 1%), as shown in table 9.

<sup>2</sup> Therefore, it can be concluded that H6 regarding a significant effect of social media usage on work collaboration was accepted.

### 4.5 Intervening Test Results

The intervening variables in this study were sharing of knowledge and absorptive capacity which acted as mediators in the correlation between social media usage <sup>8</sup> as the independent variable and work collaboration as the dependent variable. Based on the test on significance observed in the inner model sub-chapter, it was revealed that sharing of knowledge and absorptive capacity had a

significant influence on work collaboration. Thus, the function of sharing of knowledge and absorptive capacity variables as mediators was eligible for further test. The indirect effect test through the intermediary of sharing of knowledge and absorptive capacity for <sup>16</sup> the influence of independent variable on the dependent variable can be seen in the following table.

Table 11.

**Specific Indirect Effect (Mean, STDEV, T-Values, P-Values)**

	<sup>2</sup> Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Value
Use of social media → Sharing of knowledge → Absorptive capacity	0.326	0.333	0.065	5.000	0.000**
Sharing of knowledge → Absorptive capacity → Work collaboration	0.259	0.271	0.085	3.050	0.002**
Use of social media → Absorptive Capacity → Work collaboration	0.146	0.148	0.056	2.587	0.010**
Use of social media → Sharing of knowledge → Work collaboration	0.177	0.178	0.090	1.960	0.051

Use of social media → Sharing of knowledge → Absorptive capacity → Work collaboration	0.148	0.155	0.053	2.789	0.005**
Note: **) significant at p<0.01; *) significant at p<0.05					

Derived from: SmartPLS 3.2.9 output.

Test on the indirect effect <sup>19</sup> of social media usage on absorptive capacity through sharing of knowledge was conducted by comparing the regression coefficient directly with the regression coefficient indirectly. The regression coefficient regarding the influence of social media usage on absorptive capacity through sharing of knowledge was 0.326. This value was also obtained from the regression coefficient between social media usage and sharing of knowledge multiplied by the regression coefficient for sharing of knowledge on absorptive capacity ( $0.570 \times 0.572 = 0.326$ ). It was found that the regression coefficient was higher than the regression coefficient for social media usage on absorptive capacity directly of 0.323 with a probability or p value of  $0.000 < 0.01$  (significance 1%). The conclusion to be made was that sharing of knowledge was a perfect mediating variable for the correlation between social media usage and absorptive capacity. Thus, Hypothesis 7 (H7) which states that sharing of knowledge mediates the correlation between social media usage and absorptive capacity **was accepted**.

Test on the indirect effect of sharing of knowledge on work collaboration by involving absorptive capacity was conducted by comparing the regression coefficient directly with the regression coefficient indirectly. The regression coefficient on the relationship between sharing of knowledge and work collaboration through absorptive capacity was 0.259. This value was also obtained from the regression coefficient between sharing of knowledge and absorptive capacity multiplied by the regression coefficient for absorptive capacity on work collaboration ( $0.572 \times 0.452 = 0.259$ ). It was found that the regression coefficient was lower than the regression coefficient for sharing of knowledge on work collaboration directly of 0.311 with a probability or p value of  $0.002 < 0.01$  (significance 1%). It can be concluded that absorptive capacity was able to become a partial mediating variable (due to the decreasing effect) for the relationship between sharing of knowledge and work collaboration. Thus, hypothesis 8 (H8) which states that absorptive capacity <sup>17</sup> is able to mediate the relationship between sharing of knowledge and work collaboration **was accepted**.

Test for the indirect effect of social media usage on work collaboration through absorptive capacity was conducted by comparing the regression coefficient directly with the regression coefficient indirectly. The regression coefficient on the correlation between social media usage and work collaboration through absorptive capacity was 0.146. This value was also obtained from the regression coefficient between social media usage and absorptive capacity multiplied by the regression coefficient for absorptive capacity on work collaboration ( $0.323 \times 0.452 = 0.146$ ). It was found that the regression coefficient

was lower than the regression coefficient for social media usage on work collaboration directly of 0.471 with probability or p value 0.010 0.010 (significance 1%). It can be concluded that absorptive capacity was able to become a partial mediating variable (due to the decreasing effect) for <sup>7</sup> the relationship between social media usage and work collaboration. Thus, hypothesis 9 (H9) which states that absorptive capacity is able to mediate <sup>6</sup> the relationship between use of social media and work collaboration **was accepted**.

Furthermore, test for the indirect <sup>7</sup> effect of social media usage on work collaboration through sharing of knowledge was conducted by comparing the regression coefficient directly with the regression coefficient indirectly. The regression coefficient on the correlation between social media usage on work collaboration through a sharing of knowledge was 0.177. This value was also obtained from the regression coefficient between social media usage and sharing of knowledge multiplied by the regression coefficient for sharing of knowledge on work collaboration ( $0.570 \times 0.311 = 0.177$ ). It was found that the regression coefficient was lower than the regression coefficient for social media usage on work collaboration directly of 0.471 with a probability or <sup>3</sup> p value  $0.051 > 0.05$  (5% significance). It can be concluded that sharing of knowledge was not able to become a mediating variable <sup>13</sup> for the relationship between social media usage and work collaboration. Thus, hypothesis 10 (H10) which states that sharing of knowledge is able to mediate <sup>7</sup> the relationship between social media usage and work collaboration **was rejected**.



