Teachers' Interests and Competencies in Doing Research: Sequential Exploratory Analysis in Elementary School Teacher

Syahrial[1], Dwi Agus Kurniawan[1, *], Rahmat Perdana[1], Muhammad Ikhlas[2], Kuswanto[2]

[1]Faculty of Teacher Training and Education, Universitas Jambi, Indonesia
[2]Central Luzon State University,, Philippines

*Corresponding email: dwiagus.k@unja.ac.id

Abstract: Teachers' Interests and Competencies in Doing Research: Sequential Exploratory Analysis in Elementary School Teacher. Objectives: This study aims to look at teacher research competencies, teacher's interest in conducting research, and the influence of that teacher's interest toward teacher research competencies. **Methods:** This research is mixed research with a sequential explanatory approach, which Quantitative data followed by qualitative data. The sample in this study amounted to 129 teachers, which were obtained with a multi-stage sampling technique. **Findings:** The results show that the teacher's research competence and interest in researching were categorized as fair or still lacking. Further analysis showed that the teacher's interest influenced teacher research competence by 52.2%. Furthermore, the interview results show that some teachers have problems in doing research, such as lack of literature access, and lack of understanding of how to do research. **Conclusion:** Thus, it can be concluded that the research competence of teachers and the interest of teachers in researching is still relatively low.

Keywords: teachers' interest and competencies, elementary school teachers, factor analysis.

Abstrak: Minat dan Kompetensi Guru dalam Melakukan Penelitian: Analisis Sequential Explanatory pada Guru Sekolah Dasar. Tujuan: Penelitian ini bertujuan untuk melihat kompetensi riset guru, minat guru dalam melakukan penelitian, serta pengaruh yang diberikan dari minat tersebut terhadap kompetensi riset. Metode: Penelitian ini merupakan penelitian campuran dengan pendekatan sequential explanatory, terlihat dari data kuantitatif yang diikuti data kualitatif. Sampel dalam penelitian ini berjumlah 129 guru, yang didapatkan dengan teknik multi-stage sampling. Temuan: Hasil menunjukkan kompetensi riset dan minat guru dalam meneliti berkategorikan sedang atau masih kurang. Analisis lebih lanjut menunjukkan bahwasannya minat guru dalam melakukan penelitian mempengaruhi kompetensi riset guru sebesar 52,2%. Lebih lanjut, hasil wawancara menunjukkan bahwa beberapa guru mendapatkan kendala dalam hal melakukan penelitian, seperti kurangnya akses literatur dan pemahaman mengenai penelitian. Kesimpulan: Dapat disimpulkan bahwa kompetensi riset guru serta minat guru dalam meneliti masih terbilang rendah.

Kata kunci: kompetensi dan minat guru, guru sekolah dasar, analisis faktor.

■ **INTRODUCTION**

Research in the world of education is very important to do. The research provides several impacts including being able to be used as a map that illustrates the state of education and illustrates the ability of resources about the possibility of developing and the obstacles faced in the administration of education (Polster, 2007). In addition, the research conducted can also be made as a means of diagnosis in finding the causes of failures and problems faced in the implementation of education so that it can easily be sought as a solution (Padmaja, Laxmi Ramana, & Reddy, 2015). There are also those who explain it as a basis for developing policies in developing education development strategies, as well as input that will provide an overview of the capabilities in financing, equipment, supplies and labor, both in quality and quantity, which greatly contribute to success in the field of education (Kettunen, 2011; Razumovskaya, Zaitseva, Larionova, Chudnovskiy, & Breusova, 2018).

Front guard who can do research on education is a teacher. That is because teachers are the ones who understand the conditions that occur in the field (Johnson, Kraft &Papay, 2012). The importance of research conducted by teachers in Indonesia has been circumvented by the government by issuing regulations that at least one teacher conducts classroom action research. That was based on Law No. 20 of 2003 which is called a teacher educator. In the Act it is said that educators are educational staff who are qualified as teachers, lecturers, counselors, tutors, tutors, instructors, facilitators and other designations in accordance with their specialty, and participate in the administration of education. Furthermore, in Chapter XI, article 39 states that Educators are professionals who are tasked with planning and implementing mentoring and training, as well as conducting research and community service.

Research that is recommended and can be done by all teachers is classroom action research. Classroom action research is a research carried out systematically reflective of various actions taken by the teacher who is also a researcher (Elliott, 2011), since the preparation of a plan to an evaluation of real actions in the classroom in the form of teaching and learning activities, to improve the conditions of learning undertaken. With the research conducted by the teachers, the teacher is expected to be able to introspect, reflect or evaluate themselves so that their ability as a teacher or instructor is expected to be professional enough in the future (Sabol, & Pianta, 2012). With the increase in self-ability can affect the quality improvement of their students, both in the aspects of reasoning, skills, knowledge of social relations and other aspects that are beneficial for students to become adults. In addition, the teacher is also a researcher, who is always willing to improve the quality of his teaching ability (Laurillard, 2008; Cobb, &Steffe, 2010). Efforts to improve the quality are expected to be carried out systematically, realities, and rationally, accompanied by examining all the actions in front of the class, so that the teacher knows exactly the shortcomings and strengths (Jove, 2011; Fagundes, 2016). If in the implementation of these actions there are still shortcomings, the teacher will be willing to make changes so that in the class he is responsible for, there is no problem.

