The Effect of Predict Observe Explain (POE) Learning Model and Achievement Motivation on the Spiritual & Social Competence of Madrasah Tsanawiyah (MTs) Students in Social Studies

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Abstract- The effect of POE Lerning Model and Achievement Motivation on the Spiritual & Social Competence of Madrasah Tsanawiyah (MTs) Students in Social Studies. This study aims to determine the effect of learning model *predict observe explain* (POE) and achievement motivation applied in the experimental class and learning model *direct instruction* (DI) that is applied to the control class on material excellence and limitations between students towards the spiritual and social competence of students Madrasah Tsanawiyah (MTs). This research is based on a scientific-based learning model in social studies learning to improve the spiritual and social competence of students facing the 21st century. The research was conducted at MTsN 9 Kediri with sampling techniques using *simple random sampling*. Data collection techniques using questionnaires and observations. The achievement motivation instrument uses LAMB (achievement motivation questionnaire sheet). While the spiritual and social attitude competency instruments use LOKSS-S (observation sheet of spiritual and social attitudes). Research tools using syllabus, RPP, textbooks and LKS. Data analysis techniques using statistical methods with the help *of SPSS software for window version 23.00*. Normality test uses *Shapiro Wilk* and homogeneity test uses *Levenue* test. Data analysis using ANAVA univariate pathways. The results of the hypothesis study show: 1) that the significance value that follows the POE and DI learning model is 0.785, which means that it is non-significant. This shows that there is no difference in the competence of students' spiritual and social attitudes between those who follow the POE learning model and the DI learning model; 2) a significance value of 0.169 means non-significant. This shows that there is no difference in the competence of students' spiritual and social attitudes between those who have low achievement motivation and those who have high achievement motivation; and 3) significance value of 0.494 means non-significant. This shows that there is no interaction between learning models (POE and DI) and achievement motivation (low and high) on the competence of students' spiritual and social attitudes. Conclusion of hypotheses 1,2 and 3 accept H_0 and reject H1.

Index Terms- Achievement Motivation, DI Learning Model, POE Learning Model, Spiritual and Social Competence

I. INTRODUCTION

Spiritual and social competencies are aimed at getting outputs of character and mental readiness in facing the global era. *Rose & Krasnor* (2006) state that social competence is defined as effectiveness in social interactions, seen as an organizational structure with transactional, context-dependent, and specific objectives. Four general approaches to the operational definition of social competence include social skills, sociometric status, relationships and functional outcomes. In line with this Wentzel (1991) states that three aspects of social competence, namely the behavior of responsibility, self-confidence and sociometric status influence knowledge competence. the results of the multiple regression analysis show that when calculating student IQ, gender, ethnicity, absenteeism and family structure, socially responsible behavior has a big effect on student scores and two other aspects of social competence. Spiritual and social competencies become the basis for knowledge and skills competencies. This means that if students have a good attitude and spiritual competence, the knowledge and skills competencies students have will bring great benefits to world life in the 21st century. Therefore, spiritual and social competence is important to be taught to students through various learning models such as POE.

The POE syntax includes indicators to be achieved in spiritual and social competence, for example at thestage *predict* contains indicators of spiritual competence such as praying before the lesson begins. In thestage *Observe* contains indicators of mutual cooperation, such as collaborating in group work. In thestage *explain* contains the attitude of trust as students explain the difference between the allegations made at thestages *predict* and *observe* in front of the class with confidence. Thus spiritual and social competence will be formed in the learning process of students in school.

II. THEORITICAL FRAMEWORK

2.1 POE Learning

POE learning model was first introduced by *White and Gunstone* in 1995 in his book entitled *Probing Understanding* (Kearney et al., 2001). The POE learning model is one of the constructivist-based teaching strategies using scientific steps. Muna (2017) states that the POE learning model is based on constructivism learning theory. Constructivism learning theory emphasizes new knowledge that is built on existing knowledge or that is already possessed by students. The constructivist underlying POE emphasizes authentic learning, not artificial. Authentic learning is the process of interacting a person with objects that are studied in real terms, not just studying texts, and most importantly how to relate these texts to real conditions (Suprijono, 2012, p. 39). Rahman (2012) states that the learning model *POE* consists of three steps as described below.

