Excavating Mathematical Concepts Within Alms Context: An Auto|Ethnographical Study

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ABSTRACT

Mathematics and Islam are interconnected one another. Muslims need to apply mathematical knowledge in order to fulfil some Muslim obligations. One of the obligation in Islam is alms. This paper aims to portray the researcher's experiences as a Muslim in implementing alms in order to look for dominant mathematical concepts regarding the implementation. The study uses an auto|ethnographical approach and literature study. The auto│ethnographical approach allows each participant including the researcher to dive back into the values of alms that are meaningful when becoming a teacher and an elementary school student. Through these two approaches, the results found that the context of alms can be used in learning mathematics. Mathematical concepts in the second-grade elementary school, namely, the addition and subtraction operations are the dominant concepts mostly emerging in all stories. Those concepts also can be found in the all 34 Quranic verses which contains the value of alms. Such an alms-based mathematics learning empowers students to be more aware of how to spend their money with sincerity to help others. The study suggested to use the context of alms within mathematics learning so that it can help to build up students' good character.

Keywords: Islamic mathematics, alms context, auto|ethnographical approach

1. INTRODUCTION

Mathematics, what exactly is the meaning of this field of science? Until recent time, there is no decision has been announced as a bright spot or conclusions from the experts about the meaning of Mathematics itself. This is due to the nature, character and personality of Mathematics. Mathematics has a broad view, so each expert will have a different opinion and a freedom to express their perspectives, experiences, and understandings [1]. Paul Ernest in his book *"The Philosophy of Mathematics"* examines two opinions about the nature of Mathematics. These are traditional and modern views [2]. The nature of Mathematics according to the traditional view has many streams which shows Mathematics as a science that is far from values and separate from humanity aspects, in simple way, Mathematics can stand alone [2]. This kind of opinion was also conveyed by experts such as Vancleave (2006), that said Mathematics is a science that deals with the amount of something [3].

This traditional view is contrary to the traditional Mathematical view above. The nature of Mathematics according to the modern point of view has a different perspective. The essence of mathematics according to this view is *"Social Construction"*. Social constructivism sees mathematics as a product of organized human activity over time. All different fields of knowledge are human creations, interrelated with their shared origins and history. As a result, mathematics is also tied to the culture, and colored by the values of the makers and their cultural context [2]. This view is also relevant to opinion of [4] According to them, Mathematics is taught with the main aim of forming and developing various abilities to deal with every situation and problems in life. The problems that can be solved with Mathematics include various aspects such as culture, social aspects, and religion, especially Islam.

Mathematics and Islam are not actually two separate things. Islam is always related to everything in the world.. Islamic Mathematics is Mathematics that makes the Qur'an and the Sunnah of the Prophet as a true postulate or

statement [5]. This is based on the Muslim History Hadith which reads: *"I leave you two matters, you will not get lost while holding on both. The Book of Allah and the sunnah of the Prophet Muhammad"*. Islamic mathematics shows us that humans need not hesitate to form something that comes from Allah and His Messenger. All the surah and the Sunnah of the Prophet created in the Qur'an and narrated in the Hadith are indeed used to guide people to live their lives by following the right path. There are many kinds of branches in Islamic Mathematics one of which is Mathematics Alms.

Alms Mathematics is Mathematics that makes the Holy Qur'an, Hadith and Sunnah of the Prophet as a postulate related to alms issues contained in Mathematics. Alms mathematics in Ustad Yusuf Mansyur's book entitled *"the miracle of giving"*, is divided into two interrelated concepts including religious concepts and mathematical concepts. This opinion is relevant to the opinion that Mathematics has two roles which are the practical role and the spiritual role especially in the context of being a Muslim [6].

In the religious concept of the ustad Yusuf Mansyur emphasized two things including (1) the Greatness of Almsgiving (2) Giving more and reaping more, besides being a helper, Ustad Yusuf Mansyur emphasized that almsgiving would not reduce the wealth of God's servants, he promised that God promised to his people to return what has been offered at least 2 times [7]. Whereas in the mathematical concept, ustad Yusuf Mansyur emphasizes three things, among others: (1) Basic mathematics alms, basic mathematics alms according to Yusuf Mansyur is Mathematics which is slightly different from other mathematics. In alms mathematics, even though the numbers are reduced the results will still be large because God will actually give more than what we spend [7], [8].