Research that can be done by teachers in Indonesia and is also emphasized by the government is classroom action research (Departemen Pendidikan Nasional, 2010; Kristiawan, &Rahmat,2018). Classroom action research is practical research that is intended to improve classroom learning. In addition, classroom action research is also one of the efforts of the teacher or practitioner in the form of various activities carried out to improve and or improve

the quality of learning in the classroom (Widayati, 2008; Burns, 2009; Siregar, E. 2014). The class action research is also one of the scientific publications in the context of the continuous development of the teaching profession aimed at improving and improving the quality of the learning process and the results or quality of education in general.

Based on some theory and study that has been given, the teacher must have good competence in conducting research. Research Competencies are competencies related to conducting research (Wester, & Borders, 2014), such as whether or not they can design research, conduct research processes, and ultimately write research results and publish them in reputable journals (Rowley, 2012). One of the interesting studies in terms of looking at one's research competence is the research conducted by Swank and Lambie (2016), where in the research conducted there are several competency indicators that must be possessed in conducting research including qualitative research process, quantitative research processes, research ethics, scholarly writing, literature review and research sampling.

In all educational activities at the operational level, the teacher is the determinant of educational success. The teacher is the executor in the field of every policy. For example, in Indonesia, as usual, various educational policies take place from top to bottom, through a ministerial decree, followed by instructions from the head of the district education office, followed by the principal's instructions, then only implemented in the field by the teacher in class (Harits, Chudy, Juvova, & Andrysova,2016). And it is known that so far, the teacher teaches only based on the acquisition of knowledge in educational institutions based on research that has been done by others (Elliott, 2014). Of course, that needs to be questioned; why the teacher's voice was not heard in the research activities. Even though

the teacher's position in the learning process is the key to success (Beauchamp, & Thomas, 2009). How a teacher can provide effective learning while what he teaches is the work of others who are not necessarily in accordance with existing conditions. In addition, Indonesia is a vast country. Each region has different demographics, and of course different problems. And that also applies to the world of education, where the quality of education in Indonesia is not evenly distributed, for example, the results of the 2018 PISA test showed that schools in the capital city and Yogyakarta had good results while other regions were below average (OECD Publishing, 2020). Preliminary studies conducted by researchers with interviews with several elementary school teachers in Batanghari District showed that teachers had difficulty in conducting research. There is also the result of a study conducted by Susanto (2016), which shows that more than 80 percent of teachers have a low category in conducting scientific publications.

In addition to having good competence in conducting research teachers must also have a good interest in conducting research (Rogers, Gualco, Hinckle, & Baber, 2013). It is well known that interest is a factor that influences oneself both from the outside and from within (Duffy, & Dik, 2009; Sheldon, 2014). Several previous studies about the interest in researching an Indonesian teacher have been carried out, for example, a study by Rahayu (2007), which emphasizes how to foster teacher research interest through classroom action research. There is also a study from Susanto (2016), which explains that the tradition of scientific publication (writing and researching) is less popular among teachers. Unfortunately, the research that has been done is more on the study of literature, while research in Indonesia that is related to empirical studies in the field has not been found. Furthermore, based on preliminary studies conducted by researchers based on field

observations and interviews with several elementary school teachers in Batanghari, it was found that teachers are interested in doing research because it is only to get a promotion. Based on several theories and previous studies, the researcher deems it necessary to conduct a study that is related to the competencies and interests of teachers in conducting research, particularly in Batanghari District, Jambi Province. Based on this, the researcher is interested in doing research related to teacher research competence and the teacher's interest in conducting research, with the following research questions.

1. What is the teacher's research competencies in Batanghari district?

2. What is the teacher's interest in doing research in Batanghari district?

3. Does the teacher's interest in conducting research affect the teacher's research competence?

■ **METHODS**

Research design

This research uses a mixed-method with a sequential explanatory approach, where the first stage of research is carried out using quantitative methods and in the second stage is carried out with qualitative methods (Creswell, 2014). The sequential explanatory approach used by researchers aims to strengthen the quantitative results obtained with qualitative data. The quantitative approach in this study can be seen from the quantitative results in the form of descriptive and inferential statistics. Furthermore, the qualitative approach can be seen from the results of in-depth interviews conducted by researchers of several teachers. The independent variable in this study is the teacher's interest in conducting research (X), while the dependent variable is teacher research competence (Y).

Research subject

This research was conducted in December 2019 until February 2020. The sample of this study consisted of teachers in elementary schools in Batanghari district. The sampling technique in this study uses multi-stage sampling, which is chosen for each school that represents a sub-district in Batanghari. Whereas in Batanghari district there are 8 sub-districts. Based on this, 129 teachers were sampled in this study, with 40 men and 89 women. The number of teachers from schools representing each sub-district is shown in table1.

