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The relationship between knowledge of learning strategies, innovativeness and interpersonal communication with Widyaiswara's ability to manage learning

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Abstract. The objective of the research is to find out the relationship between knowledge of instructional strategy, innovativeness, and interpersonal communication with the ability of instructor to manage instruction. The subject of the research is the instructor at the Vocational Education Development Center Jakarta, with a sample 50 instructors. The three independent variables are knowledge of instructional strategy which is measured by test instrument, the innovativeness and interpersonal communication which are measured by non test instrument, and the dependent variable is the ability of instructor to manage instruction which is measured by non test instrument using the form of observation sheet. The result of the research indicates that: (1) there is positive correlation between knowledge of instructional strategy and the ability of instructor to manage instruction; (2) there is positive correlation between innovativeness and the ability of instructor to manage instruction; (3) there is positive correlation between interpersonal communication and the ability of instructor to manage instruction; and (4) there is positive correlation between knowledge of instructional strategy, innovativeness, and interpersonal communication all together and the ability of instructor to manage instruction. The result of the present study suggest that the ability of instructor to manage instruction can be increased through enhancing knowledge of instructional strategy, innovativeness, and effectiveness of interpersonal communication.

Keywords. learning strategies, inovativeness, interpersonal communication

Introduction

Vocational Secondary Education is part of the national education system, has a strategic role in efforts to prepare high-level skilled technical personnel ready for work. These technical personnel are expected to have knowledge, skills, attitudes and superior positive values that can be used as a provision to compete in the job market. Looking at the existing conditions, graduates of Vocational Secondary Education in this case Vocational High School (SMK) have not shown satisfactory performance. The expertise and number of vocational graduates are not fully in accordance with the job market, so the expectations of SMK can contribute in preventing the increase in unemployment has not been optimal.

One of the efforts that must be done is to improve the quality of vocational education through improving the debriefing system to prospective vocational graduates. Improving the

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quality of vocational education boils down to the realization of the quality of graduates who are able to compete in the job market. To produce the quality of such graduates, among others, is related to improving the quality of the learning process, one of which needs to be started by improving teacher competence.

To improve the competence of vocational teachers, among others through the implementation of vocational education and training. One of the institutions that have the task and function of organizing vocational education and training in the Ministry of National Education, namely the Center for Teacher Management Development (PPPG) Vocational Business and Tourism (now named the Center for The Development and Empowerment of Educators and Education Personnel (PPPPTK) Business and Tourism). While the energy that spearheads the management of the learning process in the institution is *widyaiswara.*

Based on the observation of objective conditions, widyaiswara in carrying out his duties in the training institution, among which is determined and influenced by various factors, such as knowledge factors about learning strategies, the level of inovativeness and effectiveness of interpersonal communication. Various factors are likely to be related to the pedagogical ability of widyaiswara in managing learning in training institutions.

On the basis of the above thinking, and driven by the desire to know and to get the results of more objective, empirical, and methodological analysis, especially on the relationship between knowledge of learning strategies, innovation and interpersonal communication with the ability of widyaiswara to manage learning in PPPG Vocational Business and Tourism, then researchers need to conduct their research.

Theoretical studies

Widyaiswara's Ability to Manage Learning

Ability is a performance that can be observed as a result of learning. (Gagne, 1992: p. 43). Human abilities fall into 5 (five) categories: (1) intellectual skills, (2) cognitive strategies, (3) verbal information, (4) movement and attitude skills. (Gagne, 1992: pp.43-47). Ability is the capacity of individuals to perform various tasks in a job. An individual's ability is composed of two devices for carrying out mental and physical activities. (Robbin, 2001: p. 37). Ability is an innate or something that can be learned that allows a person to do something either mental or physical. (Gibson, Ivancevich and Donelly, 2000: p.94). Thus ability is a power or capacity that a person shows to perform tasks on a job as a result of the learning process.

What does this have to do with ability and managing learning? Learning is defined as behavior change as a result of experience (Gage &Barliner, 1984: p.252). These behavioral changes are relatively permanent (Klein, 1997:p.2). Such permanent changes occur in knowledge, behavior, and skills, acquired through experience (Wolfolk, 1993:p.196; Brophy,1990: p.124).