1 *Predict* (making predictions) is a process of making guesses about an event or phenomenon. Students predict the answer to a problem presented by the teacher, then students write these predictions and their reasons. Students make initial guesses based on the initial knowledge they have.

2 *Observe* (observation) is a process of students making observations about what is happening. Students make observations either directly or indirectly, students record what they observe, linking their predictions before with the results of observations they get.

3 Explain (explain) is a process of students providing an explanation of the compatibility between the allegations with the observations they have made from the observation stage.

Anisa, Masykuri, and Yamtinah (2013) stated the steps in POE are efficient for encouraging students to be active in learning, because they involve students in predicting a phenomenon, making observations and explaining the results of observations. Nuramelia (2017) states that the three elements of the POE learning model encourage students and teachers to have the same perception of knowledge using POE steps. Hudson (2010) revealed that learning strategies will determine the shape of student learning environments. The use of POE learning strategies creates a positive learning environment (innovative, flexible, and communicative) for students in learning a knowledge.

2.2 DI Learning

Direct instruction learning model is a learning model designed for mastery of procedural knowledge, declarative knowledge and various skills (Suprijono, 2012, p. 50). DI is known as *active teaching* or *whole-class teaching*. This learning model is supported by theories of learning behaviorism and social learning theories. Both of these theories emphasize learning as a behavior change using aapproach *modeling* in the following sequence.

1 *Establishing set* is the phase of conveying objectives and preparing students.

2 *Demonstrating* is the phase of demonstrating knowledge or skills.

3 *Guided practice* is the phase of guiding students when working on assignments.

4 *Feed back* is phase check understanding and give feedback.

5 *Extended practice* is phase provide opportunities for advanced training and application.

2.3 Achievement Motivation

Achievement Motivation comes from the word motive meaning effort that drives someone to act or do something, referring to the notion of motive, motivation can be interpreted as a driving force that has become active (Sardiman, 2014, p. 73). *McClelland* states that the drive to go to certain conditions one of which is achievement motivation (Danim, 2012, p. 32). Morgan states that motivation is related to three things, as well as aspects of motivation. These three things are conditions that encourage behavior (*motivating states*), behaviors that are driven by these conditions (*motivated behavior*), and the purpose of the behavior (*goals or ends of such behavior*) (Soemanto, 2006, p. 2016).

The concept of achievement motivation was first formulated by Henry Alexander Murray. Murray uses the term need for achievement (need for achievement) for achievement motivation, which is described as a desire or tendency to do something difficult as quickly and as well as possible (Purwanto, 2014). According to *Murray*, achievement motivation is the driving force to achieve the highest level of learning achievement for the sake of expectations of himself (Winkle, 2014).

McCleland stated that motivation will be deeper if everyone is aware of three needs, namely: (1) need for achievement (need for achievement); (2) need for power (need for power); (3) need for affiliation (the need for affiliation) (Siagian, 2012, p. 166). The point is achievement motivation is the desire and encouragement that exists in a person to achieve a goal that is the hope of themselves so as to enable optimal achievement. According to *McClelland* (1987) the characteristics of people who are motivated to excel are: (1) want to always look for achievement; (2) like competition; (3) always want to excel; (4) likes realistic challenges; (5) want more feedback about successes and failures compared to people with low achievements.

2.4 Spiritual and Social Competence

Attitude assessment is an assessment of student behavior from educational outcomes inside and outside the classroom. Basuki and Haryanto stated that attitudes are students' responses regarding what they like or dislike about an object (2015, p. 189). In social studies competency attitudes are classified into spiritual and social attitudes. Azwar (2013, p.5) states that social attitude as a behavior, tendency or anticipatory readiness, predisposition to adjust to social situations or responses to conditioned social stimuli. Attitude competency assessment in learning is a series of activities designed to measure student attitudes as a result of learning programs. Attitude assessment is carried out using observation techniques by subject teachers, counseling guidance teachers, and homeroom teachers written in journal books. The Center for Educational Development and Education Personnel of the Ministry of Education and Culture provides a benchmark component of social attitudes in the 2013 curriculum. These components include honesty, discipline, responsibility, courtesy, mutual cooperation, tolerance and confidence. While the spiritual and social attitude competency indicators in social studies subjects in this study include: (1) religious, (2) honest, (3) discipline, (4) mutual cooperation, and (5) polite.