Table 1. Number of samples from each school

Sub-District	School	Sample		
		Male	**Female**	**Total (n)**
Bajubang	SDN 135/I SeiBuluh	4	8	12
Batin XXIV	SDN 59/I Durian Luncuk	5	7	12
Mersam	SDN 068/I SimpangMersam	5	11	16
MaroSeboIlir	SDN 012/I Terusan	5	10	15
MaroSebo Ulu	SDN 033/I Simpang Sungai Rengas	5	14	19
MuaraTembesi	SDN 001/I PasarMuaraTembesi	4	13	17
MuaraBulian	SDN 055/I Sridadi	6	15	21
Pemayung	SDN 020/I Jembatan Mas	6	11	17
Total (N)		40	89	129

Instrument

This study consisted of 2 instrument questionnaires and 1 interview guide. Interviews were conducted to strengthen the findings of quantitative data, while the questionnaire related to teacher research competence adopted from Swank and Lambie (2016) consisting of 54 statements with a reliability value of 0.79 and validity of 0.82. This instrument has six indicators such as qualitative research processes, quantitative research processes, research ethics, scholarly writing, literature review, and research sampling. While the questionnaire related to the interest in conducting research by the teacher adopted from Visser-Wijnveen, Stes, and Van Petegem (2012), which consisted of 16 statements with a reliability value of 0.76 and validity of 0.86. This instrument has 2 indicators, namely enjoyment, and effort in doing research. Each questionnaire employs 5 Likert scales. A positive statement is given on a scale of 5 for strongly agree, 4 for agree, 3 for neutral, 2 for disagree and 1 for strongly disagree. Conversely, negative statements are given on a scale of 1 for strongly agree, 2 for agree, 3 for neutral, 4 for disagree and 5 for strongly disagree.

Data Analysis and Collection Process

SPSS is used to analyze descriptive and inferential statistical data. Descriptive statistics used in this study are frequency, percentage, min, max, mean, and standard deviation. Meanwhile inferential statistics used are regression tests that aim to see the effect of teacher interest in conducting research on teacher research competencies. The categories of teacher's research competency questionnaire in conducting research consist of very bad, bad, fair, good and very good, as shown in table 2.

Furthermore, the category of teacher's

Table 2. Categories of each indicator in the teacher research competency

Category	Teacher's research competency					
	Qualitative Research Process	Quantitative Research Processes	Research Ethics	Scholarly Writing	Literature Review	Research Sampling
Very bad	13.0 – 23.4	12.0 – 21.6	7.0 – 12.5	10.0 – 18.0	8.0 – 14.4	4.0 – 7.2
Bad	23.5 – 33.8	21.7 – 31.2	12.6 – 18.1	18.1 – 26.0	14.5 – 20.8	7.3 – 10.4
Fair	33.9 – 44.2	31.3 – 40.8	18.2 – 23.7	26.1 – 34.0	20.9 – 27.2	10.5 – 13.6
Good	44.3 – 54.6	40.9 – 50.4	23.8 – 29.3	34.1 – 42.0	27.3 – 33.6	13.7 – 16.8
Very Good	54.7 – 65.0	50.5 – 60.0	29.4 – 35.0	42.1 – 50.0	33.7 – 40.0	16.9 – 20.0

interest in doing research as shown in table 2. This category consisted five categories such as very bad, bad, fair, good and very good. These categories assist researchers in terms of interpreting findings in the field.

Table 3. Categories of each indicator in the teacher's interest in conducting research

Category	Teacher's interest	
	Enjoyment	Effort
Very bad	9.0 – 16.2	7.0 – 12.5
Bad	16.3 – 23.4	12.6 – 18.1
Fair	23.5 – 30.6	18.2 – 23.7
Good	30.7 – 37.8	23.8 – 29.3
Very Good	37.9 – 45.0	29.4 – 35.0

The data gathering process in this study is shown in Figure 1 below. During data gathering, the first activity takes on is to select teachers in accordance with the research category. After getting some teachers who fit the sample category, questionnaires related to teacher interest in conducting research and research competencies are given to teachers. Furthermore, along with giving questionnaires to teachers, interviews were also conducted with teachers. Lastly, Lastly, after the questionnaire and interview data were obtained, the researcher interpreted the data in the form of the final results of the study.
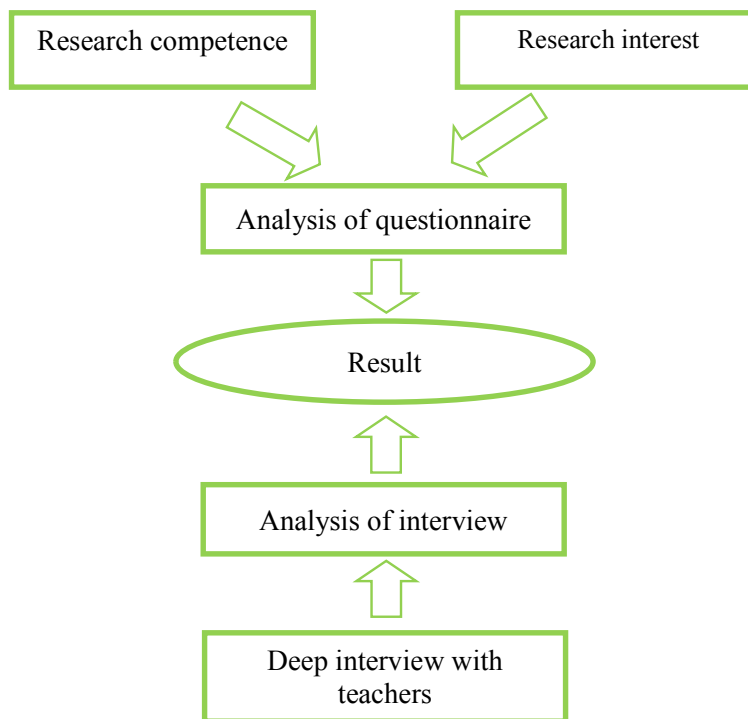