Learning is a change in human capability or ability that lasts for a period of time that is not solely caused by the process of growth. Such changes are in the form of enhanced capabilities or some type of performance performance, attitude, interest or value (Gagne, 1977: p.3). Such changes result from experience not because of growth (Slavin,1991:p.98).

Thus learning is a relatively sedentary change in behavior from the result of experience in interaction with an environment that tangibles an observable and measured ability. In the world of education various abilities in the form of learning outcomes, obtained through a process called learning.

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Knowledge of Learning Strategies

Knowledge is all we know about a particular object, including science (Suriasumantri, 1998: p.104). Human knowledge is selectively organized from a number of facts, information, and principles possessed and acquired from the results of experience (Krech, 1962: p. 62). Knowledge is information that is evaluated and organized by human thought that can be used for a variety of purposes, such as inferring and explaining. (Rousa, p.3).

Knowledge is the result of learning activities. Knowledge is more than just the end product of previous learning activities but also a guideline for new learning. Knowledge is divided into 5 (five) namely: 1) general knowledge, 2) domain-specific knowledge, 3) declarative knowledge, 4) procedural knowledge and 5) conditional knowledge. (Woolfolk, 1993: p. 239). Meanwhile Good and Brophy divide knowledge into two, namely figurative knowledge and operative knowledge (Good and Brophy, 1990: *op.cit*, pp.125–126). Figurative knowledge is the knowledge of facts, theories and principles, often also referred to as declarative, proportional, theoretical or conceptual knowledge. Operative knowledge is a display of task completion and problem solving, often referred to as procedural knowledge. Anderson and Krathwohl grouped knowledge into four dimensions connected with six dimensions of cognitive processes in order to develop learning goals related to cognitive learning outcomes. The dimension of knowledge consists of dimensions: factual knowledge, concept knowledge, procedural knowledge and meta-cognitive knowledge. Dimensions of cognitive processes include: memory, understanding, application, analysis, evaluation and creation. (Anderson and Krathwohl, 2001: pp. 27-31).

Widyaiswara's Innovativeness

Innovation is an idea, practice or object that is considered new by an individual or other group that adopts it. (Rogers, 1995:p.11). Innovation consists of the emergence of a new idea and its implementation into a product, service, process, so that it can lead to dynamic growth in a particular field. (Urabe, 1988: p.3). Hinterhuber (1986) quoted by Craig R. Littler defines innovation as every important change: 1) in a company's interaction with its social environment; 2) in the internal structure of the company, and 3) in the company's sub-systems. (Littler,1988:p.339).

Innovation is a combination of the process of discovery and exploitation (Gaynor, 2002: 15). The process of discovery includes attempts to create new ideas, exploitation is the developmental stage of the idea. Meanwhile, West and Farr as quoted by King and Anderson define innovation in terms of its characteristics, namely: 1) Innovation is a product, process or procedure that is real in the organization, 2) innovation must be new to a particular social background, 3) innovation must be intentional, 4) innovation is not routine change, 5) innovation produces benefits for the organization, 6) innovation must have an effect on the public. (King and Anderson, 2002: pp.2-3) In the same context Rogers also stated the characteristics of innovation, namely: 1) has relative *advantages*, 2) has a match with the values or cultural character of individuals and groups (*compatibility*), 3) has a level of difficulty that is being seen from the aspect of *complexity (complexity*), 4) can be piloted (*trialability*). 5) *observability*. (Rogers, 1995:*op.cit,p.16*).

The characteristics of innovation that affect the acceptance of innovation are closely related to the values and benefits of innovation itself. While the influence of the organization on the acceptance of innovation is related to the leadership and internal and external characteristics of the organization. (Rogers, *op.cit.*, p.380).