One of the verses in the Qur'an that contains the concept of Mathematics is explicitly in verse 261 of Surah Al-Baqarah. In the interpretation of Ibn Kathir explained that his words (مثلالذينينفقونأموالهمفيسبيلالله) Sa'id bin Jubair said: *"In order to obey Allah Ta'ala"* While Makhul said: "What it is meant is to invest treasure for jihad, in the form of a rope for jihad, in the form of a rope. horses, preparations for weapons, and others. "His Word (كمثلحبةأنبتتسبعسنابلفيكلسنبلةمائةحبة) Syabib bin Basyar tells of the Ikrimah, from Ibn Abbas:" The Dirham used for jihad and worship is folded to hajj and worship. fold. Therefore, Allah Ta' said with this pronunciation. This parable touches the soul more than the mention of a 700-fold number, because the parable contains the sign that the reward of good deeds was developed by Allah Ta'ala for the perpetrators, as well as plants, flourishes for those who plant it in fertile soil. And in the hadith also mentioned the multiplication of goodness up to 700 times [9], [10].

The above verse contains two important aspects to learn, which are the concept of Mathematics of subtraction and addition also the context of alms in the verse. The context of alms that integrates with such mathematical concepts can be very useful in learning elementary mathematics in class. These verses are verses in which the Mathematical context

of God is explicitly mentioned. The Qur'an in it is not merely to inform people about Islamic law, but also all forms of science. The Qur'an which is a human guideline and holds one of the roles to motivate humans, conduct reasoning, research, shape and show scientific thinking also contains many mathematical concepts and contexts in it [11].

Previous research related to the exploration of mathematics in the Qur'an verses, one of them was conducted by Abdussakir [12]. Abdussakir explored many of the findings of mathematics in almost all surahs in the Qur'an. The titles of his findings are Mathematical Patterns in Surah Al-Ashr, Al-Kautsar, and An-Nashr [13], Secrets of mentioning numbers in the Qur'an[14], Integrative Studies in Mathematics & the Qur'an [15]. The significant difference between the research of researchers and Abdussakir's research is that he studies and records any number that appears in the Qur'an, any number patterns formed in the Qur'an, and the secret of mentioning the numbers in the Qur'an. While researchers dig deeper about the context of Mathematics contained and which can be implemented in basic education, within the scope of verses that contain the value of alms.

We hope that this research can be used and applied in teaching and learning, especially in Islamic elementary schools. With the integration of Mathematics and Islam, in addition to get the context of Mathematics that is practically and spiritually present in a Muslim's daily life such as alms.The moral awareness of students will also increase indirectly, because without morals that intervenes in science, scientist, and citizen (students) will easily fall into doing *"intellectual prostitution"* [16]. Through this way, the generation of science and technology and morality will grow and develop in multicultural life in Indonesia. Researchers hope this research can also be input for running the curriculum. Indeed, we understand that the spirit of the 2013 curriculum was initially to integrate KI-I and KI-II in all subjects. Based on this background study, the researchers intend to explore the verses of the surahs in the Qur'an which contains of alms valuesto search for mathematical content that is implicitly or explicitly written.

2. METHOD

Based on the purpose of this study, researchers use a qualitative type of transformative research by combining several paradigms. The most common feature of transformative research is adopting an integral perspective that enables research to design multi-paradigm questions that ultimately aim to change educational policies and practice [17]. In this study, we integrate three paradigms, such as: interpretative paradigm, critical paradigm, and post-modern paradigm or the so- called new paradigm in educational research above. Transformative learning was first coined by Mezirow. Transformative learning is a process in which there is a change in influence on *"a frame of reference"* [18]. Frame of reference is an assumption obtained through an understanding of the experiences that

have been passed. Changing to the frame of reference itself do not occur in a short process. Transformative research involves a process of critically examining the personal and professional values and beliefs of researchers, exploring how the world of research life has been governed (perhaps distorted) by social norms, culture that is almost invisible, valuing the involvement of researchers themselves in introducing students critically into the a similar world of life, creatively conceptualizing the professionalism of the researchers themselves, and committing to changing educational policies, curricula or pedagogical practices within the research institutions themselves. The purpose of the statement, transformative research provides a means for researchers to carry out transformations for themselves and for students as research subjects related to the educational process that may not be in accordance with the values that should occur.