Figure 1. Data gathering process

■ **RESULTS AND DISCUSSION**

The novelty of this research is to explore teachers research competency and interest in doing research for elementary school teachers, and relationship among those variables. This study also more focus on teachers who teach in district area, who more known as rural area there is Batanghari District. Some of the study results found are discussed in this section, quantitative results are explained through several forms such as frequency, percentage, standard deviation, min, mean and max, meanwhile qualitative results are presented through transcripts.

Teacher's Research Competency
Qualitative Research Process

The indicators of the qualitative research process of elementary school teachers can be described by the following table 4.

Based on table 4 shows that qualitative research process of teacher's research competence as much as 129 respondents, dominated by fair competency, as many as 52 respondents or 40.3%. So, the teacher's competence in qualitative research process indicator is categorized fair. Then table 4 also states the research competence of the category is very bad as much as 10.1%, the research competence of the category is bad there are

28.7%. Then in the good category that is 14.7% and the last category is very good is 6.2%. From the 129teachers having a mean value of 36.7, a maximum value of 65, and a minimum value of 13.

Quantitative Research Process

The indicators of the quantitative research process of elementary school teachers can be described by the following table 5.

Table 4. Qualitative research process

Competency	Range	Category F M	F	Total	%	SD	Mean	Min	Max
Very bad	13.0 – 23.4	4	9	13	10.1				
Bad	23.5 – 33.8	13	24	37	28.7				
Fair	33.9 – 44.2	16	36	52	40.3	2.48	36.7	13	65
Good	44.3 – 54.6	5	14	19	14.7				
Very Good	54.7 – 65.0	2	6	8	6.2				
Total				129	100				

Table 5. Quantitative research process

Competency	Range	Category F M	F	Total	%	SD	Mean	Min	Max
Very bad	12.0 – 21.6	2	9	11	8.5				
Bad	21.7 – 31.2	13	27	40	31.0				
Fair	31.3 – 40.8	19	32	51	39.5	2.53	33.4	12	58
Good	40.9 – 50.4	3	10	13	10.1				
Very Good	50.5 – 60.0	3	11	14	10.9				
Total				129	100				

Based on table 5 shows that quantitative research process indicator of teacher's research competence as much as 129 respondents, dominated by fair competency, as many as 51 respondents or 39.5%. So, the teacher's competence in quantitative research process indicator is categorized fair. Then table 5 also states the research competence of the category is very bad as much as 8.5%, the research competence of the category is bad there are

31.0%. Then in the good category that is 10.1 % and the last category is very good is 10.9%. From the 129teachers having a mean value of 33.4, a maximum value of 58, and a minimum value of 12.

Research Ethics
The indicators of the research ethics of elementary school teachers can be described by the following table 6.

Table 6. Research ethics

| Competency | Range | Category f | | | % | SD | Mean | Min | Max |
		M	F	Total					
Very bad	7.0 – 12.5	4	10	14	10.9				
Bad	12.6 – 18.1	12	23	35	27.1				
Fair	18.2 – 23.7	17	40	57	44.2	2.62	20.2	7	33
Good	23.8 – 29.3	4	9	13	10.1				
Very Good	29.4 – 35.0	3	7	10	7.8				
Total				129	100				

Based on table 6 shows that research ethics indicator of teacher's research competence as much as 129 respondents, dominated by fair competency, as many as 57 respondents or 44.2%. So, the teacher's competence in research ethics indicator is categorized fair. Then table 6 also states the research competence of the category is very bad as much as 10.9%, the research competence of the category is bad there

are 27.0%. Then in the good category that is 10.1 % and the last category is very good is 7.8%. From the 129teachers having a mean value of 20.2, a maximum value of 33, and a minimum value of 7.

Scholarly Writing
The indicators of the scholarly writing of elementary school teachers can be described by the following table 7.

