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The Influence of ANEKA-Based Character Integrated in Physics Course with E-learning Schoology

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Abstract

The development of technology has brought enormous changes to the progress of education world. The form of the technology is E-Learning, with platform that can be used as an interactive learning media is Schoology, it's expected that lecturers can actualize the basic values ANEKA (accountability, nationalism, public ethics, quality commitment, and anti corruption). The purpose to know the influence of characters education based on ANEKA in courses Technical Physics with e-learning Schoology. The research method is quantitative with quasi experiment, the population is Electrical Engineering students at UMK. Experimental variable is the treatment for experimental class (e-learning schoology), and control class (conventional), the dependent variable is ANEKA-based characters. The result of ANEKA-based characters obtained with increase before and after treatment. The characters value is highest in nationalism, and least of quality commitment. The analysis of experimental class increase of 4.59, and the control class of 2.68. Result of ANEKA-based characters from control and experimental class get significant 0.000 (<0,05) which means that the application of learning in the Physics courses by e-learning schoology can increase higher by 25% than the conventional learning by 16%.

Keywords*:* E-learning, Schoology, Character, ANEKA

INTRODUCTION

The influence of globalization and information brings consequences to human development in the world, including the country Indonesia. All efforts have been prepared to face the changes and challenges, such as by increasing the self potential to become a superior human resources and able to compete with other nations (Vibriyanthy and Fauziah, 2014). The development of information and communication technology has brought enormous changes to the progress of education. Along with these developments, learning methods also experience many developments, whether the method of learning in a personal, learning media or learning process. The form of information technology development applied in the world of education is E-Learning. E-Learning is an innovation that has a huge contribution to the change of learning process, where the learning process is no longer just listen to the description of the material but also perform other activities such as observation, performance, demonstration and others. Platform that can be used as an interactive learning media is Schoology.

Implementation of character education for all levels of education, from elementary school to university has been proclaimed by the government since 2010. Character education is a conscious and earnest effort of an educator to teach the value of character to learners (Mansur, 2014). Our educational world is only capable of giving birth to human graduates with adequate intellectual level. Many of the high school graduates, smart, brilliant, and able to solve the subject matter very quickly, but not a few of them do not have intelligent behavior and good mental personality. Whereas the purpose of education is to make human character, human noble, humane human (Harefa, 2013). As stated by Raharjo (2010) that education that develops character is a form of education that can help to development of ethic, moral and responsibility attitude, give the love to students by showing and teaching good character. Afandi (2011) also stated that Education is basically a conscious effort to development the potential of learners optimally. Character education is to form a personal child, to be a good person, citizen, and good citizens, so as to anticipate the symptoms of moral crisis and play a role in the framework of youth coaching.

Through character education and e-learning, students have the ability to recognize, understand, and interaction with the world of information and communication technology. The main value of the character is not only done in

courses related to personality, but also into all courses, including in the courses of Physics.

The Physics courses is a part of science, which according to Chusnani (2013) The correct science learning will lead the students to have the character of curiosity, logical thinking, creative and innovative, honest, healthy, confident, disciplined, independent, responsible, caring environment and love science. Physics as a part of science subjects developed through an inductive approach, has contributed greatly to the development of science and technology (Afrizon et.al, 2012).

As stated by Hindarto (2010) that each course has content is very valuable and relevant to the values of character education. Research Rusli (2013) states the rapid development of physics in the 20th century has spurred the development of technology, which further spur also the development of Physics and changes in public attitudes. From observations over the years, it seems that the keywords of awareness, insight, and ethical depth can provide a good strategic direction, for the curriculum but especially for the teachers. So by following the development of these technologies, learning media used in the course of Physics using e-learning schoology.

Government Regulation No. 37 yaer 2009, lecturers are said to be professional educators and scientists with the primary task of transforming, developing and disseminating science, technology and the arts through education, research, and community service (Republic of Indonesia, 2009). Seeing the importance of lecturers' duties, it is expected that lecturers can actualize the five basic values in ANEKA (accountability, nationalism, public ethics, quality commitment, and anti corruption) professionally in carrying out their duties and functions. Actualization of basic values of ASN profession incorporated in ANEKA, aims to internalize these basic values to form an honest, fair, disciplined, integrity, professional person, prioritizing the interests of the State and society, to maintain national unity, and always be faithful and obedient to the Unitary State and Government of the Republic of Indonesia.