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Interpersonal Communication

The word communication or in English *communication* comes from the Latin word *communicare* which means to make the same (Pearson &Nelson, 1985: p. 6). Communication is the transmission of information from a source to a purpose. (Heinich, 1996: *op.cit*.,p. 13). Communication is the *process of understanding and sharing meaning* (Pearson & Nelson, 1985: p.6). Nancy Buerkel-Rothfuss says that communication is a process of interaction through which individuals create and share meaning. (Buerkel-Rothfuss,1985: p.7). Buerkel-Rothfuss further describes communication as an activity involving the following elements: 1) communicators are individuals involved in communication, 2) the purpose of communication, 3) relationships that have certain rules, 4) the existence of mutual influence, 5) the existence of verbal and non-verbal messages, 6) the existence of communication channels, 7) the existence of the context in which communication occurs, and 8) the expected results of the communication process.

Research methodology

Place and Time of Research

This research was conducted at the widyaiswara PPPG Vocational Business and Tourism (now named Center for Development and Empowerment of Educators and Business education and Tourism Personnel), Depok West Java, in September 2018 to June 2019.

Research Methods

The research method used is the survey method, the research data is analyzed with regression and correlation analysis. Regression analysis is used to determine the model of the relationship between variable Y and X1, X2, X3, either independently (simple regression) or together (double regression), while correlation analysis aims to uncover the strong relationship between the variables.

Population and Sample

The target population in this study is widyaiswara Teacher Management Development Center, affordable population is widyaiswara located in the environment of Jakarta Vocational Teacher Management Center and Tourism (now named Center for Development and Empowerment of Educators and Business and Tourism Education Personnel). The study sample of 50 widyaiswara people was taken with proportional random sampling techniques.

Data Collection Techniques

Data collection is carried out with non-test instruments in the form of observation sheets for widyaiswara ability variables to manage learning and questionnaires for inovative variables and interpersonal communication; While the learning strategy knowledge variable is used test instruments.

Research Results

The data description of each research variable obtained from respondents is as in table 1.

Table 1: **Recapitulation of Basic Statistics**

Size	Research Variables			
	Y	X1	X2	X3
N	50	50	50	50
Average	98,26	26,76	117,7	123,96
Median	98	27	118	124
Mood	100	27	119	130

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Size	Research Variables			
	Y	X1	X2	X3
Standard. Deviation	10,781	1,825	7,678	8,664
Variance	116,237	3,329	58,949	75,060
Theoretical minimum score	30	0	35	37
Theoretical maximum score	120	32	140	148
Empirical minimum score	78	23	104	107
Maximum score. empirik	118	30	131	140

Information:
Y: Widyaiswara's Ability to Manage Learning
x_1: Knowledge of Learning Strategies
x_2: Innovative
x_3: Interpersonal Communication

Analysis Requirements Testing
1. Normality Test
The normality test is performed using the *Lilliefors* test. The results of the normality test are fully presented in table 2 below.
Table 2: Summary of Normality Test Results
Regression Estimate Error Y over x_1, Y over x_2, and Y over x_3

Regression Estimate Error	Alpha Level Ltabel		Lhitung
	0,05	0,01	
Y over x_1	0,125	0,145	0,020**
Y over x_2	0,125	0,145	0,041**
Y over x_3	0,125	0,145	0,035**

Information:
Y = Widyaiswara's Ability to Manage Learning
x_1 = Knowledge of Learning Strategies
x_2 = Ininovativeness
x_3 = Interpersonal Communication
** 'Normal ($L_{hitung} < L_{tabel}$)
The test results concluded the data came from a normal distributed population.
2. Homogeneity Test
Homogeneity tests are used *barlett tests.* A summary of homogeneity test results is presented in table 3 below:
Table 3: Summary of Y Variance Homogeneity Test Results over Xi

Y Variance for Groups	Dk	c2hitung	c2tabel	
			0,05	0,01
X1	8	10,461**	15,507	20,090

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Y Variance for Groups	Dk	c2hitung	c2tabel	
			0,05	0,01
X2	17	7,216**	27,587	33,408
X3	13	9,661**	22,362	27,688

Information:
Y = Widyaiswara's Ability to Manage Learning
X_1 = Knowledge of Learning Strategies
X_2 = Ininovativeness
X_3 = Interpersonal Communication
dk = degree of freedom
** = homogeneous variance (**c2hitung < c2tabel**)