Taylor and Luitel argues that transformative learning as a research has a contribution to achieving sustainable development in the main educational sphere, the benefits include: (1) Researchers are possible to be learners in the long term, because transformative research enables researchers to be able to reflect critically their social role as active citizens, teachers, educators and social activists, so that they can overcome the global crisis through their involvement in the education process. (2) Through various scientific approaches embedded in research as transformative professional development, practitioners are ready to take educational action. (3) Because the focus of mentoring on transformative research leads to critical thinking and creative thinking, transformative practitioners tend not to be cynical or overly skeptical; rather the researchers produced cultural contextual solutions to the pressing problems faced by the current generation. (4) One of the main results of research as the development of transformative professional researchers is to develop practitioners who are able to look inward and re-evaluate the ethical viewpoints of researchers who are culturally located through critical reflective practice[17].

As mentioned before, this research belongs to transformative type qualitative research. In oder to be transformative researchers are required to understand the five dimensions of transformative knowledge. Taylor states that the five dimensions of transformative knowledge are: *(i) Cultural self knowing, (ii) Relational Knowing (iii) Critical Knowing (iv) Visionary and Ethical Knowing (v) Knowing in action.* Each of these 5 *ways of knowing* above will be needed during the research process [19]. In this procedure will be explained about the results of the identification of the procedure along with knowing needed during the process.

The interpretative paradigm offers researchers a social constructivist perspective to develop a deep and contextual understanding that arises from a culture that is shared with the reflection process to deepen understanding both of themselves and to the subject of culturally located research [20]. This paradigm provides a forum for researchers as a whole to reflect critically, especially researchers who here are Muslims in the form of auto│etnography about the

context of alms in daily life, so that researchers and research participants will increasingly realize how knowledge and interrelated Infaq context should be. Researchers will also do auto│etnography to find out how the values of alms in Mathematics learning change the views of researchers as a teacher who has never applied Mathematics learning by integrating Islamic values and as students who had not yet realized the importance of alms values. This paradigm facilitates researchers to interpret emerging mathematical concepts that can be applied in school mathematics learning.

The second paradigm that researchers use with the aim of answering research questions is the *critical* paradigm. Many experts convey that the purpose of using this paradigm is to criticize policies that are considered unfair. Through research that uses this critical paradigm researchers hope to reduce the hegemony that occurs in Mathematics learning so that Mathematics and Islamic values and positive values can run from apperception or commencement of learning to drawing conclusions at the end of learning. Through this critical paradigm, the researcher intends to raise his own critical awareness and build a moral vision of a better student. In this study, researchers as educators are aware that alms values should be implemented / practiced in daily life, given the importance of almsgiving and as Muslims, both researchers and students are obliged to do so. The practice of alms values should be able to go through every lesson, including Mathematics learning.

The last paradigm is the role and implementation of the *post-modern* paradigm in this research is to enable researchers to use various genres in terms of writing to engage and readers. The researcher uses the paradigm with the aim of expressing creativity as fully as possible, so that the expected representation can be well received by the reader. This post-modern paradigm also facilitates researchers to use the words *'I'*, *'me'*, *'researcher'* on each story in the body of writing. The facility does not mean that it does not have a specific purpose, the use of the first-person perspective will increasingly show the subjectivity that exists in this study[20]

These paradigms greatly affect the research method that will be used. Researchers understand that the selection of methods is something that cannot be underestimated because using the right method, the data obtained will also be appropriate for the research questions that have been made. The methods chosen in this type of transformative research include: literature study, narrative inquiry and auto│etnography that will help researchers achieve the research objectives as well as the implementation form of the specified paradigm [6].

Researchers are required to prepare research instruments before going into the field and looking for data. Research instruments are the tools that are needed or used to collect the data. In the other hand, by using these tools, the data needed to answer the problem formulation can be collected. Researchers need instruments in the form of literature study guidelines. The researcher chose a mind map and also a context table as an instrument to guide the study of

literature. The mind map will be mapped into several sections depending on the type of verse and hadith that will be explored, such the verse whose mathematical exposure can be explicitly known and the verse whose explanation is implicitly so that it requires further study by using interpretation to find out the meaning of the letter as a whole. Mind maps will also divide the discussion related to mathematical concepts found besides based on the type of verse. As it is known that Mathematics is limited to three main materials such as: numbers, geometry, and data processing, so that the discussion will be more organized and focused with each material. Researchers also use context tables as instruments. The context table contains the verse numbers, the material contained and also the SK and KD in the curriculum, so that their application will also be more specific.