Table 7. Scholarly riting

| Competency | Range | Category f | | | % | SD | Mean | Min | Max |
		M	F	Total					
Very bad	10.0 – 18.0	3	10	13	10.1				
Bad	18.1 – 26.0	11	25	36	27.9				
Fair	26.1 – 34.0	18	37	55	42.6	2.39	28.4	10	48
Good	34.1 – 42.0	4	9	13	10.1				
Very Good	42.1 – 50.0	4	8	12	9.3				
Total				129	100				

Based on table 7 shows that the scholarly writing indicator of teacher's research competence as much as 129 respondents, dominated by fair competency, as many as 55 respondents or 42.6%. So, the teacher's competence in scholarly writing indicator is categorized fair. Then table 7 also states the research competence of the category is very bad as much as 10.1%, the research competence of the category is bad there are 27.9%. Then in the good category that is 10.1 % and the last category is very good is 9.3%. From the 129 teachers having a mean value of 28.4, a maximum value of 48, and a minimum value of 10.

Literature Review

The indicators of theliterature review of elementary school teachers can be described by the following table 8.

Table 8. Literature review

Competency	Category Range	f			%	SD	Mean	Min	Max
		M	F	Total					
Very bad	8.0 – 14.4	5	10	15	11.6				
Bad	14.5 – 20.8	10	27	37	28.7				
Fair	20.9 – 27.2	18	36	54	41.9	2.67	23.7	8	37
Good	27.3 – 33.6	4	9	13	10.1				
Very Good	33.7 – 40.0	3	7	10	7.8				
Total				129	100				

Based on table 8 shows that literature review indicator of teacher's research competence as much as 129 respondents, dominated by fair competency, as many as 54 respondents or 41.9%. So, the teacher's competence in literature review indicator is categorized fair. Then table 8 also states the research competence of the category is very bad as much as 11.6%, the research competence of the category is bad there are 28.7%. Then in the good category that is 10.1 % and the last category is very good is 7.8%. From the 129teachers having a mean value of 23.7, a maximum value of 37, and a minimum value of 8.

Research Sampling

The indicators of the research sampling of elementary school teachers can be described by the following table 9.

Table 9. Research sampling

Competency	Category Range	f			%	SD	Mean	Min	Max
		M	F	Total					
Very bad	4.0 – 7.2	3	8	11	8.5				
Bad	7.3 – 10.4	12	27	39	30.2				
Fair	10.5 – 13.6	17	38	55	42.6	2.41	11.8	4	19
Good	13.7 – 16.8	5	8	13	10.1				
Very Good	16.9 – 20.0	3	8	11	8.5				
Total				129	100				

Based on table 9 shows that research sampling indicator of teacher's research competence as much as 129 respondents, dominated by fair competency, as many as 55 respondents or 42.6%. So, the teacher's competence in research sampling indicator is categorized fair. Then table 9 also states the research competence of the category is very bad as much as 8.5%, the research competence of the category is bad there are 30.2%. Then in the good category that is 10.1 % and the last category is very good is 8.5%. From the 129teachers having a mean value of 11.8, a maximum value of 19, and a minimum value of 4.

Teacher's Interest in doing research
Enjoyment

The indicators of the enjoyment of elementary school teachers in doing research can be described by the following table 10.

Table 10. Enjoyment in doing research

| Category | | | | | | | | | |
| Competency | Range | f | | | % | SD | Mean | Min | Max |
		M	F	Total					
Very bad	9.0 – 16.2	4	11	15	11.6				
Bad	16.3 – 23.4	8	19	27	20.9				
Fair	23.5 – 30.6	13	36	49	38.0	2.68	26.7	9	42
Good	30.7 – 37.8	10	15	25	19.4				
Very Good	37.9 – 45.0	5	8	13	10.1				
Total				129	100				

Based on table 10 shows that enjoyment indicator of teacher's interest in doing research as much as 129 respondents, dominated by fair competency, as many as 49 respondents or 38.0%. So, the teacher's interest in research indicator is categorized fair. Then table 10 also states the research interest of the category is very bad as much as 11.6%, the research interest of the category is bad there are 20.9%. Then in the good category that is 19.4 % and the last category is very good is 10.1%. From the 129teachers having a mean value of 26.7, a maximum value of 42, and a minimum value of 9.

Effort

The indicators of the effort in doing research of elementary school teachers can be described by the following table 11.

Table 11. Effort in doing research

| Category | | | | | | | | | |
| Competency | Range | F | | | % | SD | Mean | Min | Max |
		M	F	Total					
Very bad	7.0 – 12.5	4	13	17	13.2				
Bad	12.6 – 18.1	8	15	23	17.8				
Fair	18.2 – 23.7	17	35	52	40.3	2.73	21.9	7	33
Good	23.8 – 29.3	8	14	22	17.1				
Very Good	29.4 – 35.0	3	12	15	11.6				
Total				129	100				

Based on table 11 shows that effort indicator of teacher's interest in doing research as much as 129 respondents, dominated by fair competency, as many as 52 respondents or 40.3%. So, the teacher's interest in doing indicator is categorized fair. Then table 11 also states the research interest of the category is very bad as much as 13.2%, the research interest of the category is bad there are 17.8%. Then in the good category that is 17.1 % and the last category is very good is 11.6%. From the 129teachers having a mean value of 21.9, a maximum value of 33, and a minimum value of 7.

The Regression between teacher's interest toward teacher's competence

For the results of the impact of teacher's interest in doing research with teacher's research competence can be seen in table 12 below.