Hypothesis Testing

1. Relationship between Learning Strategy Knowledge (X_1) and Widyaiswara Ability to Manage Learning (Y)

The calculation of simple regression analysis variable Widyaiswara's Ability to Manage Learning (Y) over Learning Strategy Knowledge (X_1) results in regression direction (*b)* of 3,360 and constant (*a*) of 8,340. Thus the relationship between the two variables is illustrated by the regression equation model $\hat{Y}$ = 8,340+3,360X1. The significance and linearity of the regression model tested with the F test, concluded the regression model $\hat{Y}$=8,340+3.360X1 is very significant and linear (table 4). If the knowledge of learning strategy (X_1) rises by one unit, it is followed by an increase in the ability of widyaiswara to manage learning (Y) by 3,360 units at the constant 8,340.

Table 4: Variance Analysis for Significance And Linearity Tests regression Widyaiswara's ability to manage learning (Y) over Learning Strategy Knowledge (X_1).

Y = **8,340+3,360X1**

SOURCE Variance	Dk	JK	RJK (JK / dk)	*Fhitung*	F *table*	
					0,05	0,01
Total	50	488.447				
Coefficient (a)	1	482.751,38	482,751.38			
Regression (b/a)	1	1.841,807	1.841,807	22,940**	4,04	7,19
Remnant	48	3.853,813	80,288			
Tuna Suitable	6	391,603	65,267	0,792 ns	2,32	3,26
Error	42	3.462,210	82,434			

Information:
** = very significant regression (F_h = 22,940 > F_t = 7.19) at α = 0.01
ns = non-significant = linear regression (F_h = 0.792 < F_t = 2.32 :α = 0.05; F_t = 3.26 :α = 0.01)
dk = degree of freedom
JK = Number of Squares
RJK = Average Number of Kuadrates

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The strength of the relationship between Knowledge Learning Strategy (X_1) and Widyaiswara's Ability to Manage Learning (Y) is indicated by the correlation coefficient r_{y1} = 0.569, whose meaning is tested with t-test $t_{obtained} > t_{tabel}$ price both at $\alpha = 0.05$ and $\alpha = 0.01$ (table 5), meaning the relationship between the two variables is positive and very significant.

Table 5: Test the Significance of the Correlation Coefficient between Knowledge Learning Strategy (X_1) with Ability Widyaiswara Manages Learning (Y)

n	Correlation Coefficient (r_{y1})	t_{hitung}	t_{tabel}, α =	
			0,05	0,01
50	0,569	4,79**	1,68	2,40

Information:
n = Number of samples
r_{y1} = Correlation Coefficient between X_1 and Y
** = Very significant correlation coefficient

The coefficient of determination $(r_{y1})^2$ = 0.3238, meaning that 32.38% variation in widyaiswara's ability to manage learning (Y) can be explained by knowledge of learning strategies (X_1) through regression models $\hat{Y} = 8{,}340 + 3.360X1$ at □ = 0.05 and □ = 0.01.

The relationship between learning strategy knowledge (X_1) and widyaiswara ability to manage learning (Y) is positive and very significant at $\alpha = 0.05$ and $\alpha = 0.01$, although inovativeness (X_2) and interpersonal communication (X_3) are controlled both single-handedly and together. The contribution of learning strategy knowledge variance to the variance of widyaiswara ability to manage learning, when the variances of other variables are jointly separated, is $(r_{y1.23})^2$ = 0.1705, or by 17.05%. (results of partial correlation analysis as in table 6).

Table 6: Summary of Significance Test of Partial Correlation Coefficient between Learning Strategy Knowledge (X_1) and Widyaiswara Ability to Manage Learning (Y) by controlling Variables X_2 and X_3

Partial Correlation Coefficient	t_{hitung}	t_{tabel}; α =	
		0,05	0,01
$r_{y1.2}$ = 0.5109	4,08**	1,68	2,40
$r_{y1.3}$ = 0.4285	3,25**	1,68	2,40
$r_{y1.23}$ = 0.4130	3,076**	1,67	2,40

Information:
$r_{y1.2}$ = Partial correlation coefficient X_1 with Y if X_2 is controlled
$r_{y1.3}$ = Partial correlation coefficient X_1 with Y if X_3 is controlled
$r_{y1.23}$ = Partial correlation coefficient X_1 with Y if X_2 and X_3 are controlled
** = Very significant correlation

From table 6 above it is concluded that the partial correlation between learning strategy knowledge and widyaiswara ability to manage learning is positive and very significant, both if the initiative and interpersonal communication are controlled individually and together. Thus it can be concluded that any increase in knowledge of learning strategies can improve the ability of widyaiswara to manage learning.

