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The Correlation between Academic Honesty and a Students' Curiosity with the Results of Learning based on Discovery Learning

Sugiarti
Faculty of Mathematics and Natural Sciences
Universitas Negeri Makassar
Makassar, Indonesia
atisugiarti34@yahoo.co.id

Halimah Husain
Faculty of Mathematics and Natural Sciences
Universitas Negeri Makassar
Makassar, Indonesia

Abstract—**Problem statement: Schools as educational organizers play an important role in fostering academic, honesty and curiosity behaviors of learners as the next generation nations. To cultivate honest behavior and curiosity behaviors should be applied to any learning that uses contextual-based discovery learning models. This study aims to determine: (1) the correlation between academic honesty and the outcomes of acid-base learning outcomes, (2) the correlation of curiosity with the outcomes of acid-base learning the approach. That used this research is correlational research. Data collection techniques used are observation, documentation, and questionnaires. Quantitative analysis of data using correlation. The study population was 498 students consisting of three high schools in the 2017/2018 school year. The research sample of 92 students was taken randomly, three Mathematics and Natural Science classes from three senior high schools, namely: (1) class XI.1-9 Maros, (2) Class XI.1-3 Pangkep, (3) and Class XI.3-8 Makassar. Results of the study. It was found that (1) there was a significant and positive correlation between academic honesty with acid-base learning outcomes of students in these three schools, (2) There was a significant and positive correlation between curiosity with acid-base learning outcomes of students of class XI MIA 1 SMA Negeri 9 Maros and class XI MIA 1 Senior High School 3 Pangkep, but there is no correlation of curiosity with the learning outcomes of students of class XI MIA 3 Senior High School 8 Makassar. Acid-base learning using contextual discovery-based models is one of the learning models that can integrate academic honesty and curiosity in the process of learning chemistry in high schools as a growing point of scientific attitude in students.**

Keywords—academic honesty, curiosity, learning outcomes, discovery learning based contextual

I. INTRODUCTION

Education as a concept of a value transfer that has three goals. First, education aims to form humans who have a balance between cognitive, psychomotor and affective abilities. Second, the value system, which is faith and devotion, radiates on human submission to carry out its worship, and always maintains the harmony of God's relationship with nature. Third, the process of transferring values to science and technology development, such as work ethic, respect for time, discipline and so on [1]. Moreover, there are so many values that can be referred to the implementation of education, especially character education in Indonesia, for example in particular schools. Each education unit can take the core values that will be developed

in each school, according to the school's vision and mission. There are several values that can be developed in schools are honesty and curiosity. Honesty means that through honesty building a future life by conveying correctly and accurately the facts that happened in the past. Whereas curiosity means the desire to investigate and seek understanding of the secrets of nature or social events that occur [2].

Both values or attitudes can be influenced by heredity and the environment, both the natural environment and the school environment that can be distinguished from others and manifests in attitudes and behavior in daily life. These two attitudes support the social, emotional and ethical development of students. Therefore, they are a fundamental part of good education. The schooling system is one of the transformation mediums of values or attitudes, the strengthening of social ties and the development of science.

Honesty as one of character that needs improve among the student in the school is often referred to as academic honesty which has implications for building confidence with others. Honesty is very much determined by the temperament of the brain and heart, being dishonest, honest, and fair, will be the main rule. The Indicators of academic honesty that can be developed through education touch, that affect the mind and student behavior, the description of the attitude, are: 1) do the work yourself, 2) do not soar to the right / 3) do not glance left and right / cheat, 4) do not open a notebook during the exam, 5) make their own conclusions, and 6) submit the actual learning results. All of them are linked to emotional intelligence. Students who have intelligence will be able to successfully realize various kinds of challenges, including the challenge to succeed academically [2], [3].

Curiosity naturally arises in people, while knowing something different, but ultimately the same as people who know and understand what they want. Students curiosity can be found through several indicators, in the form of 1) asking or answering questions, 2) spelling out tasks/experiments according to their st questions, 3) looking for those who support the process and results of the practicum, 4) following the learning phase correctly.