III. METHOD

This research is quantitative using an experimental design with a factorial design. Sugiyono (2016) states that the factorial design is a modification of the *true experimental*design, the research design that pays attention to the possibility of a moderator variable that influences the treatment (*independent variable*) on the outcome (*the dependent variable*). The sampling technique in this study uses *simple random sampling* , which is a technique of taking sample members randomly without regard to strata in the population because the members are homogeneous. The technique is done by drawing to determine the experimental class and the control class.

Data collection techniques using questionnaires and observations. Instrument of achievement motivation uses LAMB (achievement motivation questionnaire sheet). While the instruments of spiritual and social competency variables use LOKSS-S (observation sheet of spiritual and social attitudes). The POE and DI learning models are equipped with learning devices consisting of syllabi, RPP, LKS and student textbooks and have been tested for validity and reliability. Testing requirements consist of tests of normality and homogeneity. Test for normality using Shapiro Wilk. While the homogeneity test uses the *leveneu test.* Hypothesis testing is done after the test requirements are normally distributed and homogeneous. In this study, hypothesis testing was carried out using an univariate two-way anova using *SPSS for window version 23.00* with an error rate of 0.05.

IV. RESULT AND DISCUSSION

4.1 Description of Student Spiritual and Social Competency Score Data

4.1.1 Data on Spiritual and Social Competency Scores for POE Class Students

Data on spiritual and social competency scores of students is taken by observing student behavior during the learning process by filling in LOKSS-S. Then it is analyzed using the description analysis program *SPSS for window version 23.00*. The results of the data description analysis are presented in the following Table 1.

Table 1
Tabel Results of Descriptive Analysis of Students' Spiritual & Social Competensy Scores

	KSS POE	KSS DI	KSS MR	KSS MT	KSS POE MR	KSS POE MT	KSS DI MR	KSS DI MT
N Valid	32	32	32	32	16	16	16	16
Missing	0	0	0	0	16	16	16	16
Mean	14.18	13.93	13.43	14.56	13.25	15.12	13.75	14.25
Std Deviation	3.57	3.71	3.99	3.24	4.25	2.55	3.87	3.67
Variance	12.80	13.80	15.93	10.51	18.06	6.51	15.00	13.53
Skewness	-.1,00	-.32	.10	-.55	.32	.11	-.24	-.54
Std. Error of Kurtosis	.41	.41	.41	.41	.56	.56	.56	.56
Kurtosis	-1.04	-.92	-1.25	-.12	-1.44	-.77	-.95	-.69
Std Error of Kurtosis	.80	.80	.80	.80	1.09	1.09	1.09	1.09
Range	12.00	13.00	13.00	13.00	12.00	9.00	13.00	12.00
Minimum	8.00	7.00	7.00	7.00	8.00	11.00	7.00	7.00
Maximum	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.00

Based on data Table 1 results of descriptive analysis of KSS-S scores of POE classes it is known that of 32 students getting the lowest score of 8.00 and the highest score of 20.00. The average score of 14.18 with standard deviation of 3.57. While swekness is -0.10 and kurtosis is -1.04. This means that the POE class's spiritual and social competency score data are normally distributed.

4.1.2 Data on Spiritual and Social Competency Scores of Class DI Students

Based on the data in Table 1, the results of descriptive analysis of the KSS-S score of DI classes revealed that 32 students received the lowest score of 7.00 and the highest score of 20.00. The average score of 13.93 with a standard deviation of 3.71. While swekness of -0.32 and kurtosis of -0.92. This means that the DI class spiritual and social competency score data is normally distributed.