Table 12. Results of single regression

Variable	Unstandardized Coefficients		Standardized Coefficients	t	sig.
	B	Std. Error	Beta		
Constant	9.321	3.356		4.760	.000
Interest	1.192	.133	.145	2.214	.007

From table 12, it can be gotten the results of a simple regression test found that the regression equation is $Y = 9.321 + 1.192$, which mean that interest effects research competence ($p<0.05$).

Table 13. Role from interest on research competence

Model	R	R square	Adjust R Square	Std. Error of the Estimate
1	.630	.522	.513	1.905

The results of simple regression analysis presented that the rate of coefficient of determination was (R^2) 0.522, which means that the contribution of interest to research competence is 52.2%, while the remaining 47.8% is influenced by other variables.

Based on the results obtained, it can be seen that the research competency of teachers in Batanghari district is still not very good or mediocre. This is evident by the fact that most teachers get competencies that are categorized as fair. From the six indicators of the research results, most teachers get fair categorized competencies, which indicates that the teacher's competence in conducting research is still not very good. For example, indicators understand both qualitative and quantitative research designs that are dominated by fair and even bad answers. The teacher as a researcher should understand research (Kyriakides, Creemers, & Antoniou, 2009; Srisa-ard, B., Luanganggoon, N., &Malasi, A. (2012), especially classroom action research (Amri, 2013). Judging from the research design, classroom action research can follow qualitative, quantitative and even mixed method designs (Vogelzang, &Admiraal, 2017). Thus, of course it is very important for teachers to understand these competencies. The same thing is also shown by the results of the teacher's interest in conducting research, which are mostly

categorized as fair.

Furthermore, the interview results show that in fact most teachers are interested in doing research, only there are some obstacles such as the lack of training in conducting research. This can be seen from the results of the interview summary given in the following manuscript.

> Q_1 *"Have you ever done research?"*
> A_1 *"...hmm related to that, yes I have done it, it is due to one of the demands to do the research, where if we, these teachers want to get certified, they must do published research..."*
> *"Yes, I did, when I was in charge of promotion..."*
> Q_2 *"Are you interested in doing research in your class?"*
> A_2 *"...hmm, depending on the situation yeah maybe, it's just that it's too difficult to do research at this moment..."*
> *"...Honestly I'm not too interested, I think the research is difficult, maybe if it's not complicated, I want to ... "*
> Q_3 *"...Did you find obstacles in doing the research...?"*
> A_3 *"...of course, I am an old teacher, sometimes such learning applies to young teachers, who are more understanding about doing things like that, but I want to do a lot of research, even if there are those who guide him, or there is training ... "*
> *"...Yes, I have problems, sometimes I am confused about where to do the research, confused about what I want to study, sometimes when I have been confused like that, lazy to do research ...".*

Based on the results of the interview also found that teachers are interested in doing research only because of outside motivation to seek promotion or certification. If none of these things are not necessarily the teacher would want to do research. This certainly affects the intrinsic motivation of a teacher to conduct research. Where in terms of doing something, one must have a strong interest from within himself (Roth, & Hsu, 2008; Jensen, & Andersen, 2015), and one of the factors that influence is motivation from within, not from outside oneself (Deci, & Ryan, 2010). In addition, based on the results of the interview, the teacher also felt a lack of competence in conducting research, where for the teacher in terms of conducting research, for the time being, was not appropriate to the era, more young teachers who are famous for millennial, who are more competent. Interestingly the results of research related to the interest in researching by teachers have been conducted by Everton, Galton, and Pell (2000), showing that there are some teachers who have positive perspectives and interests in research and there are also some teachers who have negative perspectives and interests. The study also showed results that were different from the researchers' findings, where the study explained that teachers who had long experience teaching or older teachers had higher interests than younger teachers.

From the results of the interview also it can be seen that the teacher sometimes encounters obstacles such as confusion about where to start doing research, and also sometimes cannot determine the research topic to be studied. This certainly has an impact on the teacher's interest in doing research, where it is known that if someone encounters an obstacle in doing something and does not know who to ask (Bruinsma, & Jansen, 2010), sometimes the teacher is lazy to continue the work (Boyd, 2013),

can even leave it and no longer want to do it (Demir, 2011).

There are many factors that cause teachers not to do research. Like, teachers lack an understanding of what research is, especially classroom action research (Defrioka, 2017). The teacher considers classroom action research difficult. In fact, classroom action research is not as difficult as what is imagined. Classroom action research can be from the daily teaching of teachers in the classroom (Pati, 2014). The teacher only needs to reflect a little on the learning process. Record the problems that arise, and try to find a solution. In addition, there is also a factor of lack of reference and internet access, especially teachers who come from schools far from urban areas (Howley, Wood, & Hough, 2011; Handal, Watson, Petocz, & Maher, 2013).

Based on this, teachers are expected to be able to increase their competence and interest in research. Due to the research conducted by teachers, Education practitioners can learn from each other from the data obtained in the field and find out what deficiencies exist, and can later be improved. Thus, certainly awareness is expected by the teacher to conduct research, especially classroom action research. In addition, in increasing the competence and interest of teachers to conduct research requires more role from the government, for example providing special training on research and scientific publications. Furthermore, many ways can be taken to improve the competence and interest of teachers in research, which can be done by schools and education department. The department of education might provide training on writing scientific articles on research results and provide information on the importance of action classroom research conducted, as well as awarding teachers who are diligent in conducting research. There are also schools that can also conduct joint training on the publication of scientific articles.

