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The Role of Communication Quality, Teamwork Skills, and Utilization of ICT in Improving Human Resources Performance at the Type A Semarang Customs and Excise Supervision and Service Office

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Abstract. *This study aims to analyze how the quality of communication and teamwork skills based on the utilization of Information and Communication Technology (ICT) can improve the performance of human resources (HR) at the Semarang Type A Customs and Excise Supervision and Service Office. Based on the differences in the results of previous studies regarding the role of communication on HR performance, the formulation of the problem of this study is how to improve HR performance influenced by the quality of communication and teamwork skills based on ICT. The type of research used is explanatory research, with a population of 203 employees who are all HR in the office. This study uses a census sampling technique, where the entire population becomes the research sample. Measurements are made using a Likert scale of 1 to 5, and data analysis uses the Partial Least Square (PLS) model. The results of the study indicate that: (1) communication quality has a positive and significant effect on HR performance, meaning that the better the quality of communication, the higher the HR performance; (2) communication quality also has a positive and significant effect on teamwork skills, meaning that the higher the quality of communication, the better the teamwork skills; (3) Teamwork skills have a positive and significant influence on HR performance, meaning that the better the teamwork skills, the higher the HR performance; (4) the influence of communication quality on HR performance will be stronger if HR is able to utilize ICT effectively; (5) the influence of teamwork skills on HR performance will also be stronger if HR is able to utilize ICT effectively. This research provides an important contribution in clarifying the relationship between communication, teamwork skills, and ICT in improving HR performance in government agencies.*

Keywords*: Communication; Teamwork; Technology; Utilization; Quality.*

1. Introduction

Economic globalization poses new challenges for organizations to survive in increasingly intense competition (Dong & Yu, 2020). The Semarang Type A Customs and Excise Supervision

and Service Office is required to have competent human resources, who are able to carry out and complete tasks and obligations more effectively. Individuals must be trained to be actively responsible for their behavior and be able to develop and share work-related information.

The Semarang Type A Customs and Excise Supervision and Service Office has the main task of carrying out part of the duties of the Ministry of Finance in the field of customs and excise. This task is carried out based on policies set by the Minister, and aims to secure government policies related to the flow of goods entering and leaving the Customs Area.

The Semarang Type A Customs and Excise Supervision and Service Office is also responsible for the collection of Import Duty, Excise, and other state levies in accordance with applicable laws and regulations. In carrying out its functions, this office acts as a trade facilitator by providing trade facilities and carrying out tasks entrusted by other agencies. As an industrial supporter, this office protects domestic industries from unfair competition with similar industries from abroad. In addition, this office functions as a protector of the public from the entry of dangerous goods and as a collector of state revenues through the collection of import duties, export duties, and excise to the maximum.

Performance is the result of work achieved by a person or group of people in an organization, in accordance with their respective authorities and responsibilities, in an effort to achieve organizational goals that are legally valid and in accordance with morals and ethics (Bakirova Oynura, 2022). Information about organizational performance can be used to evaluate whether the work processes carried out by the organization are in accordance with the expected goals (Gabcanova, 2012). However, in reality, many organizations have little or no information about their performance. Some factors that influence performance include communication (Gita Friolina et al., 2017), cooperation (Ahmad & Manzoor, 2017), and experience in using ICT (Yunis et al., 2018).

Teamwork involves a group of individuals working together to achieve a common goal (Wijayanti, 2021). The success of an organization is greatly influenced by the capabilities and competencies of each individual and the cooperation between team members (Qamari et al., 2020). Effective communication is essential to establish this cooperation. Ariyanto et al., (2019) showed that cooperation affects performance, while Driskell et al., (2018) stated that teamwork facilitates the achievement of goals more effectively than working individually.

Cooperation will unite the power of ideas that will lead to success (Bachtiar, 2012:15). In addition, good cooperation also strengthens communication and relationships between team members, creating a harmonious and supportive work environment (Brenda Barker Scott, 2017).

In addition to communication quality and teamwork skills, another factor that influences performance is the use of information technology (Gërguri-Rashiti et al., 2007). Mastery of information technology can improve organizational performance by changing the

management system from traditional to contemporary (Cueva-Ortiz & Cruz-Cárdenas, 2021). Information technology is related to service, especially in increasing the speed and accuracy of service (Ominde et al., 2021). Organizations that utilize information technology, such as computer-based systems or websites, can provide faster and more accurate services (Katz, 2021).