By realizing the importance of character education, and remembering character education can not stand alone, but is a value that becomes a unity with every courses in campus. Character education must be implemented and then integrated into the life of the campus, both in the context of learning in the classroom and outside the classroom. Education is one of the

guiding tools of the younger generation for the right path. Thus, the education system greatly influences the behavior of the young generation in the future.

Based on the background exposure, the authors would like to conduct research on the integration of ANEKA-based character in Physics courses through e-learning Schoology. The purpose of this study was to determine the effect of ANEKA-based character using e-learning Schoology.

METHOD

This study includes a type of quantitative research with a quasi-experimental approach, ie researchers need an experimental class and a control class. This quasi-experimental design is a non-equivalent control group design, with the experiment and control groups. The study was conducted at the Universitas Muria Kudus with the population observed being students of Electrical Engineering taking Physics courses. This study involves two variables, namely the experimental variable and the dependent variable.

The experimental variable is the treatment variable for the experimental class, namely the learning of Physics through e-learning schoology, and the treatment variable for the control class that is used as a comparison, namely conventional learning. While the dependent variable is ANEKA-based character.

Data collection techniques in the form of a questionnaire given to students before and after learning in both classes. Questionnaires are used because their forms are easily provided, namely in the form of questions to the respondents. In addition, the questionnaire has other advantages, which are faster and cheaper than observation. The questionnaire will be sent to the respondent directly addressed to the respondent in question. Respondents were asked to fill in all the questions in the questionnaire by giving two types of Likert scale, namely positive perception (favorable), and negative perception (unfavorable).

Primary data value of ANEKA-based characters from both groups was tested statistically to find out whether there were differences after and before learning using e-learning Schoology.

RESULTS AND DISCUSSION

Learning activities are conducted to encourage students to more reflect values ANEKA-based character . The learning process carried out in accordance with the RPP that has been made, both those carried out conventionally and with e-learning schoology.

At the first meeting, in the beginning ANEKA-based character given the value of character religious,

polite, respectful, and caring; at the core activities are given the value of character responsibility, honesty, hard work, innovation, quality oriented, participatory, efficiency, courage, and effectiveness; and in the final activity given the value independent, consistent, religious, polite and respectful. The values of ANEKA-based character that have not been given at the first meeting, will be given at the second meeting, and will be further increased at the next meeting.

From the total sample (55 students) in this study, there were 27 students in experimental group and 28 in conventional group. The results of the data were obtained from the initial and final grades in learning both conventionally and using e-learning Schoology. Each of which uses four indicators, with the number of all indicators studied are 20 indicators that list the questions contained in the questionnaire.

The values ANEKA-based character are: a) Accountability: were conducted to test the level of significance of the correlation. Validity test will be carried out by Pearson method or Product Moment method, that is by correlating the item scores on the questionnaire with the total score. This validity test uses the help of the SPSS program, with a significance level of responsibility, honest, consistent, and participatory; b) Nationalism: religious, non-discriminatory, love the country, and respect for opinions; c) Public ethics: polite, respectful, obedient rules, and high integrity; d) Quality commitment: effectiveness, efficiency, innovation, and quality orientation; and e) Anti corruption: independent, hard work, courageous and caring. All indicators of the ANEKA-based character were observed in the control class and experimental class.

After carrying out the stages of the study, the author obtained a number of data which were considered to be sufficiently valid to explain the variables in this paper, and to test the hypothesis of increasing ANEKA-based characters. The numbers used for statistical calculations in this analysis are obtained from respondents' answers to questionnaires submitted to respondents, then scores for each variable are obtained.

Before stepping into the main procedure of the study, validation tests <0,05. After testing the validity, it is known that all questions in the questionnaire have a significance of <0.05, meaning that all question items are considered valid and can be used to collect data in the study.