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2. Relationship between Ininovativeness (X_2) and Widyaiswara's Ability to Manage Learning (Y)

The calculation of simple regression analysis variable Widyaiswara's Ability to Manage Learning (Y) over Inovative (X_2) results in regression direction (*b)* of 0.722 and constant (*a*) of 13.223. Thus the relationship between the two variables is illustrated by the regression equation model $\hat{Y}$ = 13.223 + 0.722X2. The significance and linearity of the regression model tested with the F test, concluded the regression model $\hat{Y}$=13.223 + 0.722X2 is very significant and linear (table 7). If the initiative (X_2) rises by one unit, it is followed by an increase in the ability of widyaiswara to manage learning (Y) by 0.722 units at the constant 13.223.

Table 7: Variance Analysis for Significance and Linearity Tests regression of Widyaiswara's ability to manage learning (Y) over ininovativeness (X_2))

$\hat{Y}$ = 13,223+0.722X2

SOURCE Variance	**Dk**	**JK**	**RJK (JK / dk)**	***Fhitung***	**F *table***	
					0,05	**0,01**
Total	50	488.447				
Coefficient (a)	1	482.751,38	482.751,38			
Regression (b/a)	1	1.507,755	1.507,755	17,281**	4,04	7,19
Remnant	48	4.187,865	87,247			
Tuna Suitable	26	2.927,781	112,607	1, 966ns	2,03	2,75
Error	22	1.260,083	57,277			

Information:

** = Very significant regression (F_h = 17,281 > F_t = 7.19) at α = 0.01
ns = non-significant = linear regression (F_h = 1,966 < F_t = 2.03 :α = 0.05; F_t = 2.75: α = 0.01)
dk = degree of freedom
JK = Number of Squares
RJK = Average number of squares

The strength of the relationship between The Inovativeity (X_2) and widyaiswara's ability to manage learning (Y) is indicated by the correlation coefficient r_{y2} = 0.515, whose meaning is tested by the t-test obtained the thihisity price of > in the α = 0.05 or α = 0.01 (table 8). This means that the relationship between the two variables is positive and very significant.

Table 8: Test the Significance of the Correlation Coefficient between Ininovatives (X_2) and Widyaiswara's Ability to Manage Learning (Y)

n	**Correlation Coefficient (r_{y2}))**	**thitung**	**ttabel, α =**	
			0,05	**0,01**
50	0,515	4,157**	1,68	2,40

Information:

n = Number of samples
r_{y2} = Correlation coefficient between X_2 and Y
** = Very significant correlation coefficient

The coefficient of determination $(r_{y2})^2$ = 0.2652, meaning that 26.52% variation in widyaiswara's ability to manage learning (Y) can be explained by inovativeness (X_2) through regression model $\hat{Y}$= 13,223+0.722X2 at □ =0.05 and □ =0.01.

The relationship between inovativeness (X_2) and widyaiswara ability to manage learning (Y), if learning strategy knowledge (X_1) and interpersonal communication (X_3) is controlled singularly is positive and very significant at α = 0.05 and α = 0.01. However, if controlled the

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knowledge of learning strategies ($_{X1}$) and interpersonal communication ($_{X3}$) together, significant at α = 0.05. The contribution of synovative variance to the ability of widyaiswara to manage learning, when the variances of other variables are jointly separated, is $(_{ry2.13})^2$ = 0.098, or by 9.89% (partial correlation analysis results as in table 9).