4.1.3 Data on Spiritual and Social Competency Scores of Students Low Motivation Group

Based on the data in Table 1 results of the descriptive analysis of the KSS-S score of low motivation students it is known that of 32 students getting the lowest score of 7.00 and the highest score of 20.00. The average score of 13.43 with a standard deviation of 3.99. While swekness is 0.10 and kurtosis is -1.25. This means that the data on the spiritual and social competency scores of low motivation groups is normally distributed.

4.1.4 Spiritual and Social Competency Score Data of High Motivation Group Students

Based on the data from the descriptive analysis of the KSS-S score of high motivation students it is known that of 32 students getting the lowest score of 7.00 and the highest score of 20.00. The average score of 14.56 with a standard deviation at 3.24. While swekness of -0.55 and kurtosis of -0.12. This means that data is normally distributed.

4.1.5 Data on Spiritual and Social Competency Scores of POE Class Students Low Motivation Group

Based on the data in Table 1, the results of descriptive analysis of KSS-S scores of POE class students of low motivation groups are known that of the 32 students getting the lowest score of 8.00 and the highest score of 20.00. The average score of 13.25 with a standard deviation of 4.25. While swekness is 0.32 and kurtosis is -1.44. This means that data is normally distributed.

4.1.6 Spiritual and Social Competency Score Data of POE Class Students High Motivation Group

Based on data from the descriptive analysis results of the SSC-S score of high motivation POE students it is known that of 32 students getting the lowest score of 11.00 and the highest score of 20.00. The average score of 15.12 with a standard deviation of 2.55. While swekness is 0.11 and kurtosis is -0.77. This means that data is normally distributed.

4.1.7 Spiritual and Social Competency Scores Data Class Students in the Low Motivation Group

Based on data Table descriptive analysis results KSS-S scores of students in the low motivation group known that of the 32 students get the lowest score of 7.00 and the highest score of 20.00. The average score of 13.75 with a standard deviation of 3.87. While swekness of -0.24 and kurtosis of -0.95. This means that data is normally distributed.

4.1.8 Spiritual and Social Competency Scores Data Class Students in the High Motivation Group

Based on descriptive analysis of the KSS-S score of classes in the high motivation group it is known that of 32 students getting the lowest score of 7.00 and the highest score of 19.00. The average score of 14.25 with a standard deviation of 3.67. While swekness is 0.54 and kurtosis is -0.69. This means that data is normally distributed.

4.2 Test Requirements (Normality Test and Homogeneity Test)

4.2.1 Normality Test

Normality test is conducted to find out whether the sample is from a population that is normally distributed or not. In this study using thetest *Shapiro Wilk*, by taking an error rate ά of 0.05 and the number of samples more than 30. To find out whether or not normal data samples by comparing the sig value with a significance level of 0.05. If the value of sig. > 0.05 then the data sample is normally distributed and if the value of sig. <0.05 then the data sample is not normally distributed. The presentation of normality test is presented below.

4.2.1.1 Normality Test Observation Score Competency of Spiritual and Social POE Class

Analysis of the normality test data with *Shapiro-Wilk* in the POE class shows a value of more than 0.05 which is equal to 0.267. This means that the spiritual and social IPS KKA competency score data is normally distributed.

4.2.1.2 Normality Test of Observation Competency Score of Spiritual and Social in DI

Analysis of the normality test data with Shapiro-Wilk in the DI class showed a significance value of 0.153. This shows that the significance value is more than 0.05, meaning that the social and social competency score data of IPS KKA class DI is normally distributed.

4.2.1.3 Normality Test Observation Scores for Spiritual and Social Competencies Low Achievement Motivation Group

The results of the normality competency score test for spiritual and social of groups of students with low achievement motivation can be seen that the significance value of 0.071. This shows that the significance value is more than 0.05, meaning that the data is normally distributed.

4.2.1.4 Normality Test Observation Score Competency of Spiritual and Social High Achievement Motivation Group
Based on the results of the normality competency test scores of spiritual and social groups of students with high achievement motivation can be seen that the significance value of 0.372. This shows that the significance value is more than 0.05, meaning that the data is normally distributed.