The application of information and communication technology (ICT) in government organizations is an absolute necessity, but in reality the utilization of existing information technology has not been maximized. Meanwhile, the application of technology can cause significant changes in the organizational system, both from within and from outside. On the other hand, in carrying out its service function, the Semarang Type A Customs and Excise Supervision and Service Office is faced with the challenge of the importance of communication as a crucial component in the organization. However, in reality, communication

2. Research Methods

This study was conducted to test the hypothesis with the intention of justifying or strengthening the hypothesis with the hope that in the end it can strengthen the theory that is used as a basis. In relation to the above, the type of research used is "Explanatory research" or research that is explanatory, meaning that this study emphasizes the relationship between research variables by testing the hypothesis, the description contains a description but the focus lies on the relationship between variables (Singarimbun, 1982). Population is a set of all possible people or objects and elements that are the measure of conclusions (Syahrum & Salim, 2012). The population in this study was all HR at the Customs and Excise Supervision and Service Office, Type Madya Pabean A Semarang, totaling 203 employees.

3. Results and Discussion

The respondents of this study were HR at the Semarang Type A Customs and Excise Supervision and Service Office, totaling 203 employees. The research was conducted by distributing research questionnaires on December 16-25, 2024. The distribution of questionnaires used an online questionnaire (googleform). The results of the distribution of research questionnaires obtained 203 questionnaires that were completely filled out and could be processed. The description of respondents can be presented according to their characteristics which are presented as follows:

1) Gender

Respondent Description Table Based on Gender

Gender	Frequency	Percentage
Man	153	75.4
Woman	50	24.6

Total	203	100.0

Source: Data processing results, 2024.

The table presents data that there are 153 male respondents (75.4%) and 50 female respondents (24.6%). The findings show that the number of men is greater than women. This provides a great contribution to the Semarang Type A Customs and Excise Supervision and Service Office, where male employees generally have better abilities when working in the field.

2) Age

Respondent Description Table Based on Age

Age	**Frequency**	**Percentage**
21 - 30 years	79	38.9
31 - 40 years	80	39.4
41 - 50 years	28	13.8
51 - 60 years	16	7.9
Total	203	100.0

Source: Data processing results, 2024.

The data presentation in the table shows that the number of respondents aged 21-30 years was 79 respondents (38.9%), aged 31-40 years was 80.

respondents (39.4%), aged 41-50 years as many as 28 respondents (13.8%), and there were 16 respondents (7.9%) aged 51-60 years. From the data above, it can be seen that the largest number of respondents have an age range of 31-40 years. At that age, employees generally have a lot of experience and expertise according to the field they are handling. The maturity of this age makes employees wiser in making decisions when working in the field.

3) Last education

Respondent Description Table Based on Last Education

last education	**Frequency**	**Percentage**
High School/Vocational School	3	**1.5**
IN	41	**20.2**
DIII	50	**24.6**
DIV	2	**1.0**
S1	92	**45.3**

S2	14	**6.9**
S3	1	**0.5**
Total	**203**	**100.0**

Source: Data processing results, 2024.

Based on the table above, it can be seen that most respondents have a last education of S1 level, which is 92 respondents (45.3%). Furthermore, respondents with the last education of D3 are 50 respondents (24.6%), D1 are 41 respondents (20.2%), D4 are 2 respondents (1.0%), SMA/SMK respondents are 3 people (1.5%), respondents who have the last education of S2 are 14 people (6.9%), and respondents who have the last education of S3 are 1 person (0.5%). Respondents with higher education are usually more likely to have a deeper understanding of a particular field of work, as well as have better analytical skills.

4) Years of service

Respondent Description Table Based on Length of Service

Years of service	Frequency	Percentage
0 - 10 years	103	50.7
11 - 20 years	69	34.0
21 - 30 years	22	10.8
> 30 years	9	4.4
Total	203	100.0

Source: Primary Data Processing Results, 2024.

The table shows that most respondents who have worked between 0 - 10 years are 103 respondents (50.7%). Respondents with a work period of 11 -20 years are 69 respondents (34.0%), a work period of 21 - 30 years are 22 respondents (10.8%), and respondents with a work period > 30 years are 9 respondents (4.4%). The work experience possessed by employees makes it easier for them to understand problems in the field. As the length of service increases, employees have more opportunities to hone their skills. Employees with longer work periods usually have in-depth expertise that allows them to handle more complex tasks.