Furthermore, learning in schools with the 2013 curriculum that has been done using learning models that can be used. Imaging conducted by several schools, teachers, students, and learning models which constitute, shows that there are no schools that apply the learning model by

instilling honest values and curiosity of students. Moreover, Education who still use conventional learning, have different attitudes, know that students are not built at all, the teacher does not show an effort to power them. Likewise, the habit of the student who does cheating is very high during daily or summative tests. Students always commit cheating such as taking notes, asking questions and glancing at friends' works at the time of the exams or removing them from the school for cheating. Students are not afraid if there is no purpose, they do not give punishment or deterrent sanctions. As a consequence make the students lazy to learn and do not have adequate cognitive abilities and do not understand deeply.

One learning model that activates and fosters students' curiosity to learn is the discovery model [4]. This model has several advantages, including (1) helping students to improve and enhance cognitive skills and processes, (2) the knowledge acquired is very personal and effective because it strengthens understanding, memory, and transfer, enhancing students' abilities solving problems, (3) helping students strengthen their concepts, (4) encouraging the involvement of students' activities (5) and encouraging students to think intuition and formulate their own hypotheses, (6) and train students to learn independently.

Based on the description above, it is considered necessary to conduct research on the correlation between academic honesty and curiosity with acid-base learning outcomes for high school students. The purpose of this study is to determine the correlation between academic honesty with learning outcomes and the correlation between curiosity and acid-base learning outcomes of students through contextual discovery-based on learning.

II. RESEARCH METHODS

This research is product-moment correlational research. Subjects were students of class XI MIA-1 of Senior High School 9 Maros, class XI MIA-1 of Senior High School 3 Pangkep, and Class XI MIA-3 of Senior High School 8 Makassar, with a total subject of 92 people. The number of sampling is done randomly through sweepstakes. The random technique used is based on the assumption that all classes are homogeneous in terms of cognitive abilities, behavior, and ways of learning.

The instruments used in data collection were academic honesty observation sheets, curiosity observation sheets, interviews, and multiple-choice on the subject of acid-base questions in 24 items for learning outcomes, as well as essay tests at the end of each lesson. The instrument was used to obtain three types of data, namely (1) data on the implementation of model syntax, learning and activity management, (2) data on academic honesty and curiosity processed using bivariate Pearson correlation to calculate the level of relationship between two honesty variables with the results learning, between curiosity and learning outcomes, and (3) learning outcomes. The results of the descriptive analysis are determined based on the level of categorization; good, enough, not good and bad [5].

III. RESULTS AND DISCUSSION

The results of the descriptive analysis of the feasibility of the syntax of contextual discovery-based learning models can be seen in Table 1.

TABLE I. IMPLEMENTATION OF THE CONTEXTUAL DISCOVERY-BASED LEARNING SYNTAX

School	Syntax (%)						Average (%)	Category
	1	2	3	4	5	6		
Senior High School 9 Maros	66.67	73.33	72.92	78.33	62.08	81.67	72.50	Good
Senior High School 3 Pangkep	68.75	72.08	70.83	75.83	65.00	71.25	70.62	Good
Senior High 8 Makassar	60.00	72.08	71.67	76.25	61.25	73.75	68.33	Enough
Average	62.40	71.87	71.36	74.17	61.46	75.11		

Syntax description: number 1 = Stimulus, 2 = problem identification, 3 = data collection, 4 = data processing, 5 = verification, and 6 = conclusion

Achievement of syntax shows that all three schools are in the good category for Senior High School 9 Maros and Senior High School 3 Pangkep, enough categories for Senior High School 8 Makassar.

TABLE II. THE AVERAGE VALUE OF ACHIEVING SYNTAX

No	Aspects	The average score in the Schools		
		SMAN 9 Maros	SMAN 3 Pangkep	SMAN 8 Makassar
1	Academic Honesty	77.03	74.81	61.21
2	Curiosity	81.67	79.07	76.88
3	Result Study	72.45	75.81	78.40

In table 2 above shows that academic honesty, curiosity, and learning outcomes are in a good category. With the exception of Makassar's 8th high school, it shows a sufficient category of academic honesty

IV. CORRELATIONAL ANALYSIS RESULTS

Based on the results of the prerequisite test for normality and homogeneity of academic honesty data, curiosity, and learning outcomes of students in the three schools. Therefore, Pearson correlation test was conducted to determine the correlation between the two scientific attitudes with acid-base learning outcomes of students, the results of the three classes were normally distributed with the homogeneous data variance.