Table 9: Summary of Significance Test of Partial Correlation Coefficient between Inovatives (X2)
Widyaiswara's Ability to Manage Learning (Y)
dengan mengontrol Variabel X1 dan X3

Koefisien Korelasi Parsial	**t_{hitung}**	**$t_{tabel;}$ α =**	
		0,05	**0,01**
$r_{y2.1}$ = 0,4438	3,40**	1,68	2,40
$r_{y2.3}$ = 0,3364	2,45**	1,68	2,40
$r_{y2.13}$ = 0,3146	2,248*	1,67	2,40

Information :
ry2.1 = X2 partial correlation coefficient with Y if X1 is controlled
ry2.3 = X2 partial correlation coefficient with Y if X3 is controlled
ry2.13 = Coefficient of partial correlation X2 with Y if X1 and X3 are controlled
** = Very significant correlation
* = Significant correlation at = 0.05.

From table 9 above, it is concluded that the partial correlation between innovativeness and widyaiswara's ability to manage learning is positive and very significant, if knowledge of learning strategies and interpersonal communication are controlled individually. Meanwhile, if both are controlled together, the partial correlation is significant at = 0.05. Thus, it can be concluded that any increase in innovativeness can improve the widyaiswara's ability to manage learning.

3. Relationship between Interpersonal Communication (X3) and Widyaiswara's Ability to Manage Learning (Y)

The calculation of simple regression analysis of the Widyaiswara's Ability to Manage Learning (Y) on Interpersonal Communication (X3) produces a regression direction (b) of 0.792 and a constant (a) of 0.06321. Thus the relationship between the two variables is described by the regression equation model = 0.06321+0.792X3. The significance and linearity of the regression model were tested by the F test, it was concluded that the regression model = 0.06321+0.792X3 was very significant and linear (table 10). If interpersonal communication (X3) increases by one unit, then it is followed by an increase in the widyaiswara's ability to manage learning (Y) by 0.792 units at a constant of 0.06321.

Table 10: Analysis of Variance for Significance Test and Regression Linearity
Widyaiswara's Ability to Manage Learning (Y) above
Interpersonal Communication (X3) = 0.06321+0.792X3

Sumber Varians	**dk**	**JK**	**RJK (JK / dk)**	**F_{hitung}**	**F_{tabel}**	
					0,05	**0,01**
Total	50	488.447				
Koefisien (a)	1	482.751,38	482.751,38			
Regresi (b/a)	1	2.307,989	2.307,989	32,702**	4,04	7,19
Sisa	48	3.387,631	70,577			

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Tuna Cocok	28	2.018,081	72,074	1, 053^{ns}	2,04	2,77
Galat	20	1.369,55	68,477			

Information:

** = very significant regression (Fh = 32.702 > Ft = 7.19) at = 0.01

ns = non significant = linear regression (Fh = 1.053 < Ft = 2.04 :α = 0.05; Ft = 2.77: = 0.01)

dk = degrees of freedom

JK = Sum of Squares

RJK = Average Sum of Squares

The strength of the relationship between Interpersonal Communication (X3) and Widyaiswara's Ability to Manage Learning (Y) is indicated by the correlation coefficient ry3 = 0.637, the significance of which is tested by t-test obtained by the value of tcount > ttable both at = 0.05 and = 0.01 (table 11), Means that the relationship between the two variables is positive and very significant.

Table 11: Significance Test of the Correlation Coefficient between Interpersonal Communication (X3) and
Widyaiswara's Ability to Manage Learning (Y)

n	**Koefisien Korelasi (r_{y3})**	**t_{hitung}**	**t_{tabel}, α =**	
			0,05	**0,01**
50	0,637	5,725**	1,68	2,40

Information :

n = Number of samples

ry3 = Correlation Coefficient between X3 and Y

** = Very significant correlation coefficient

The coefficient of determination (ry3)2 = 0.4058, meaning that 40.58 % of the variation in the widyaiswara's ability to manage learning (Y) can be explained by interpersonal communication (X3) through the regression model =0.06321+0.792X3 at = 0.05 and = 0.01.