4.2.1.5 Normality Test Observation Score Spiritual and Social Competence POE Class with Low Achievement Motivation

Based on the results of the normality competency score test of spiritual and social POE classes with low achievement motivation can be seen that the significance value is 0.099. This shows that the significance value is more than 0.05, meaning that the data is normally distributed.

4.2.1.6 Normality Test Observation Score Spiritual and Social Competence POE Class with High Achievement Motivation

Based on data on the results of the normality test score of the spiritual and social competence of the POE class with high achievement motivation it can be seen that the significance value is 0.815. This shows that the significance value is more than 0.05, meaning that the data is normally distributed.

4.2.1.7 Normality Observation Test Competency Score for Spiritual and Social of Class DI with Low Achievement Motivation.

Based on the data on the results of the normality competency test scores of spiritual and social of the DI class with low achievement motivation it can be seen that the significance value is 0.538. This shows that the significance value is more than 0.05, meaning that the data is normally distributed.

4.2.1.8 Normality Observation Test Competency Score for Spiritual and Social of Class DI with High Achievement Motivation

Based on the results of the normality score test of spiritual and social competency of DI classes with high achievement motivation it can be seen that the significance value is 0.282. This shows that the significance value is more than 0.05, meaning that the data is normally distributed.

4.2.2 Homogeneity Test

Homogeneity test is carried out to test the variance of the spiritual and social competency observation score data, the knowledge competency test score data and the critical thinking ability test material advantages and limitations between spaces. In this study the homogeneity test using *SPSS for windos version 23.00*. If the significance value is less than 0.05 then the data is not homogeneous, if the significance value is more than 0.05 then the data is homogeneous. The homogeneity test recapitulation is presented below.

4.2.2.1 Homogeneity Test of Spiritual and Social Competency Score of POE and DI Classes

Table 2
Homogeneity Test Result Data Competency Score Class POE and DI

		Levene Statistic	df1	df2	Sig
The spiritual & social competency Class POE & DI	Based on Mean	.057	1	62	.812
	Based on Median	.014	1	62	.905
	Based on Median and with adjusted df	.014	1	59.82	.905
	Based on trimmed mean	.051	1	62	.823

Based on homogeneity test data in Table 2 of the spiritual and social competency score of IPS KKA has a significance value of 0.812. This shows that the significance value is more than 0.05, meaning that the data of the two classes is assumed to be homogeneous.

4.2.2.2 Homogeneity Test of Spiritual and Social Competency Score Low Achievement Motivation and High Achievement Motivation

Table 3
Homogeneity Test Result Data Competency Score Low Achievement Motivation and High Achievement Motivation

		Levene Statistic	df1	df2	Sig
The spiritual & social competency LAM & HAM	Based on Mean	3.140	1	62	.081
	Based on Median	3.195	1	62	.079
	Based on Median and with adjusted df	3.195	1	61.961	.079
	Based on trimmed mean	3.171	1	62	.080

Based on the data in Table 3 it can be seen that the homogeneity test results have a significance value of 0.081. This shows that the significance value is more than 0.05, meaning that the data of the two groups are assumed to be homogeneous.

4.2.2.3 Homogeneity Test Spiritual and Social Competency Score POE Class Low Achievement Motivation Group and High Achievement Motivation

Table 4
Homogeneity Test Result Data Competency Score POE Class Low Achievement Motivation and High Achievement Motivation

		Levene Statistic	df1	df2	Sig
The spiritual & social competency Class POE With LAM & HAM	Based on Mean	1.066	1	30	.310
	Based on Median	.982	1	30	.330
	Based on Median and with adjusted df	.982	1	29.994	.330
	Based on trimmed mean	1.033	1	30	.318

Based on the data in Table 4 it can be seen that the homogeneity test results have a significance value of 0.310. This shows that the significance value is more than 0.05, meaning that the POE class data with different groups is assumed to be homogeneous.