The results of the correlation analysis using the SPSS 23 application show that 1) There is a significant correlation of academic honesty with the learning outcomes of students in Senior High School 9 Maros (r=0.465, with sig=0.006 at α=0.05), and there is a significant correlation of honesty academic with student learning outcomes of Senior High School 3 Pangkep (r=0.395, with sig=0.042, α=0.05), there is a significant correlation of academic honesty with the learning outcomes of students of Senior High School 8 Makassar (r=0.379, with sig=0.033, α=0.05). 2) There is a significant correlation of curiosity with the learning

outcomes of students of Public Senior High School 9 Maros (value of r=0.347, with a value of sig = 0.048 at α = 0.05), there is a significant correlation of curiosity with the learning outcomes of students of Senior High School 3 Pangkep (r = 0.555, with a value of sig = 0.003 at α = 0.05), but there was no significant correlation of curiosity with the learning outcomes of students of Senior Senior High School 8 Makassar with (r = 0.213, with sig = 0.242 on α = 0.05)

V. DISCUSSION

This study aims to determine the correlation between academic honesty and curiosity with acid-base learning outcomes of students on contextual discovery-based learning. The achievement of each syntax shows sufficient and good value in each school. The syntax of this model consists of six. The six syntaxes are; stimulus, problem identification, data collection, data processing, verification, and generalization or conclusion drawing. Data on the achievement of syntax is obtained from the results of the assessment of students' worksheets at each meeting. However, the achievement of this model syntax has not achieved maximum results, such as for the Senior high school 9 Maros and Senior High Scholl 3 Pangkep still in the good and sufficient category.

Achievement of syntax in good categories and sufficient categories is obtained based on the results of learning through a worksheet that contains six syntax of this model. Students have not been able to work well on the worksheet because they do not understand the meaning.

The syntax that is not yet understood, namely the first syntax about the stimulus, the third syntax about data collection and the fifth syntax about verification. In the stimulus, a case idea is proposed which directs students to find indicators and learning objectives, but they have difficulty with the reason that they are unable to understand the direction of the stimulus. Similarly, the third syntax of data collection. Students are very less able to connect and explain data obtained through reading based on problems that have been identified in the second syntax. As for the fifth syntax about verifying or matching learning outcomes with facts and theories, it is difficult to write down and interpret the results of verification between the theories and problems raised.

The ability of students to understand the overall syntax that has not been satisfied is because students in the three schools experienced discovery for the first time. However, based on the results of interviews with some students, some information was obtained from the student shows that students liked discovery learning because it involved students finding problems directly and processing them until conclusions were drawn. However, because they were the first to experience them, so they still had difficulty understanding their intentions and goals from each syntax of this model. As a result of their learning outcomes are still in the low category.

There are still many students who did cheating during the exam, and not many of them have curiosity. This is indicated by the results of the three things that are still in the good category. Therefore, it is necessary to integrate discovery models in other chemistry learning and other general lessons, getting them to actively learn to find their own according to their learning styles and styles so as to foster better learning

motivation [6]. However, it still provides good learning outcomes, namely in the good category, so it can be said that discovery learning models that are contextual can affect their learning outcomes [7].

The combination of discovery learning models with contextual approaches that are set cooperatively using existing learning resources in the environment can spur curiosity, so students learn more about their learning outcomes, thus, learning motivation is high, academic honesty is created, and student learning outcomes are better. This kind of learning is effective in its implementation and its benefits when accompanied by overall integrity by the academic community of an educational unit [8]. Therefore, meaningful learning is cultivated to build students' awareness of learning better so that academic honesty can be maintained [9]. Comprehensive, meaningful learning contains affective (emotional), psychomotor (skills) and cognitive (mental / intellectual) abilities. Prioritizing learning that utilizes chemicals from the environment, and focusing learning that activates students to make their own statements about what will be learned, find and process themselves so that there is a good communication relationship between teachers and students through coaching to find concepts, from facts around life [10]. This connection between communication between teachers and students is expected to develop and improve the scientific attitude of students.