Descriptive Analysis of Research Data

In this section, descriptive analysis is conducted to obtain a picture of respondents' responses to the research variables. This analysis is conducted to obtain perceptions about respondents' tendencies to respond to the indicator items used to measure the variables and to determine the status of the variables studied at the research location.

The variable descriptions are grouped into 3 categories based on the index value formula as follows:

Index Value = ((%F1x1) + (%F2x2) + (%F3x3) + (%F4x4) + (%F5x5))/5

Information :

F1 is the frequency of respondents who answered 1 F2 is the frequency of respondents who answered 2 F3 is the frequency of respondents who answered 3 F4 is the frequency of respondents who answered 4 F5 is the frequency of respondents who answered 5

Grouping of index values is done by calculating the lowest, highest, range and length of the interval class as follows:

Lowest : (%Fx1)/5 = (100x1)/5 = 20 Highest : (%Fx5)/5 = (100x5)/5 = 100 Range : 20-100 = 80

Class Interval Length: 80 : 3 = 26.7

By using the three-box method criteria, the answers will be divided into three categories as the basis for interpreting the index values as follows:

a. Low = 20 - 46.6

b. Medium = 46.7 – 73.3

c. Height = 73.4 – 100

Based on this categorization, the index values for each variable can be presented as follows:

1) Communication Quality

Communication Quality Variable Description Table

No	Indicator Communication quality	STS (1)		TS (2)		CS (3)		S (4)		SS (5)		Index Value	Category
		f	(%)	f	(%)	f	(%)	f	(%)	f	(%)		
1	Openness,	2	1.0	14	6.9	50	24.6	101	49.8	36	17.7	75.27	**Tall**
2	Empathy (empathy)	0	0.0	12	5.9	65	32.0	98	48.3	28	13.8	73.99	**Tall**
3	Positive attitude (positiveness)	0	0.0	6	3.0	52	25.6	107	52.7	38	18.7	77.44	**Tall**
4	Orientationto others (other-*orientation*).	0	0.0	15	7.4	46	22.7	110	54.2	32	15.8	75.67	**Tall**
Average Index Value												**75.59**	**Tall**

The table shows that the average value of the data index of the overall Communication Quality variable is 75.59, which is in the high category range (73.4 - 100). This means that

respondents view the quality of communication in the agency as good. The results of the data description on the Communication Quality variable were obtained with the highest index value being the Positive Attitude indicator (77.44), while the lowest index was Empathy (73.99).

2) Teamwork skills

Teamwork skill Variable Description Table

No	Indicator ***Teamwork skills***	STS (1)		TS (2)		CS (3)		S (4)		SS (5)		Index Value	Category
		f	(%)	f	(%)	f	(%)	f	(%)	f	(%)		
1	*Coordination*	0	0.0	7	3.4	59	29.1	102	50.2	35	17.2	76.26	**Tall**
2	*Information exchange*	0	0.0	11	5.4	69	34.0	101	49.8	22	10.8	73.20	**Currently**
3	*Use of authority*	2	1.0	9	4.4	51	25.1	109	53.7	32	15.8	75.76	**Tall**
4	*Assessing capabilities*	2	1.0	7	3.4	49	24.1	107	52.7	38	18.7	76.95	**Tall**
5	*Supporting behaviors*	0	0.0	9	4.4	74	36.5	94	46.3	26	12.8	73.50	**Tall**
Average Index Value												**75.13**	**Tall**

In the Teamwork skill variable as a whole, the index value obtained was 75.13, which is in the high category range (73.4 - 100). This means that respondents have good communication skills in groups. The results of the data description on the Teamwork skill variable were obtained with the highest index value being Assessing capabilities (76.95) and the lowest index on the Information exchange indicator (73.20).