After the validity test, a reliability

test was performed on the test instrument. The method used the Cronbach's Alpha method. The Cronbach's Alpha calculation is done by calculating the intercorrelation average among the items in the questionnaire. The variable is said to be reliable if the Cronbach's alpha value is > 0,6. As a result, it is known that the research questionnaire is worthy of being used as an instrument of data collection to find out the value of ANEKA-based characters in students. The Table 1 are the results of validation and reabilitation tests.

Table 1. Data validation and reability of questionnaire question items

ANEKA characters	Indicators	Number equation	Signi-ficant	Validity	Cronbach 's Alpha	Reliability
Accountability	Responsibility	1	0,000	Valid	0,897	Reliable
	Honest	2	0,015	Valid	0,896	Reliable
	Consistent	3	0,000	Valid	0,890	Reliable
	Participatory	4	0,000	Valid	0,890	Reliable
Nationalism	Religious	5	0,000	Valid	0,890	Reliable
	Non-discriminatory	6	0,000	Valid	0,890	Reliable
	Love the country	7	0,000	Valid	0,890	Reliable
	Respect for opinion	8	0,015	Valid	0,896	Reliable
Public Ethnics	Polite	9	0,000	Valid	0,890	Reliable
	Respectful	10	0,000	Valid	0,890	Reliable
	Obedient rule	11	0,000	Valid	0,890	Reliable
	High integrity	12	0,000	Valid	0,890	Reliable
Quality commitment	Effectiveness	13	0,001	Valid	0,891	Reliable
	Efficiency	14	0,000	Valid	0,890	Reliable
	Innovation	15	0,000	Valid	0,890	Reliable
	Quality orientation	16	0,000	Valid	0,890	Reliable
Anti corruption	Independent	17	0,000	Valid	0,890	Reliable
	Hard work	18	0,001	Valid	0,891	Reliable
	Courageous	19	0,000	Valid	0,890	Reliable
	Caring	20	0,015	Valid	0,896	Reliable

Based on the table 1, the validity of the questionnaire question items where the significance is <0,05, it means that all question items are considered valid and can be used to collect data in the study.

Table 2. Data reliability items questionnaire questions

Reliability Statistics	
Cronbach's Alpha	N of Items
.896	20

Based on Table 2, the processed data of each the indicators, with the value of Cronbach's Alpha> 0,6 stated reliable. This questionnaire is worthy of being used as a data collection instrument to find out whether there is an increase in values ANEKA-based character for students.

Data obtained for changes in the value ANEKA-based characters for the experimental class can be seen in Figure 1. In each character there is an increase from before and after learning. Improvement looks almost the same for each character indicator.

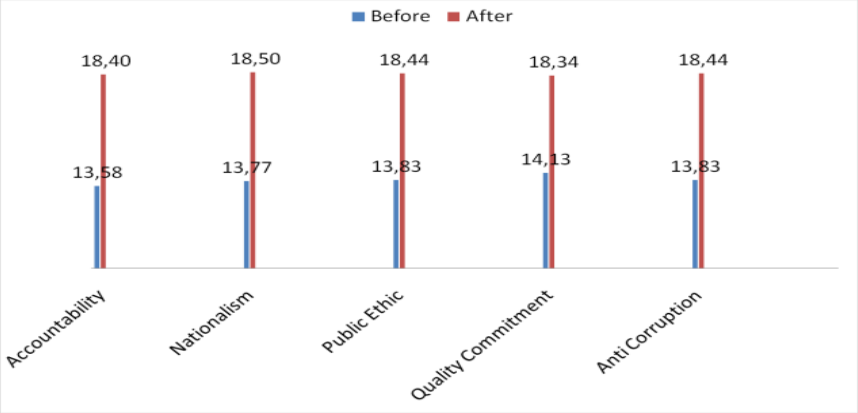

Figure 1. Graph comparison of ANEKA-based character in the experimental class.