In addition, discovery learning models involve the discovery of a concept that is long remembered and understood the problem because learning activities are centered on students [11]. Its application is in class, fulfilling six syntaxes, namely: (1) Stimulation, (2) Problem Statement (statement / identification of problems), (3) Data Collection (data collection), (4) Data processing (data processing), (5) Verification (verification) and (6) Generalization (draw conclusions) [12].

Application of contextual discovery-based learning models put great hope in instilling academic honesty and high curiosity so that the learning outcomes of students are better and there is a change in self-confidence behavior that is good for students. Learning outcomes according to Wulandari, 2018 , is an activity which is a form of effort to master the material being learned which allows students to get something. Concretely, these changes can be as follows: (1) from not knowing to know, (2) from being unable to be able to, and (3) from not wanting to be willing. While Dunlosky et al. said that learning is a mental / psychic activity in the environment that produces changes in knowledge, skills, and attitudes [8].

Learning outcomes can be influenced by two main factors, namely internal factors, and external factors. Internal factors involve physical conditions such as students' health; psychology refers to learning styles, interests, talents, and learning readiness brought by students. The second factor is external factors that relate to the conditions or circumstances of the surrounding environment, both family, school and community environment [1].

The attitude of academic honesty builds confidence. By behaving honestly, someone will be able to live freely, be free, without pressure and not feel guilty. Some indicators developed are:1) doing their own assignments, 2) not asking for answers to their friends, 3) not glancing left and right / cheating, 4) not opening notebooks on exams, 5) making

their own conclusions, and 6) submitting actual learning results. Based on the results of a descriptive analysis of the attitude of academic honesty of students from the three schools showed sufficient and good results for each school. While the learning outcomes obtained by students showed good results. Therefore, it can be said that statistically there is a correlation between academic honesty and learning outcomes. That there is a significant and positive relationship between academic honesty of students with learning outcomes. This indicates that students who are actively taught have good academic honesty. Not only because of the model used when teaching, but the high ability of teachers gives a high degree of academic honesty [13].

The correlation between academic honesty with learning outcomes based on the results of the analysis of the three schools shows that there is a linear relationship for students of the Maros Senior High School 9, but there is a negative relationship at Pangkep State Senior High School 3 and 8 Makassar. Therefore, it can be stated that the increase in academic honesty in both schools is not in line with the increase in learning outcomes, or there is a linear relationship, but there is no causal causality relationship. Moreover, the absence of a causality relationship can be caused by several factors: there are still several students who commit cheating during the exam, asking friends and not making their own conclusions. These factors are still widely practiced by students. In these cases, learning outcomes that are not complete showed that the low ability of students to understand learning through discovery models because they only know and follow the learning model. Resulting in students being less able to coordinate the meaning of each syntax.

The attitude of curiosity of the students that are dominant is 1) want to ask questions or answer questions. Learning contextual based discovery models stimulates them to ask questions and answer questions from teachers and friends because the lessons given have been experienced and all are around them, 2) spell out tasks / experiments according to their steps. Although on the activity sheet students are directed to work procedures, but students feel rigid and afraid to conduct a trial because they have never been given a practicum before. Students who do practicums are only a small part, 3) look for sources that support the learning process and results / practicum. This learning activity was welcomed by students because the student book and the student worksheets that were distributed displayed teaching material along with pictures that were quite interesting so that they quickly recognized what was learned. Students who are active quite a lot, 4) follow the learning syntax correctly. Very few students can take the syntax seriously, and the results are correct. This is because they are still laymen, do not understand the direction of the purpose of each syntax, even though it has been explained before learning begins, namely apperception.

The results of the descriptive analysis found that the average value of students' curiosity for the three schools showed good categories. The results of hypothesis testing indicate that there is a significant and positive relationship between curiosity and student learning outcomes even though the relationship between them is not causality.

The fourth indicators of curiosity are carried out by students with pleasure and enthusiasm; this shows that they already have an effort to want to learn chemistry because

learning uses models that activate and train them to find their own learning outcomes. Contextual approach by utilizing chemicals from around students stimulates students' motivation to conduct learning activities. This situation is in line with the results of the study Wulandari et al. who found that students who have a good curiosity will get good learning outcomes while those who have low curiosity get low learning outcomes as well [12].