3) Utilization of ICT

ICT Utilization Variable Description Table

No	Usability Indicator***ICT***	STS (1)		TS (2)		CS (3)		S (4)		SS (5)		Index Value	Category
		f	(%)	f	(%)	f	(%)	f	(%)	f	(%)		
1	Frequency use,	6	3.0	20	9.9	41	20.2	108	53.2	28	13.8	73.00	**Currently**
2	Variety of features used,	6	3.0	24	11.8	27	13.3	96	47.3	50	24.6	75.76	**Tall**
3	Level of dependencyn in task,	2	1.0	26	12.8	49	24.1	73	36.0	53	26.1	74.68	**Tall**
4	User satisfaction with system convenience	6	3.0	20	9.9	41	20.2	108	53.2	28	13.8	73.00	**Currently**
Average Index Value												**74.11**	**Tall**

In the overall ICT Utilization variable, an index value of 74.11 was obtained, located in the high/good category range (73.4 - 100). This means that in general employees have good behavior/attitude in using information technology to complete tasks. The results of data descriptions on the ICT Utilization variable were obtained with the highest index value being the indicator of the Variety of features used (75.76) and the lowest index being the indicator of Frequency of use and User satisfaction with the ease of the system (73.00).

4) HR Performance

No	Performance Indicators HR	STS (1)		TS (2)		CS (3)		S (4)		SS (5)		Index Value	Category
		f	(%)	f	(%)	f	(%)	f	(%)	f	(%)		
1	Quality of work	6	3.0	24	11.8	49	24.1	94	46.3	30	14.8	71.63	**Currently**
2	Quantity of work,	4	2.0	20	9.9	32	15.8	105	51.7	42	20.7	75.86	**Tall**
3	Accuracy time	2	1.0	16	7.9	39	19.2	97	47.8	49	24.1	77.24	**Tall**
4	Effectiveness.	6	3.0	20	9.9	38	18.7	98	48.3	41	20.2	74.58	**Tall**
Average Index Value												**74.83**	**Tall**

In the overall HR Performance variable, the mean value obtained was 74.83, located in the high/good category range (73.4 - 100). This means that in general employees have good performance. The results of the data description on the HR Performance variable were obtained with the highest index value being the Punctuality indicator (77.24) and the lowest index being the Work Quality indicator (71.63).

*Discriminant validity*namely a measure that shows that the latent variable is different from other constructs or variables in theory and is proven empirically through statistical testing. Discriminant validity is measured by the Fornell Lacker Criterion, HTMT, and Cross loading. The test results on each variable can be explained as follows:

Validity testing using the Fornell-Larcker Criterion is done by looking at the root value of the Average Variance Extract (AVE) compared to the correlation between constructs with other constructs. This test is fulfilled if the root of the AVE is greater than the correlation between variables.

Table of Discriminant Validity Test Values with Fornell-Larcker Criterion Criteria

Fornell-Larcker Criterion	**HR Performance**	**Communication quality**	**Utilization ICT**	***Teamwork skills***
HR Performance	**0.856**			
Communication quality	0.754	**0.796**		
Utilization of ICT	0.748	0.716	**0.881**	
Teamwork skills	**0.387**	**0.390**	**0.278**	**0.831**

Note: The values in bold are the AVE root values.

From the table, it is obtained that the AVE root value is higher than the correlation value between other constructs. This result indicates that the constructs in the estimated model have met the criteria for high discriminant validity, meaning that the results of the data analysis can be accepted because the values that describe the relationship between constructs develop. This can mean that all constructs have good discriminant validity. Thus, the research instrument used to measure all constructs or latent variables in this study has met the criteria for discriminant validity.

1) Heterotrait-Monotrait Ratio (HTMT) Test Results

Validity testing using the Heterotrait-monotrait ratio (HTMT) criteria is carried out by looking at the HTMT matrix. The accepted HTMT criteria are below 0.9 which indicates that the evaluation of discriminant validity is accepted.

Table of Discriminant Validity Test Values with Heterotrait-monotrait ratio (HTMT) criteria

	Heterotrait-monotrait ratio (HTMT)
Communication quality <-> HR performance	**0.884**
ICT Utilization <-> HR Performance	**0.830**
Utilization of ICT <-> Communication quality	**0.834**
***Teamwork skills*<-> HR Performance**	**0.429**
***Teamwork skills*<-> Communication quality**	**0.441**
***Teamwork skills*<-> Utilization of ICT**	**0.304**

Source: Processed primary data (2024)

The table shows that the values in the HTMT matrix are not more than 0.9. This means that the model shows that the evaluation of discriminant validity is acceptable. From the results of the discriminant validity test, it can be seen that the HTMT test requirements have been met so that all constructs in the estimated model meet the criteria for good discriminant validity, meaning that the results of the data analysis can be accepted.

2) Cross Loading

The results of the analysis regarding the correlation of the construct with its own indicators or the correlation of the construct with other indicators can be presented in the cross loading table section.