The relationship between interpersonal communication (X3) and the widyaiswara's ability to manage learning (Y) is positive and very significant at = 0.05 and = 0.01, although knowledge of learning strategies (X1) and innovativeness (X2) is controlled either singly or individually. together. The contribution of the variance of interpersonal communication to the widyaiswara's ability to manage learning, when the variance of the other variables are separated together, is (ry3.12)2 = 0.1488 or 19.48% (the results of the partial correlation analysis as shown in table 12).

Table 12: Summary of Significance Test of Partial Correlation Coefficient between Interpersonal Communication (X3) and Widyaiswara's Ability to Manage Learning (Y) by controlling Variables X1 and X2

Koefisien Korelasi Parsial	**t_{hitung}**	**$t_{tabel;}$ α =**	
		0,05	**0,01**
$r_{y3.1}$ = 0,5314	4,30**	1,68	2,40

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$r_{y3.2}$ = 0,5316	4,30**	1,68	2,40
$r_{y3.12}$ = 0,4414	**3,336****	**1,67**	**2,40**

Information :
ry3.1 = X3 partial correlation coefficient with Y if X1 is controlled
ry3.2 = X3 partial correlation coefficient with Y if X2 is controlled
ry3.12= Partial correlation coefficient of X3 with Y if X1 and X2 are controlled
** = Very significant correlation

From table 12 above, it can be concluded that the partial correlation between interpersonal communication and the widyaiswara's ability to manage learning is positive and very significant, both if knowledge of learning strategies and innovation are controlled individually or jointly. Thus it can be concluded that every increase in interpersonal communication increases the widyaiswara's ability to manage learning.

4. The relationship between Knowledge of Learning Strategies (X1), Innovativeness (X2) and Interpersonal Communication (X3) together with Widyaiswara's Ability to Manage Learning (Y)

The results of the calculation of the multiple regression equation model of the independent variable data on the data of the widyaiswara's ability to manage learning (Y) obtained the regression direction b1 = 1.972 for the learning strategy knowledge variable (X1), b2 = 0.346 for the innovative variable (X2), b3 = 0.481 for the interpersonal communication variable (X3), at constant = -54,839. Thus the relationship between the independent variables and the dependent variable is described through the regression equation model = -54,839 + 1,972X1+ 0,346X2 + 0,481X3. Test the significance of the multiple regression equation model using the F test as shown in table 13 below.

Table 13: Analysis of Variance for Multiple Regression Equation Significance Test $\hat{Y}$ =-54,839 + 1,972X_1+ 0,346X_2 + 0,481X_3.

Sumber Varians	dk	JK	RJK	$F_{-hitung}$	$F_{tabel,}$ α =	
					0,05	0,01
Total	49	5.695,62	116,237			
Direduksi						
Regresi (b/a)	3	3.204,363	1.068,121	19,714**	2,80	4,22
Sisa	46	2.491,157	54,156			

Information:
** = Very significant regression (Fh = 19.714 > Ft = 4.22) at = 0.01
dk = degrees of freedom
JK = Sum of Squares
RJK = Average Sum of Squares

The results of the analysis of variance as in table 13 can be concluded that the overall multiple regression equation model is very significant. This means that if the knowledge of learning strategies (X1), innovation (X2) and interpersonal communication (X3) are increased by one unit each, it will be followed by an increase in the widyaiswara's ability to manage learning by 1.972 + 0.346 + 0.481 = 2.799 at constant -54,839.

Each coefficient of the Y multiple regression equation model on X1, X2, and X3, was tested by t-test, it can be concluded that the coefficients b1 and b3, are significant at the real

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level = 0.05 and the real level = 0.01, while for the coefficient b2 significant at the level of significance = 0.05 (Table 14).

