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The Relevance of Mathematics Lessons and Understanding of Islamic Inheritance Law

Section:
Learning design

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Abstract

Purpose: This study aims to test whether there is an effect of mastery of the concept of mathematical fractions on students' understanding of the calculation of inheritance. **Methods** - Data were collected through a test on two parts of the question: mathematical fractions and a test of inheritance calculations on 66 students majoring in Islamic Religious Education (PAI). The analysis technique used is correlation and regression. **Findings**- Through data analysis, it can be concluded that the two are indeed interrelated and mastery of the material fraction concept has a 40% influence proportion on students' ability to calculate inheritance. These results indicate that to support students' ability to calculate inheritance and be equipped with fiqh knowledge, they also need to be fitted with their ability to calculate, especially in mathematical fraction functions. **Limitations** - This study is limited to a sample of PAI students with Fiqh concentration class 2014, so it does not describe all students at Antasari Islamic University. Future studies are advised to expand the sample size and add more math fraction tests to show students' real abilities.

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INTRODUCTION

Today, an educated person must master all the problems in the community related to the field or not related to what area is mastered; the many diverse community requests mark this for someone who is educated to solve daily problems. Based on the results of an interview with one of the teachers at the Tahfizh Al Quran Al Amanah Islamic boarding school, he stated that as a student of UIN Antasari Banjarmasin, especially the Department of Mathematics Education, he must master various religious studies related to Mathematics, such as zakat affairs, astronomy, logic, science afraid and different other branches of science related to mathematics. There is an assumption that enforcing Islamic inheritance law in religious courts and the distribution of inheritance among the Indonesian Muslim community seems to be based more on customary law (customary law) and not on Islamic inheritance law (Fiqh Al Marwaris). Whereas in Islam, every Muslim is required to submit, obey, and obey Islamic law while still referring to the Qur'an and Sunnah, including in carrying out inheritance law. (Habiburrahman, 2011: 1).

One of the reasons we are obliged to learn and then teach these Marwaris is that the Prophet SAW mentioned that among the teachings of Islam that will be revoked the first time is the science of these Marwaris. So that the people, even though they claim to be Muslims, may even go back and forth every year to go on pilgrimage to the holy land. Still, when their parents die, they do not use the law that Allah SWT has set in the distribution of inheritance, the widespread application makes people guide the application, the lack of public attention to the interests who control the legacy. This happened not only because they were reluctant to do so but ironically because almost no one else could share their inheritance because their knowledge had been lifted. And they did not find anyone who could calculate the legacy, so they distributed it in ways that were displeasing to Allah SWT. In heritage, there are at least three abilities that a person must possess to solve problems related to the distribution of inheritance. The first is the ability to master the law and its division, the second is about learning the concept of fractions, and the third is the ability to add up the remaining tirkah (treasures) left by simayyit.

The problem of Islamic inheritance law is an actual phenomenon in Indonesia and various other countries. In his study, Sigh (2017) tries to compare the law of inheritance Anglo-Hindu and Anglo-Islamic in India with a focus on the position of women. Their study found that in contrast to the Hindu inheritance law that prohibits women from obtaining inheritance, the Anglo-Islamic inheritance law allows women to inherit property and provides freedom to use this property. The differing position of women in these two laws causes the relationship between inheritance law and wealth accumulation to be treated differently in India. Meanwhile, in Indonesia, inheritance law has not been established as a national guideline in the form of legislation. So far, there are 3 (three) types of inheritance law that apply and are accepted by the Indonesian people, namely inheritance law based on Islamic law, customary law, and European civil law or Burgerlijk Wetboek (BW) (Fikri and Budiman, 2018).

Apart from the problems regarding the application of inheritance law, the current study focuses more on studying the relationship between the understanding of inheritance law and mathematical concepts. Like other Islamic universities, the state Islamic university Antasari Banjarmasin provides lessons on "faraid" science, a branch of the compulsory tarbiyah course, namely fiqh. Usually, this fiqh course will be divided into several parts, namely in the third semester, especially for PAI students, who will take fiqh courses in general. Then, this fiqh course will continue if they take the concentration of fiqh in the fifth semester. They study in two classes, namely the fiqh subject in MA and the Al Faraidh course itself, while in the sixth semester, they once again study inheritance in an introductory

inheritance course. On the other hand, mathematics only presents fiqh courses where the scope is only a discussion of heritage in general and concise, while in the PAI department, inheritance is discussed clearly, the authors are more interested in researching PAI students. Based on the explanation above, this study aims to determine the effect of mastery of the concept of fractions on the ability to calculate inheritance (Al Faraidh) in PAI students of 2014 fiqh concentration.