Table of Correlation Values of Constructs with Indicators (Cross Loading)

	Performance HR	**Quality communication**	**Utilization ICT**	***Teamwork skills***
X1_1	0.509	**0.783**	0.551	**0.233**
X1_2	0.616	**0.820**	0.608	**0.230**
X1_3	0.602	**0.746**	0.495	**0.323**
X1_4	0.651	**0.831**	0.619	**0.423**

Y1_1	0.294	0.270	0.235	**0.777**
Y1_2	0.291	0.296	0.170	**0.795**
Y1_3	0.383	0.383	0.279	**0.891**
Y1_4	0.375	0.374	0.286	**0.900**
Y1_5	0.234	0.271	0.157	**0.782**
Y2_1	**0.853**	0.686	0.710	**0.262**
Y2_2	**0.870**	0.669	0.703	**0.375**
Y2_3	**0.855**	0.616	0.596	**0.397**
Y2_4	**0.845**	0.601	0.531	**0.294**
Z_1	0.637	0.594	**0.923**	**0.256**
Z_2	0.654	0.657	**0.789**	**0.280**
Z_3	0.701	0.676	**0.882**	**0.184**
Z_4	**0.634**	**0.584**	**0.923**	**0.262**

Discriminant validity testing in this way is said to be valid if the correlation value of the construct with its own indicator is greater than with other constructs and all correlation values of the construct with its own indicator and other constructs show positive values. From the results of data processing presented in the cross loading table, it can be seen that these requirements have been met so that all constructs in the estimated model meet the criteria for good discriminant validity, meaning that the results of data analysis can be accepted.

Reliability Test Reliability measurement can be done using 3 (three) methods, namely:

a. *Composite Reliability*.

Composite reliability shows the degree that indicates common latent (unobserved), so that it can show the block indicator that measures the internal consistency of the construct forming indicators, the accepted limit value for the Composite reliability level is 0.7 (Ghozali & Latan, 2015)

b. *Average Variance Extracted*(AVE)

If the AVE value > 0.5 then the indicator used in the study is reliable, and can be used for research. It is better if the AVE measurement value is greater than 0.50 (Ghozali & Latan, 2015).

c. *Cronbach's alpha*

d. If the Cronbach alpha value > 0.70 then the construct can be said to have good reliability.

Reliability Test Results Table

	Cronbach's alpha	**Composite reliability**	**Average variance extracted (AVE)**
HR Performance	0.879	0.916	**0.733**
Communication quality	0.807	0.873	**0.633**

Utilization of ICT	0.902	0.933	**0.776**
Teamwork skills	**0.888**	**0.917**	**0.690**

Source: Processed primary data (2024)

The table shows the results of the reliability test of each construct can be said to be good. The findings show that the cronbach alpha value of each construct is more than 0.7, then the composite reliability value of each construct is more than 0.7, and the AVE value of each construct is more than 0.5. Based on the results of the reliability test, it can be concluded that the research instrument has high reliability.

PLS analysis is a variance-based SEM analysis aimed at testing model theories that focus on predictive studies. Several measures to state the acceptance of the proposed model include R square and Q square (Hair et al., 2019).

R square shows the magnitude of the variation of endogenous variables that can be explained by other exogenous or endogenous variables in the model. The interpretation of R square according to Chin (1998) quoted (Abdillah, W., & Hartono, 2015) is 0.19 (low influence), 0.33 (moderate influence), and 0.67 (high influence). The following results of the determination coefficient (R2) of the endogenous variables are presented in the following table

R-Square Value Table

	R-square
HR Performance	**0.702**
Teamwork skills	**0.152**

The coefficient of determination (R-square) obtained from the model is 0.702, meaning that the HR Performance variable can be explained 70.2% by the Teamwork skill, Communication quality, and ICT utilization variables. While the remaining 29.8% is influenced by other variables outside the study. The R square value (0.702) is in the range of 0.67 - 1.00, meaning that the Teamwork skill, Communication quality, and ICT utilization variables have an influence on the HR Performance variable in the high category.

The R square value of Teamwork skill is 0.152, meaning that Teamwork skill can be explained 15.2% by the Communication quality variable, while the remaining 84.8% is influenced by other variables outside the study. The R square value (0.152) is in the range of 0.00 - 0.19, meaning that the Communication quality variable has an influence on the Teamwork skill variable in the low category.