Table 14: Summary of the significance test of multiple regression coefficients

Koefisien Regresi	t_{hitung}	t_{tabel}, α =	
		0,05	0,01
b_1 = 1,972	3,076**	1,68	2,40
b_2 = 0,346	2,248*	1,68	2,40
b_3 = 0,481	3,336**	1,68	2,40

Information:
b1: The regression coefficient corresponding to X1
(th = 3.076 > tt = 1.68) at level = 0.05 very significant
(th = 3.076 > tt = 2.40) at level = 0.01 very significant
b2: Regression coefficient corresponding to X2
(th = 2.248 > tt = 1.68) at level = 0.05 Significant
(th = 2.248 < tt = 2.40) at level = 0.01 non-significant
b3: The regression coefficient corresponding to X3
: (th = 3.336 > tt = 1.68) at level = 0.05 very significant
(th = 3.336 > tt = 2.40) at level = 0.01 very significant

The strength of the multiple correlation between learning strategy knowledge, innovation and interpersonal communication together with the widyaiswara's ability to manage learning is shown by the multiple correlation coefficient (Ry.123) = 0.75, with significance based on the F test, obtained Fcount > Ftable good for = 0.05 and = 0.01 (table 15), which means that the correlation between knowledge of learning strategies, innovation and interpersonal communication together with the widyaiswara's ability to manage learning is positive and very significant.

Table 15: Double Correlation Coefficient Significance Test

n	**Koefisien Korelasi Ganda (R_{y123})**	F_{hitung}	F_{tabel}, α =	
			0,05	**0,01**
50	0,75	19,714**	2,81	4,24

Information :
n = Number of samples
Ry123 = Correlation Coefficient between Knowledge of Learning Strategies (X1), Innovativeness (X2), Interpersonal Communication (X3) and Widyaiswara's Ability to Manage Learning (Y)
** = Very significant correlation (Fcount = 19.714 > Ftable (1 : 46) = 4.24) at = 0.01

The coefficient of determination (Ry.123)2 is 0.5626. It means that 56.26% of the variation in the widyaiswara's ability to manage learning (Y) can be explained by the variables of learning strategy knowledge (X1), innovation (X2), and interpersonal communication (X3) together through the regression equation = -54,839 + 1,972X1+ 0.346X2 + 0.481X3. The remaining variation, 43.74% is explained by other independent variables.

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The significance of the coefficients b1, b2, and b3, indicated by the respective prices tcount = 3.076; 2,248; and 3.336, indicating the rank of the significance of the contribution of each variable X1, X2, and X3 to Y, which also corresponds to the ranking of the partial correlation coefficients between X1, X2, and X3 with Y (table 16),

Table 16: Ranking the Strength of the Relationship of Each Independent Variable (Xi) to the Bound Variable (Y)

No	Independent Variabel	Coefficient Partial Correlation	Rating
1	Learning Strategy Knowledge (X1)	$r_{y1.23}$ = 0,4130	second
2	Innovativeness (X_2)	$r_{y2.13}$ = 0,3146	third
3	Interpersonal Communciation (X_3)	$r_{y3.12}$ = 0,4414	first

Conclusion

Based on correlational research, between knowledge of learning strategies, innovation and interpersonal communication with widyaiswara's ability to manage learning, it can be concluded as follows:

1. There is a positive relationship between knowledge of learning strategies and the ability of widyaiswara to manage learning. This means that the higher the widyaiswara's knowledge of learning strategies, the higher his ability to manage learning. Thus the widyaiswara's ability to manage learning can be improved by increasing knowledge of learning strategies.

2. There is a positive relationship between innovation and the widyaiswara's ability to manage learning. This means that the higher the level of innovation, the higher the widyaiswara's ability to manage learning. Thus the widyaiswara's ability to manage learning can be improved by increasing the widyaiswara's innovation.

3. There is a positive relationship between interpersonal communication and the widyaiswara's ability to manage learning. This means that the more effective interpersonal communication, the higher the widyaiswara's ability to manage learning. Thus the widyaiswara's ability to manage learning can be improved by increasing the widyaiswara's interpersonal communication.

4. There is a positive relationship between knowledge of learning strategies, innovation and interpersonal communication together with the widyaiswara's ability to manage learning. This means that the higher the knowledge of learning strategies, innovation and interpersonal communication, the higher the widyaiswara's ability to manage learning. Thus the widyaiswara's ability to manage learning can be improved by jointly increasing knowledge of learning strategies, innovation and interpersonal communication.

5. Interpersonal communication has the highest level of relationship strength to increase the widyaiswara's ability to manage learning, followed by knowledge of learning strategies and innovation after each of these independent variables is controlled by two other independent variables.

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