Based on the results of the study and discussion, it can be said that the results of the analysis that has been carried out show that there is a positive and significant correlation between academic honesty and curiosity with the acid-base learning outcomes of students in the three schools. These results are in line with the results of Langa study that scientific attitudes which include academic honesty, responsibility, and curiosity have a positive correlation with students' learning outcomes [9]. Similarly, the results of Hacieminoglu which state that scientific attitudes have a close relationship with the learning outcomes of science with a percentage of the relationship of 14% [14].

VI. CONCLUSIONS

There is a significant and positive correlation between academic honesty and curiosity with student learning outcomes in class XI.1 MIA Senior High School 9 Maros, class XI.1 MIA Senior High Scholl Pangkep 3, and class XI.3MIA Senor High School 8 of Makassar, but not causality , cause, and effect. Therefore both variables can act as X variables affect or Y variables (influenced)

For researchers who want to research about academic honesty and curiosity, it should be integrated into some subject matter for one semester so that students really understand and apply the learning outcomes.

REFERENCES

[1] R. Marples, "The Aims of Education," in *International Encyclopedia of Education (Third Edition)*, P. Peterson, E. Baker, and B. B. T.-I. E. of E. (Third E. McGaw, Eds. Oxford: Elsevier, 2010, pp. 103–107.

[2] G. Chen and D. Sun, "The Exploration of College Students' Honesty Education Curriculum System Constructing," *Creat. Educ.*, vol. 5, no. 08, p. 568, 2014.

[3] A. Pala, "The need for character education," *Int. J. Soc. Sci. Humanit. Stud.*, vol. 3, no. 2, pp. 23–32, 2011.

[4] M. D. Svinicki, "A theoretical foundation for discovery learning.," *Adv. Physiol. Educ.*, vol. 275, no. 6, p. S4, 1998.

[5] S. Arikunto, "Dasar-Dasar Evaluasi Pembelajaran," *Jakarta Bumi Aksara*, 2009.

[6] V. Herlily, A. Anhar, Y. Ahda, and R. Sumarmin, "Application of Learning Model Learning Guided Discovery with Scientific Approach to Enhance Learning Competency Science Seventh Grade Students," *Int. J. Progress. Sci. Technol.*, vol. 6, no. 2, pp. 499–505, 2018.

[7] Dahlia, L. Advinda, and Y. Ahda, "Effect of Learning Model Discovery of Competence Student Subject Biology Class VIII MTSN Rambah 2014 / 2015 Academic Year," *Int. J. Progress. Sci. Technol.*, vol. 7, no. 1, pp. 1–7, 2018.

[8] J. Dunlosky, K. A. Rawson, E. J. Marsh, M. J. Nathan, and D. T. Willingham, "Improving students' learning with effective learning techniques: Promising directions from cognitive and educational psychology," *Psychol. Sci. Public Interes.*, vol. 14, no. 1, pp. 4–58, 2013.

[9] C. Langa, "Investigation of students' attitude to academic honesty–empirical study," *Procedia-Social Behav. Sci.*, vol. 76, pp. 426–430, 2013.

[10] A. L. Brown and J. C. Campione, *Guided discovery in a community of learners.* The MIT Press, 1994.

[11] N. M. Seel, "Model-centered learning and instruction," *Technol. Instr.*

Cogn. Learn., vol. 1, no. 1, pp. 59–85, 2003.

[12] I. G. A. P. A. Wulandari, C. Sa'dijah, A. R. As'ari, and S. Rahardjo, "Modified Guided Discovery Model: A conceptual Framework for Designing Learning Model Using Guided Discovery to Promote Student's Analytical Thinking Skills," in *Journal of Physics: Conference Series*, 2018, vol. 1028, no. 1, p. 12153.

[13] S. A. Stearns, "The student-instructor relationship's effect on academic integrity," *Ethics Behav.*, vol. 11, no. 3, pp. 275–285, 2001.

[14] E. Hacieminoglu, "Elementary School Students' Attitude toward Science and Related Variables.," *Int. J. Environ. Sci. Educ.*, vol. 11, no. 2, pp. 35–52, 2016.