Q-Square (Q2) describes the measure of prediction accuracy, namely how well each change in exogenous/endogenous variables is able to predict endogenous variables. Q-Square predictive relevance for structural models is a measure of how well the observation values are generated by the model and also its parameter estimates. Size. Q square above 0 indicates that the model has good predictive relevance or model prediction suitability. The criteria for the strength of the model are measured based on Q-Square Predictive Relevance (Q2) according to Ghozali & Latan (2015, p. 80) as follows: 0.35 (strong model), 0.15 (moderate

model), and 0.02 (weak model).

Q-square Value Table

	SSO	SSE	Q^2 (=1-SSE/SSO)
HR Performance	**812,000**	**405.045**	**0.501**

The Q-square (Q2) value for the HR Performance variable is 0.501, which indicates a Q square value above 0.35, so it can be said that the model has high predictive relevance. This means that the estimated parameter value produced by the model is in accordance with the observation value or the structural model is stated to fit the data or has good suitability.

Decisions are made based on the calculated statistical test values and previously determined significance levels. Hypothesis testing is done by comparing the t table at the 5% level (1.96) with the calculated t resulting from the PLS calculation. Based on the table of data processing results above, it can be seen in the testing of each hypothesis that has been proposed, namely:

1) Hypothesis Testing 1:

H1: The higher the quality of communication, the higher the performance of human resources.

In testing hypothesis 1, the original sample estimate value was obtained at 0.365. This value proves that communication quality has a positive effect on human resource performance, the results of which are also strengthened by the results of the t-test obtained with a calculated t value (6.539) > t table (1.96) and p (0.000) < 0.05, so it can be said that there is a positive and significant effect of communication quality on human resource performance. Thus, the first hypothesis stating that "The higher the quality of communication, the higher the performance of human resources" can be accepted.

2) Hypothesis Testing 2:

H2: The higher the quality of communication, the higher the teamwork skills.

In testing hypothesis 2, the original sample estimate value was obtained at 0.390. This value proves that communication quality has a positive effect on teamwork skills, the results of which are also strengthened by the results of the t-test which obtained a calculated t value (6.347) > t table (1.96) and p (0.000) < 0.05, so it can be said that there is a positive and significant effect of communication quality on teamwork skills. Thus, the second hypothesis which states that "The higher the quality of communication, the higher the teamwork skills" can be accepted.

3) Hypothesis Testing 3:

H3: The better the teamwork skills, the higher the HR performance.

In testing hypothesis 3, the original sample estimate value was obtained at 0.120. This value proves that Teamwork skills have a positive effect on HR Performance, the results of which are also strengthened by the results of the t-test which obtained a calculated t value (2.453) > t table (1.96) and p (0.014) < 0.05, so it can be said that there is a positive and significant influence of Teamwork skills on HR Performance. Thus, the third hypothesis which states that 'The better the Teamwork skills, the higher the HR performance' can be accepted.

4) Hypothesis Testing 4:

*H4: The influence of communication quality on performance will be stronger if HR is able to utilize ICT effectively. Conversely, the influence of communication quality on performance will be weaker if HR is unable to utilize ICT effectively.*In testing hypothesis 4, the original sample estimate value for the moderation variable (ICT Utilization x Communication Quality) was obtained at 0.129. This value proves that the moderator variable ICT Utilization is able to strengthen the influence of Communication Quality on HR performance. This is proven by the results of the t-test obtained t count (2.785) > t table (1.96) and p (0.005) < 0.05, so it can be said that good ICT Utilization is able to strengthen the influence of Communication Quality on HR performance. Thus, the fourth hypothesis which states that "The influence of communication quality on performance will be stronger, if HR is able to utilize ICT effectively, Conversely, the influence of communication quality on performance will be weaker, if HR is not able to utilize ICT effectively." can be accepted.

5) Hypothesis Testing 5:

H5: The influence of Teamwork skills on performance will be stronger if HR is able to utilize ICT effectively. Conversely, Teamwork skills on performance will be weaker if HR is unable to utilize ICT effectively.

In testing hypothesis 5, the original sample estimate value for the moderation variable (ICT Utilization x Teamwork skill) was obtained at 0.179. This value proves that the moderator variable ICT Utilization is able to strengthen the influence of Teamwork skill on HR performance. This is proven by the results of the t-test obtained t count (3.819) > t table (1.96) and p (0.000) < 0.05, so it can be said that good ICT Utilization is able to strengthen the influence of Teamwork skill on HR performance. Thus, the fifth hypothesis that "The influence of Teamwork skill on performance will be stronger if HR is able to utilize ICT effectively. Conversely, Teamwork skill on performance will be weaker if HR is unable to utilize ICT effectively" can be accepted.