Islamic inheritance law

Inheritance law before the Islamic era in Arabia initially only gave inheritance rights to male relatives. Since the emergence of Islam, this law has changed, and the practice of inheritance also uses Islamic law. Under Islamic law, women have the right to inherit and the right of inheritance to more distant relatives to inherit. In the context of Islamic inheritance law, heirs fall into two broad categories: male Agnes ('asaba) and all others (Ahl al-fara'id). Male agnatic heirs have close relationships or relatives through the father. Close relationships occur when siblings have the same biological father and mother. Inbreeding occurs when siblings share the same biological father but have different mothers. Meanwhile, the uterine relationship happens when siblings share the same biological mother but have other fathers (Sigh, 2017).

Allah SWT commands that every believer follows Allah's provisions concerning inheritance law as contained in the holy book of the Qur'an and promises the punishment of hell for those who violate the rules by not carrying out the fair distribution of inheritance. Allah SWT says in Q.S An-Nisaa '(4): 13-14: "These laws are the provisions of Allah, whoever obeys (the laws) of Allah and His Messenger, Allah will surely enter him into Paradise where rivers flow, while they (will) abide in it forever. And that is a big win. And whoever disobeys Allah and His Messenger, and violates the provisions (laws) of Allah and His Messenger, Allah will surely put him in the fire of hell, while they will remain in it, and for him is a very humiliating torment."

Inheritance law is an essential branch of Islamic Jurisprudence, which deals specifically with how the deceased's property is divided among the heirs according to the Noble Qur'an, the Sunnah of the Prophet Muhammad (PBUH), and the decisions of other Muslim Scholars. This explanation is complete because Allah (SWT) provides an adequate description of those who can claim shares in the property or property of the deceased in about four verses (Tahir, 2015; Umar, 2021). Pumbaya (2014) explains that inheritance in Islam teaches about who inherits, who will be inherited. In addition, the law of inheritance also explains the calculation and how much is given to each heir. From the above definition, it can be seen that Islamic inheritance law comes from the Qur'an, the Sunnah of the Prophet Muhammad (SAW), and the decisions of other Muslim scholars. The importance of studying Islamic heritage cannot be overemphasized. Several Hadiths (although some have been verified to be weak) in which Prophet Muhammad (PBUH) calls on Muslims to learn and teach them. By extension, contemporary Muslim scholars still call on Muslims to study knowledge and spread it to not disappear from other non-Islamic views of it. One of the main factors causing this branch of knowledge loss is that students are currently not motivated to learn it (Pumbaya, 2014).

According to Umar (2021), Islamic scholars with Islamic heritage as their area of research interest mostly work or study in the Department of Islamic Studies or Islamic Law. Close interaction with Islamic clerics in Nigeria reveals that the main reason why Islamic heritage does not appeal to them is that they are weak in mathematics. And the successful implementation of Islamic inheritance requires basic mathematical skills, and most scholars and students of Islamic Sciences and Law are weak in mathematics (Umar, 2021).

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MATERIAL AND METHODS

This type of research is field research (field research). The approach in this study uses a quantitative approach. The quantitative approach emphasizes analyzing numerical data (numbers) processed by statistical methods (Hendryadi et al., 2019). The technique used in this research is descriptive research. Descriptive research is research conducted to describe or explain systematically, factually, and accurately the facts and characteristics of a particular population, not to find or explain the relationship between variables. This descriptive study uses a survey method.

Sampling and data collecting procedures

The population in the study were all PAI students with Fiqh concentration class 2014 with a total of 66 students. The collected data through three ways: tests, observations, and interviews. Test, the test's purpose is a series of questions or exercises and other tools used to measure skills, intelligence, knowledge, abilities, or talents possessed by individuals or groups (Arikanto, 2006: 150). This test is given to obtain data on student errors in solving Observation questions. The researchers are carried out to see directly the location, which is used to explore the data needed by conducting direct observations of the problem to be studied to obtain data, which supports this research. Interviews are used as one of the data collection techniques. The data collected relates to the interview material containing the obstacles faced by the research subjects and the profile of the school, students, and facilities available at the school. This technique is to complements and strengthens the data obtained by researchers from observation techniques.

RESULTS AND DISCUSSION

Descriptive statistics

Based on the data obtained from the results of the distribution of questions to respondents, the description of the effect of mastering the concept of fractions on the ability to calculate inheritance (Al Faraidh) in PAI students can be described as follows:

Students' ability to calculate the operation of adding fractions of two terms

Table 1.

Respondents in answering question no. 1

No	Bobot / skor	Frekuensi	Persentase %
1	0	3	7,5 %
2	2	1	2,5 %
3	3	18	45%
4	5	18	45%
Total		40	100%

Source: field data, processed

The table above shows as many as 45% of the students were able to answer question number 1 with the correct but incomplete answer and solve it correctly. Meanwhile, 7.5% of students were unable to answer at all, namely three students. Furthermore, there are 2.5% of students can complete only one step.

Table 2

Respondents in answering question no. 2

No	Bobot / skor	Frekuensi	Persentase %
1	0	3	7,5 %
2	2	1	2,5 %
3	3	20	50%
4	5	16	40%
Total		40	100%

Source: field data, processed

The table above shows that 50% of the students answered question number 2 with correct but incomplete answers, followed by students who answered correctly by 40%. Next, 7.5% of students were not able to answer at all. Meanwhile, 2.5% of students were only able to complete one step.