4.2.2.4 Homogeneity Test of Class Spiritual and Social Competency Score in the Low Achievement Motivation Group and High Achievement Motivation

Table 5
Homogeneity Test Result Data Competency Score DI Class Low Achievement Motivation and High Achievement Motivation

		Levene Statistic	df1	df2	Sig
The spiritual & social competency Class DI With LAM & HAM	Based on Mean	.170	1	30	.683
	Based on Median	.023	1	30	.880
	Based on Median and with adjusted df	.023	1	29.258	.880
	Based on trimmed mean	.165	1	30	.688

Based on the data in Table 5 it can be seen that the homogeneity test results have a significance value of 0.683. This shows that the significance value is more than 0.05, meaning the DI class data with different groups is assumed to be homogeneous.

4.3 Hypothesis Testing

Hypothesis testing is carried out after the prerequisite tests are normally distributed and homogeneous. In this study, hypothesis testing was carried out using an univariate two-way anova using *SPSS for window version 23.00* with an error rate of 0.05. The hypothesis testing in this study includes the influence of the POE learning model and achievement motivation on spiritual and social competencies, knowledge competencies and critical thinking abilities.

4.3.1 Hypothesis Testing Competence of Spiritual and Social POE Class and DI Class

H_0: There is no difference in the spiritual and social competence of social studies KKA between those who follow the POE learning model and the DI learning model.

H_1: There is a difference in the spiritual and social competence of social studies KKA between those who follow the POE learning model and the DI learning model.

Data on the results of testing the hypothesis of spiritual and social competence are presented below.

Table 6
Table of Hypothesis Competency Test Results Spiritual & & Social

Source	Type III Sum of Squares	df	Mean Square	F	Sig
Corrected Model	32.250[a]	3	10.750	.813	.492
Intercept	12656.250	1	12656.250	956.994	.000
Learning Model	1.000	1	1.000	.076	.784
Achievement Motiv	25.000	1	25.000	1.890	.174
LM * AM	6.250	1	6.250	.473	.494
Error	793.500	60	13.225		
Total	13482.000	64			
Corrected Total	825.750	63			

R Squared = ,039 (Adjusted R Squared = -,009)

The test data of hypothesis testing shows that the significance value of the learning model of 0.784 means non-significant. This shows that there is no difference between spiritual and social competencies between those who follow the POE and DI learning models. The conclusion is to accept H_0 and reject H_1.

4.3.2 Hypothesis Testing Competence of Spiritual and Social The Low Achievement Motivation and High Achievement Motivation Groups.

H_0: There is no difference in the spiritual and social competence of social studies KKA between those who have low achievement motivation and those who have high achievement motivation.

H_1: There is a difference in the spiritual and social competence of social studies KKA between those who have low achievement motivation and those who have high achievement motivation.

Based on the data in Table 6 it can be concluded that the significance value of achievement motivation of 0.174 means non-significant. This shows that there is no difference in the spiritual and social competence of social studies KKA between those who have low achievement motivation and those who have high achievement motivation. The conclusion is to accept H_0 and reject H_1.

4.3.3 Hypothesis Testing Competence of Spiritual and Social of POE Classes and in Low Achievement Motivation Group and High Achievement Motivation

H_0: There is no interaction of the use of learning models (POE and DI) and achievement motivation (low and high) on the spiritual and social competence of social studies KKA.

H_1: There is an interaction between the use of learning models (POE and DI) and achievement motivation (low and high) towards the spiritual and social competence of social studies KKA.

Based on the data in Table 6 it can be concluded that the significance value of the learning model and achievement motivation is 0.494, meaning that it is non-significant. This shows that there is no interaction between the use of learning models (POE and DI) and achievement motivation (low and high) on the spiritual and social competence of social studies KKA. The conclusion is to accept H_0 and reject H_1.

V. CONCLUSION

Spiritual and social attitude competencies are the result of a habit that is repeated and taught in the learning process for a relatively long period of time so that if treatments are carried out in the short term it will not make a difference to these competencies. The POE and DI learning models do not make a difference in this competency. This means that being taught with the POE and DI models give the same results to this competency.

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