Whereas in the control class, the value ANEKA-based characters can be seen in Figure 2. The change in the increase of each character is obtained the highest is the value of nationalism, and the least increase in the value of quality commitment

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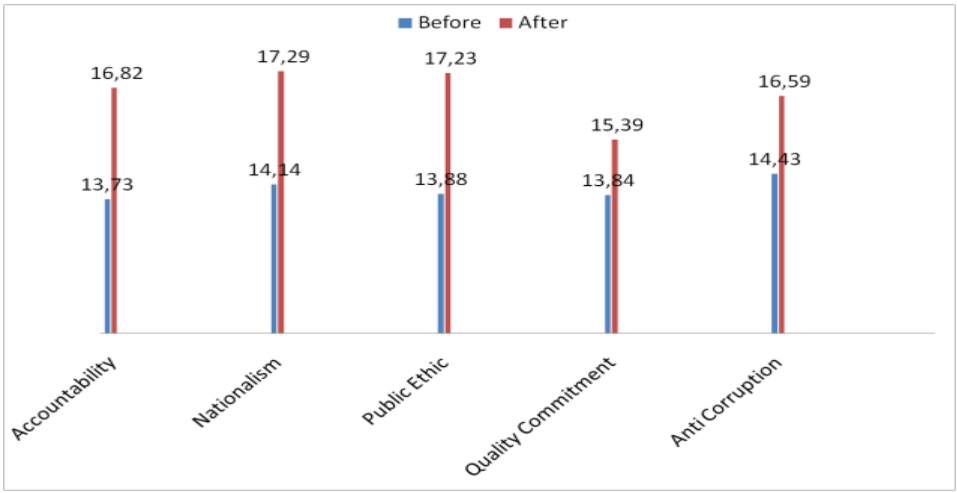

Figure 2. Graph comparison of ANEKA-based characters in the control class.

Integration of ANEKA-based characters in the learning process means that students learn about various forms of material, formulas, and practice questions, accompanied by character values, so that the learning process feels meaningful and fosters students' sincerity in learning and gives a positive influence on character development students.

Analysis of data from hypnosis with differences in character beginning and ending after learning was obtained using the Mann Whitney test with SPSS. The different values of ANEKA-based characters in the control class and the experimental class are presented in table 3.

Table 3. Assymp Mann Whitney Test of ANEKA-based characters at control class and experimental class

Ranks				
	Name Class	N	Mean Rank	Sum of Ranks
Before Integrated ANEKA-based characters	Experiment Class	27	34.37	928.00
	Control Class	28	21.86	612.00
	Total	55		
After Integrated ANEKA-based characters	Experiment Class	27	35.59	961.00
	Control Class	28	20.68	579.00
	Total	55		

From Table 3, at the results of the experimental class data analysis getting a mean rank is greater than the control class, its mean learning with e-learning Schoology can increase the value of ANEKA-based characters for students. This is in accordance with the results of the study by Suranto (2014) which shows that through the integration of character education in these courses, students' understanding of the values of noble characters has increased. The integration of character education has succeeded in increasing students' understanding of the values of noble characters that are very important to be implemented in everyday life.

The basis for Mann Whitney decision making is if the Assymp value is. Sig <0.05 then the hypothesis is accepted, and if> 0.05 the hypothesis is rejected, the results can be seen in table 4.

Table 4. Assymp Value. Sig at Mann Whitney Test

Test Statistics[a]	
After Integrated ANEKA-based characters	
Mann-Whitney U	173.000
Wilcoxon W	579.000
Z	-3.462
Asymp. Sig. (2-tailed)	.001
a. Grouping Variable: Name Class	

By using the Whitney mann test, the Assymp value is 0,001 which means <0,05, this indicates a difference in ANEKA-based characters in the control class and the experimental class. The treatment given is in the form of integration of ANEKA-based character, in Physics course with e-learning Schoology or conventionally.

Even though there were changes in values between the two classes, the experimental class that gained an increase in scores was greater than the control class. This means that the application of learning in Physics course using e-learning schoology can increase the ANEKA-based characters higher than conventional learning.

Changes in ANEKA-based character in the experimental class and control on each indicator can be seen in Figure 3.