The student's ability to calculate the operation of multiplying ordinary fractions with any integer bilangan

Table 3

The results of respondents' answers to question no. 3

No	Bobot / skor	Frekuensi	Persentase %
1	0	0	0%
2	2	0	0%
3	3	22	55%
4	5	18	45%
Total		40	100%

Source: field data, processed

Table 3 shows that as many as 55% of students answered question number 3 with correct but incomplete answers, followed by students who answered correctly by 45%.

Table 4

The results of respondents' answers to question no. 4

No	Bobot / skor	Frekuensi	Persentase %
1	0	0	0%
2	2	0	0%
3	3	22	55%
4	5	18	45%
Total		40	100%

Source: field data, processed

Table 4 shows that 55% of students were able to answer question number 4 with correct but incomplete answers. Furthermore, followed by students who answered correctly by 45%.

Table 5
The results of respondents' answers to question no. 5

No	Bobot / skor	Frekuensi	Persentase %
1	0	0	0%
2	2	0	0%
3	3	22	55%
4	5	18	45%
Total		40	100%

Source: field data, processed

Table 5 shows that 55% of students were able to answer question number 5 with correct but incomplete answers. Furthermore, students who answered correctly were 45%.

Based on the respondents' answers to the tests posed, only a tiny proportion of PAI students do not master the concept of fractions. The level of mastery of the idea of fractions of PAI students with Fiqh concentration is sufficient, namely the average value of 75.6.

Regression analysis

The test results given on the understanding of mathematical fractions are then regressed to calculate inheritance. The analysis results show that the correlation between the mathematical fraction test and the inheritance calculation test is 0.632, with an R square of 0.40. These results indicate that 40 percent of the variation in students' abilities in calculating inheritance can be explained by their ability to perform mathematical fractional operations calculations.

Next, the regression equation model that is formed is Y = 1.732 + 0.555 X, which explains that every one-point increase in math test results can increase the ability to calculate inheritance by 0.55 units. On the other hand, a decrease of one point on the math test will decrease the ability to calculate inheritance by 0.55. The regression model formed is also proven to have fulfilled the assumption of residual normality, as shown in Figure 1.

Table 6.
Regression analysis

Mode	B	Std. Error	t	Sig.
(Constant)	1.732	.552	3.141	.003
x	.555	.112	4.964	.000
R	.632			
R Square	.400			
F	24.639			
Sig.	.000			

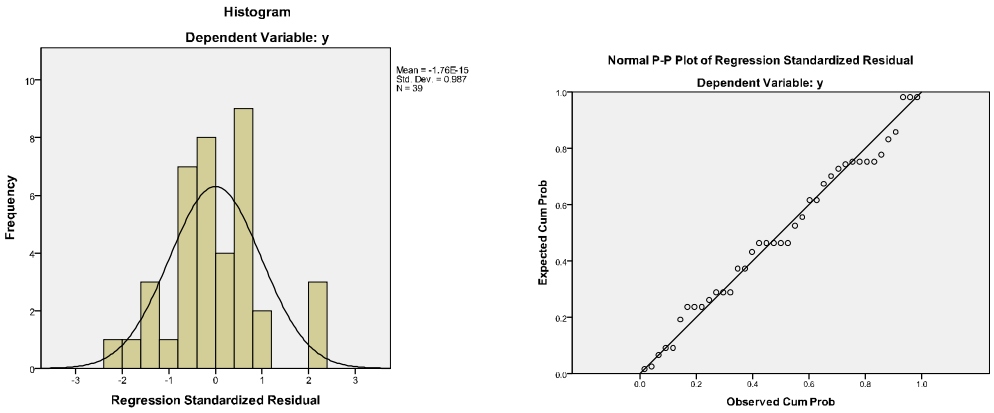

Figure 1.

Normality Test (Histogram and Normal p-p plot)

The campus needs to ensure that students are equipped with two balanced abilities, namely inheritance fiqh and the ability to count mathematical fractions. These results provide evidence that the application of inheritance calculations requires a combination of religion and logic. Mathematics is a science that can speed up the calculation process so that by being equipped with good skills, the inheritance calculation process can be faster and accurate

CONCLUSION

This study aims to test whether there is an effect of mastery of the concept of mathematical fractions on students' understanding of the calculation of inheritance. Through data analysis, it can be concluded that the two are indeed interrelated and mastery of the material fraction concept has a 40% influence proportion on students' ability to calculate inheritance. These results indicate that to support students' ability to calculate inheritance and be equipped with fiqh knowledge, they also need to be fitted with their ability to calculate, especially in mathematical fraction functions.

This study is limited to a sample of PAI students with Fiqh concentration class 2014, so it does not describe all students at Antasari Islamic University. Future studies are advised to expand the sample size and add more math fraction tests to show students' real abilities.

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