■ CONCLUSIONS

In conducting research certainly, a teacher must have a good and strong interest in researching, as well as a good understanding and competence about research. In a sense the teacher must understand about research such as designing research, conducting research, and finally being able to do research publications. From the research that has been done, it is found that the research competence of teachers in Batanghari district is still not good which is indicated by most teachers getting fair competence even below that such as, bad competence even very bad competence. The same thing is also shown by the results of teachers' interest in conducting research, which is also the majority of teachers get a fair interest in doing research. Furthermore, the results also showed that the teacher's interest in conducting research affected the teacher's research competence. Thus, it is certainly very important for teachers to further increase their interest and competence in research. Where is known that teachers are the front guard in the world of education, who are more aware of the conditions and situations in the field. With this finding the researcher also suggested that it would be better if the relevant agencies like department of education, increased the interest of teachers in researching such as providing training and socialization on the importance of classroom action research, and giving awards to teachers who were diligent in conducting research or succeeded in publishing their research in well-known journals.

■ REFERENCES

Amri, Z. (2013). Classroom Action Research and Lesson Study: How do They Work for Lecturers and High School English Teachers. *Proceedings of ISELT FBS UniversitasNegeri Padang*, *1*, 260-266.

Beauchamp, C., & Thomas, L. (2009).

Understanding teacher identity: An overview of issues in the literature and implications for teacher education. *Cambridge journal of education*, *39*(2), 175-189.

Boyd, M. (2013). " I Love My Work But..." The Professionalization of Early Childhood Education. *Qualitative Report*, *18*, 71.

Bruinsma, M., & Jansen, E. P. (2010). Is the motivation to become a teacher related to pre-service teachers' intentions to remain in the profession?.*European Journal of Teacher Education*, *33*(2), 185-200.

Burns, A. (2009). Action research. In *Qualitative research in applied linguistics* (pp. 112-134). Palgrave Macmillan, London.

Cobb, P., &Steffe, L. P. (2010). The constructivist researcher as teacher and model builder. In *A journey in mathematics education research* (pp. 19-30). Springer, Dordrecht.

Creswell, J. W. (2014). *A concise introduction to mixed methods research*. Sage publications.

Deci, E. L., & Ryan, R. M. (2010). Intrinsic motivation. *The corsiniencyclopedia of psychology*, 1-2.

Demir, K. (2011). Teachers' intrinsic And Extrinsic Motivation as Predictors of Student Engagement: An Application of Self-Determination Theory. *Education Sciences*, *6*(2), 1397-1409.

Duffy, R. D., &Dik, B. J. (2009). Beyond the self: External influences in the career development process. *The career development quarterly*, *58*(1), 29-43.

Departemen Pendidikan Nasional. (2010). *Permendiknas No. 35 Tahun 2010 tentang Petunjuk Teknis Pelaksanaan Jabatan Fungsional Guru dan Angka Kreditnya* [Minister of National Education Regulation No. 35 of 2010 concerning Technical Guidelines for the Implementation of the Teacher's Functional Position and Credit Score]. Jakarta: Departemen Pendidikan

Defrioka, A. (2017). The use of information gap activities in teaching speaking (Classroom action research at SMK). *Lingua Didaktika: Jurnal Bahasa dan Pembelajaran Bahasa*, *10*(2), 116-126.

Elliott, J. (2011). Educational action research and the teacher. *Action Researcher in Education*, *1*(1), 1-3.

Elliott, J. (2014). Lesson and learning study and the idea of the teacher as a researcher. In *Realising learning* (pp. 164-183). Routledge.

Everton, T., Galton, M., & Pell, T. (2000). Teachers' perspectives on educational research: Knowledge and context.*Journal of Education for Teaching*, *26*(2), 167-182.

Fagundes, T. B. (2016). Concepts of the teacher as researcher and reflective teacher: perspectives about teachers' work. *RevistaBrasileira de Educação*, *21*(65), 281-298.

Handal, B., Watson, K., Petocz, P., & Maher, M. (2013). Retaining mathematics and science teachers in rural and remote schools. *Australian and international journal of rural education, 23*(3), 13.

Harits, I. W., Chudy, S., Juvova, A., &Andrysova, P. (2016). Indonesia education today: Dating back its history of Islam and imparting European education system. *Asian Social Science*, *12*(5), 179-184.

Howley, A., Wood, L., & Hough, B. (2011). Rural elementary school teachers' technology integration. *Journal of Research in Rural Education, 26*.

Jensen, U. T., & Andersen, L. B. (2015). Public service motivation, user orientation, and prescription behaviour: Doing good for

society or for the individual user?.*Public Administration*, *93*(3), 753-768.

Johnson, S. M., Kraft, M. A., &Papay, J. P. (2012). How context matters in high-need schools: The effects of teachers' working conditions on their professional satisfaction and their students' achievement. *Teachers College Record*, *114*(10), 1-39.