Finally, test for the indirect effect <sup>11</sup> of social media usage on work collaboration through sharing of knowledge and absorptive capacity was conducted by comparing the regression coefficient directly with the regression coefficient indirectly. The regression coefficient between social media usage on work collaboration through sharing of knowledge and absorptive capacity was 0.14. This value was also obtained from the regression coefficient between social media usage and sharing of knowledge multiplied by the regression coefficient for sharing of knowledge on absorptive capacity multiplied by the regression coefficient for absorptive capacity on work collaboration ( $0.570 \times 0.572 \times 0.452 = 0.148$ ). It was found that the regression coefficient was lower than the regression coefficient for social media usage on work collaboration directly of 0.471 with a probability or p value  $0.005 < 0.01$  (1% significance). It can be concluded that absorptive capacity was able to become a partial mediating variable (due to the decreasing effect) <sup>13</sup> for the relationship between social media usage and work collaboration. Thus, hypothesis 11 (H11) which states that sharing of knowledge and absorptive capacity is able to mediate <sup>13</sup> the relationship between social media usage and work collaboration **was accepted**.

#### 4.6 Discussion

The discussion section presents, analyzes, and discusses the study findings. Based on descriptive statistics of variables, it was found that respondents gave a very good response and positive and the constructs of each variable gained a mean value of more than 4. In addition, the inner test model (in table 9) revealed

a direct, significant and positive <sup>22</sup> correlation between social media usage and absorptive capacity. It can be interpreted <sup>44</sup> that the higher use of social media would lead <sup>23</sup> to a higher absorptive capacity. Further description revealed <sup>23</sup> that social media usage had a significant effect <sup>6</sup> on sharing of knowledge. This study also revealed <sup>33</sup> that the higher use of social media would lead to a higher level of sharing of knowledge among employees. It was also revealed that sharing of knowledge had <sup>33</sup> a significant effect on absorptive capacity. This meant <sup>34</sup> that the higher level of sharing of knowledge would lead to a higher absorptive capacity of the employees. Further result showed that sharing of knowledge had a significant influence on work collaboration. Such finding illustrated that the higher the sharing of knowledge, the higher the work collaboration. In addition, absorptive capacity had a significant influence on work collaboration. This meant that the higher absorptive capacity, the higher the work collaboration. The other finding showed <sup>20</sup> that social media usage had a significant effect on work collaboration. This <sup>23</sup> meant that the higher use of social media, the higher the work collaboration.

Meanwhile, the indirect effect test results are presented in table 11. The hypothesis <sup>11</sup> regarding the effect of intervening variable of social media usage on work collaboration through sharing of knowledge variable was rejected. This finding indicated that sharing of knowledge could not improve the correlation between social media usage and collaborative working. Meanwhile, the hypothesis <sup>11</sup> regarding the indirect effect of social media usage on work collaboration through sharing of knowledge and absorptive capacity was accepted.

## 5. Conclusions, Managerial Implications and Limitations

### 5.1 Conclusions

The study revealed the important and effective <sup>42</sup>role of social media in the process of increasing the absorptive capacity of individuals within the organization and to improve the sharing of knowledge. Easy access to information and internet facilities at the office may improve the effective use of social media. Utilization of social media can be the solution during the current COVID-19 pandemic, so that each individual can still coordinate and share information with a low and affordable cost. Besides, social media has become the basic need for today human communication. Thus, it <sup>19</sup>can be used to share knowledge and increase the absorptive capacity of social media which makes collaborative working easier.

COVID-19 pandemic condition has encouraged the utilization of social media, so that the work coordination and learning processes can still run and eventually productivity can be maintained. Such chain illustrates that the social media could be used for productive activities and strengthening or improving knowledge, not just for fun and games. Setting the future agenda regarding the utilization of information technology becomes a good step forward, so that many activities can be performed in any place, not only through meeting together in one room. Conference meeting, socialization program including training and new information dissemination can also be carried out through social media.

### **5.1 Managerial Implications**

Based on test results for variables described above, it was found that sharing of knowledge, absorptive capacity and work collaboration in organizations were increased by social media usage.

Thus, social media usage should be improved in work organizations and it is necessary to make certain rules since the use of media can encourage collaboration and organizational performance. Certain rules regarding social media usage are also necessary in order to avoid any negative effects.

### **5.3 Study <sup>3</sup> Limitation**

The limitation of the current study was regarding the samples involved, namely the state civil apparatus of the Central Java Province, generally in all kind of departments. For the future agenda, it is necessary to conduct a study in more specific fields or departments, for example in the Health Office, Public Works Agency and others. In addition, the current study research was conducted during the COVID-19 Pandemic. Therefore, it is necessary to conduct a further study in a non-pandemic as the comparison for the findings.

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