Indirect Effect Analysis, Indirect effect testing is conducted to see the influence given by the communication quality variable on the HR performance variable through Teamwork skill as an intervening variable. The presentation of the indirect effect test results is shown in the following table.

Indirect Effect Test Results Table

	Original sample	T statistics	P values	Information
Communication quality -> *Teamwork skills*-> HR Performance	**0.047**	**2,026**	**0.043**	**Significant**

Source: Processed research data, 2024

According to the test results in the table above, it is known that the magnitude of the indirect influence of Communication Quality on HR performance through Teamwork skills is 0.178 with a t-value of 2.276 and p = 0.023 (p <0.05). This shows that there is a significant influence of communication quality on HR performance indirectly through Teamwork skills. This means that good communication quality can improve employee teamwork skills, then employee communication skills will have an impact on the process of cooperation between employees, thus improving employee performance.

Discussion:

1) The influence of communication quality on human resource performance

Hypothesis 1 testing proves that communication quality has a positive and significant effect on human resource performance, which means that the better the communication quality, the higher the human resource performance. These findings support the results of previous studies that effective communication in every organization will affect employee performance (Kalogiannidis, 2020).

The measurement of the communication quality variable is reflected through four indicators. namely indicators of Openness, Empathy, Positive attitude, Orientation to others (other-orientation) while the measurement of the HR Performance variable (Y2) is reflected through four indicators. namely indicators of Work Quality, Work Quantity, Punctuality, Effectiveness.

The Communication Quality variable has the highest outer loading value on the orientation indicator towards others, while the HR Performance variable has the highest outer loading value on the Quantity of Work indicator. These results indicate that the higher the Orientation to Others (other-orientation), the greater the quantity of work that can be produced by human resources. This means that the ability of individuals to pay attention to the needs, views, and interests of others in the team plays an important role in increasing work productivity. With a strong orientation towards collaboration and empathy, team members can more easily understand task requirements, work synergistically, and achieve work targets more optimally. This confirms that building a work culture that encourages attention to others is an effective strategy for increasing the quantity of work.

On the other hand, the Communication Quality variable has the lowest outer loading value on the Positive Attitude indicator (positiveness), while the HR Performance variable has the lowest outer loading value on the Effectiveness indicator. These results indicate that the higher the positive attitude, the better the effectiveness of the work done. This means that a positive attitude reflected in optimism, enthusiasm, and a constructive approach to tasks and

coworkers can increase efficiency in completing work. With a positive attitude, individuals tend to be better able to face challenges, minimize conflicts, and optimize available resources, so that work results become more effective. Therefore, developing a positive attitude through training in emotional management, motivation, and a supportive work culture is important to encourage overall work effectiveness.

2) The influence of communication quality on teamwork skills

Hypothesis 2 testing proves that communication quality has a significant positive effect on teamwork skills, which means that the higher the quality of communication, the higher the teamwork skills. The findings of this study support previous studies that there is a significant positive relationship between interpersonal communication skills and teamwork attitudes (Khademian & Neshat, 2017).

The measurement of the communication quality variable is reflected through four indicators. namely the indicators of Openness, Empathy, Positiveness, Orientation to others (other-orientation). Then, the measurement of the Teamwork skill variable is reflected through five indicators. namely the indicators of Coordination, Information exchange, Use of authority, Assessing capabilities, Supporting behaviors.

The communication quality variable with the highest outer loading value is the Orientation to others indicator (other-orientation) while the measurement variable Teamwork skill variable with the highest outer loading value is the Assessing capabilities indicator. These results indicate that the quality of communication that focuses on orientation to others plays an important role in improving individual or team skills to evaluate team members' capabilities effectively. Orientation to others reflects the ability to listen, understand perspectives, and empathize, which supports the process of objectively assessing capabilities. Thus, the higher the quality of communication built through orientation to others, the more optimal the team's ability to identify and utilize the potential of each member to achieve common goals.