Jove, G. (2011). How do I improve what I am doing as a teacher, teacher educator and action-researcher through reflection? A learning walk from Lleida to Winchester and back again. *Educational Action Research*, *19*(3), 261-278.

Kettunen, J. (2011). Strategy and Quality Maps in Higher Education. *Online Submission, 8*(2), 149-156.

Kristiawan, M., &Rahmat, N. (2018). *Peningkatan Profesionalisme Guru Melalui Inovasi Pembelajaran* [Increasing Teacher Professionalism Through Learning Innovation]. *Jurnal Iqra': Kajian Ilmu Pendidikan*, *3*(2), 373-390.

Kyriakides, L., Creemers, B. P., & Antoniou, P. (2009). Teacher behaviour and student outcomes: Suggestions for research on teacher training and professional development. *Teaching and teacher education*, *25*(1), 12-23.

Laurillard, D. (2008). The teacher as action researcher: Using technology to capture pedagogic form. *Studies in Higher education*, *33*(2), 139-154.

OECD Publishing. (2020). *PISA 2018 Results (Volume I): What Students Know and Can Do*. Organisation for Economic Co-operation and Development OECD.

Padmaja, A., LaxmiRamana, V. S. V., & Reddy, P. R. (2015). Importance of research at undergraduate level. In *Proceedings of the International Conference on Transformations in Engineering Education* (pp. 631-632). Springer, New Delhi.

Pati, P. (2014). Indonesian foreign school teachers' perception and capability to undertake classroom action research: Basis for capability building program. *IOSR Journal of Research & Method in Education*, *4*(1), 67-89.

Polster, C. (2007). The nature and implications of the growing importance of research grants to Canadian universities and academics. *Higher Education*, *53*(5), 599-622.

Presiden Republik Indonesia. (2003). *Undang-undang Republik Indonesia nomor 20 tahun 2003 tentang system pendidikan nasional* [Law of the Republic of Indonesia number 20 of 2003 concerning the national education system]. Jakarta: Pemerintah Republik Indonesia.

Rahayu, S. (2007). *Menumbuhkan minat meneliti guru dengan penelitian tindakan kelas* [Foster interest in researching teachers with classroom action research]. *EFISIENSI-Kajian Ilmu Administrasi*, *7*(2).

Razumovskaya, M., Zaitseva, N. A., Larionova, A. A., Chudnovskiy, A. D., & Breusova, E. A. (2018). Prospects for applying various forms of organizational integration to improve the quality of education. *Astra Salvensis*, *6*, 348-362.

Rogers, A. T., Gualco, K. J., Hinckle, C., & Baber, R. L. (2013). Cultivating interest and competency in gerontological social work: Opportunities for undergraduate education. *Journal of Gerontological Social Work*, *56*(4), 335-355.

Roth, W. M., & Hsu, P. L. (2008). Interest and motivation: A cultural historical and discursive psychological approach.

Educational psychology: Cognition and learning, individual differences and motivation, 81-105.

Rowley, J. (2012). Conducting research interviews. *Management Research Review*, *35*(3/4), 260-271.

Sabol, T. J., &Pianta, R. C. (2012). Recent trends in research on teacher–child relationships. *Attachment & human development*, *14*(3), 213-231.

Sheldon, K. M. (2014). Becoming oneself: The central role of self-concordant goal selection. *Personality and Social Psychology Review*, *18*(4), 349-365.

Siregar, E. (2014). *Pengembangan Profesionalisme Guru Melalui Penelitian Tindakan Kelas* [Teacher Professional Development Through Classroom Action Research]. *Jurnal Pengabdian Kepada Masyarakat, 20* (77).

Srisa-ard, B., Luanganggoon, N., &Malasi, A. (2012). The development of standards, factors, and indicators for evaluating the quality of classroom action research. *Procedia-Social and Behavioral Sciences*, *69*, 220-226.

Susanto, A. (2016). *Pelaksanaan pengembangan keprofesian berkelanjutan (PKB) pada guru SMK Teknik Otomotif di Wilayah Purworejo* [Implementation of sustainable professional development (PKB) for vocational automotive engineering teachers in the Purworejo region]. *Seminar Nasional Pendidikan*.

Swank, J. M., &Lambie, G. W. (2016). Development of the research competencies scale. *Measurement and Evaluation in Counseling and Development, 49*(2), 91-108.

Visser-Wijnveen, G. J., Stes, A., & Van Petegem, P. (2012). Development and validation of a questionnaire measuring teachers' motivations for teaching in higher education. *Higher Education*, *64*(3), 421-436.

Vogelzang, J., &Admiraal, W. F. (2017). Classroom action research on formative assessment in a context-based chemistry course. *Educational Action Research*, *25*(1), 155-166.

Wester, K. L., & Borders, L. D. (2014). Research competencies in counseling: A Delphi study. *Journal of Counseling& Development*, *92*(4), 447-458.

Widayati, A. (2008). Penelitian tindakan kelas. *Jurnal Pendidikan Akuntansi Indonesia*, *6*(1).