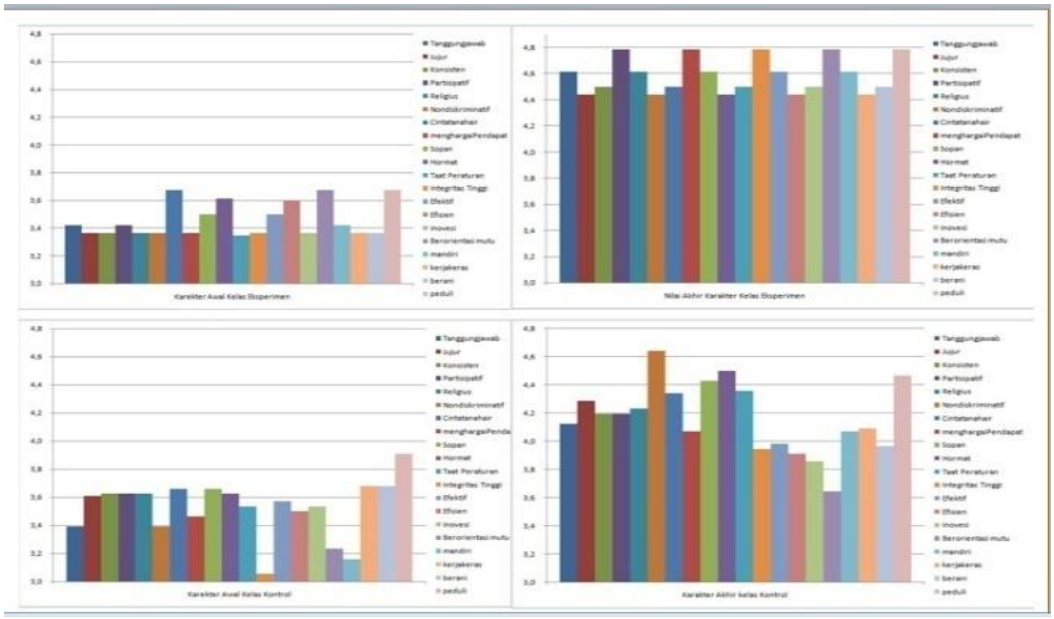

Figure 3. The initial and final values for each ANEKA-based character indicators.

In Figure 3. in each ANEKA-based character indicators in the control class and experimental class, it can be seen that there are differences in character obtained. In the experimental class the value of ANEKA-based character indicators is seen rising with high and very high categories. Whereas in the control class there are still indicator which are in the moderate or sufficient category, namely the character of quality commitments with quality-oriented indicator, namely the subject of students always updating the material in completing assignments and carrying out lecture / discussion activities.

The results of the ANEKA-based character of the control class and experimental class (table 2), it can be seen that for character both experience differences before and after learning. This is in accordance with Vibriyanthy and Fauziah (2014) statement that the results of the implementation of character education cannot be seen instantly because character education is a long process that will later shape children's behavior in daily life. Whereas according to Anton Suwito (2012), with the integration of character education values helps to change the behavior of students who were initially unhealthy to be healthy and bad to not be bad or good even though large or small changes and developments.

The learning outcomes of the Physics course by integrating ANEKA-based character can provide increased changes in student attitudes in everyday life that are easier to control and influence the results of their character values.

CONCLUSION

The results obtained from this study, integration of ANEKA-based characters can be applied to learning and have an influence on learning with e-learning Schoology. In the activities before and after learning in the control class and experiment, there were ANEKA-based characters who shared changes. Changes in the increase of each character value obtained the highest is the value of nationalism, and the least increase in the value of quality commitment. From the results of the analysis in both classes there was a change in the value increase, but the experimental class that gained an increase was greater than the control class, this means that the application of learning in Physics courses using e-learning schoology can increase the value of ANEKA-based characters higher than learning conventional. In the experimental class the value of ANEKA character indicators is seen to rise with high and very high categories, while in the control class there are still indicator values which are in the moderate or sufficient category, namely the character values of quality commitments.

SUGGESTION

This research can be a further reference to be applied to other subjects, by providing other ANEKA-based character indicators.

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