The communication quality variable with the lowest outer loading value is the Positive Attitude indicator (positiveness) while the measurement variable of the Teamwork skill variable with the lowest outer loading value is the Coordination indicator. These results indicate that a positive attitude possessed by an individual contributes significantly to the team's ability to coordinate. A positive attitude reflects optimism, openness, and a desire to work together, which can create a supportive and harmonious work environment. With a positive attitude, team members find it easier to establish effective communication, understand their respective roles, and align actions to achieve common goals. Therefore, increasing positive attitudes will encourage better coordination within the team.

3) The influence of teamwork skills on HR performance

In testing hypothesis 3, it is proven that Teamwork skills have a positive and significant effect

on HR performance, which means that the better the Teamwork skills, the higher the HR performance. The results of previous studies show that teamwork has a positive and significant effect on performance (Yasa et al., 2021).

Measurement of Teamwork skill variable measurement is reflected through five indicators. namely Coordination, Information exchange, Use of authority, Assessing capabilities, Supporting behaviors. While the measurement of HR Performance variable (Y2) is reflected through four indicators. namely indicators of Work Quality, Work Quantity, Timeliness, Effectiveness.

4) The moderating effect of ICT utilization on the influence of communication quality on performance

In testing hypothesis 4, it is proven that the moderator variable of ICT Utilization is able to strengthen the influence of Communication Quality on HR performance. This means that the influence of communication quality on performance will be stronger if HR is able to utilize ICT effectively. Conversely, the influence of communication quality on performance will be weaker if HR is unable to utilize ICT effectively.

Measurement of ICT Utilization variables is reflected through four indicators, namely the Frequency of Use indicator, Variety of features used, Level of dependency in tasks, User satisfaction with the ease of the system. ICT utilization has been proven to be a strengthening factor in the influence of communication quality on HR performance.

The ICT Utilization variable has the highest outer loading value on the Frequency of Use indicator, the Communication Quality variable has the highest outer loading value on the orientation to others indicator while the HR Performance variable has the highest outer loading value on the Quantity of Work indicator. These results indicate that the influence of orientation to others on increasing work quantity will be more optimal if the frequency of ICT use is high. These results indicate that orientation to others, which reflects the ability to understand, listen, and empathize with others, can significantly increase work quantity if supported by intensive ICT utilization.

High frequency of ICT usage enables faster access to information, more effective communication, and more efficient collaboration. Thus, when individuals or teams have a good orientation towards others, and utilize ICT optimally, productivity and quantity of work can increase significantly due to the synergy between the quality of communication and technology.

These results indicate that a positive attitude in communication can play an important role in increasing work effectiveness. However, this impact will be more optimal if accompanied by the use of a wider variety of ICT features. This means that the use of various technology features, such as collaboration platforms, project management software, or interactive communication tools, can support the delivery of ideas, decision making, and task execution

more effectively. The combination of a positive attitude that encourages harmonious communication and the use of feature-rich technology will create a more productive and efficient work environment.

5) The moderating effect of ICT utilization on the influence of teamwork skills

In testing hypothesis 5, it is proven that the moderator variable of ICT Utilization is able to strengthen the influence of Teamwork skills on HR performance. This means that the influence of Teamwork skills on performance will be stronger if HR is able to utilize ICT effectively. Conversely, Teamwork skills on performance will be weaker if HR is unable to utilize ICT effectively.

Measurement of ICT Utilization variables is reflected through four indicators, namely the Frequency of Use indicator, Variety of features used, Level of dependency in tasks, User satisfaction with the ease of the system. ICT utilization has been proven to be a strengthening factor in the influence of teamwork skills on HR performance.

4. Conclusion

based on the difference in research results / research gap between the role of communication on HR performance. So the formulation of the problem of this study is "how to improve human resource performance influenced by the quality of communication and teamwork skills based on the utilization of Information and Communication Technology (ICT) at the Customs and Excise Supervision and Service Office Type A Semarang. Then the answer to the research question (Question Research) that appears is as follows: Communication quality has a positive and significant effect on HR performance. This means that the better the quality of communication, the higher the performance of human resources, Communication quality has a positive and significant effect on Teamwork skills. This means that the better the quality of communication, the higher the Teamwork skills, Teamwork skills have a positive and significant effect on HR performance. Which means that the better the Teamwork skills, the higher the HR performance, The influence of communication quality on performance will be stronger, if HR is able to utilize ICT effectively, The influence of Teamwork skills on performance will be stronger, if HR is able to utilize ICT effectively.

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