The next step the researcher must take after collecting the data is to process the data and analyze the data.So, the collected data will be easier to understand and in the end the researcher can conclude the answers of the research objectives as mentoned in background of the study above. Data analysis techniques that researchers use are data analysis techniques according to [21]. Activities in data analysis based on the model are data collection, data reduction, data display, and conclusion / verification.

This study was also complemented by data validity techniques which were also termed quality standards in order to strengthen the credibility of this research itself [6]. Each paradigm in transformative research has its own quality standards, interpretation paradigms with quality standards. Quality standards or data validity techniques Trustworthiness and Authenticity (authentic and trustworthy), critical paradigms with critical reflexivity, while verisimilitude for post-modern paradigms [20].

3. RESULTS AND DISCUSSION

In the research method, the researcher has explained that the researcher will use two types of data collection techniques to find mathematical concepts contained in the context of alms from the verse and from the experience of the research subjects. Below, the researcher will divide the data presentation based on the data collection techniques used, such as the auto⎮etnographic study for data results in the form of stories and literature studies based on the context of alms containing Mathematical concepts.

The results from the auto⎮ethnography data consist of five stories. (1) First story is entitled " The First time". This first story tells the researcher's experience when she was asked to do alms by the researcher with her own money for the first time in her life. At that time researchers felt very irritated because the money was planned to be used for other purposes. The researcher explained that the things that should not be left out in this life are alms and prayers. First story contains the Mathematical concept of subtraction (2) The second story is entitled "Alms at Good Times. The second story tells the experience of Ustad A or the second

research subject of At-Taqwa Elementary School for the first time giving alms, at that time he sat in the second grade of elementary school. In the month of Ramadhan, the Ustad School A holds regular activities at Pondok Romadhan with an end to charity for the poor around the school. In the charity activity, Ustad A still asked his mother. Afterwards because of feelings of guilt, Ustad decided to set aside his money just in case there were other charitable activities. From the experience of giving alms in the month of Ramadhan, Ustad A grew into a person who likes to give alms, of course using his own money The mathematical concept that contained in this story is the concept of subtraction and division.(3) The third story is entitled "Alms: Do it with a sincere heart". Story 3 tells the story of Ustadzah B, the third research subject who is also one of the teachers at SD IT-At-Taqwa. Both parents of ustadzah B are very fond of giving charity, Ustadzah B is always invited when they want to provide the basic ingredients to be offered. One day, Ustadzah B's classmate was sick and the teacher asked all students to set aside part of their allowance to give it to sick students. Ustadzah B did give his allowance but she felt very annoyed and complained to his mother after school. Her mother explained that alms should be done sincerely with soft words. After that incident, Ustadzah B became the first person to always give alms money when a sick friend had to be visited. Unmitigated he even gave half more than his pocket money at the time to be offered. This story contains the Mathematical concepts of subtraction and division. (4) The fourth story is entitled "Alms: Like corn kernels in a fertile cornfield". The fourth story tells the experience of a researcher who heard the story from a high school physics teacher who told about a friend who was successful and had a large salary. The research teacher told me that his friend was very fond of charity. He began to take alms-giving since the days of college. From that story he motivated us in class to regularly give alms. He explained that there were many benefits from giving alms. He likens alms like corn kernels in a fertile cornfield. Mathematical concepts contained in the story are multiplication and subtraction.The last story is entitled Spiritual Paradigm: Stimulus of Student Learning and Morals. The last story tells the experience of Ustadzah B when she had become a teacher and applied verses that gave alms context to learning mathematics. The surah used is the At-taubah surah. Ustadzah B delivered the verse at the opening activity of learning and asked students to find out the relationship between the sound of the hadith and the material to be delivered today. Ustadzah B always feels amazed when students understand the integration between spiritual paradigms with the material that she wants to convey. The last story contains the Mathematical concept of subtraction

Based on the five stories above, the researcher considers that applying the value of alms in a lesson is important to form a good foundation for students. Students must understand that they need to learn to set aside a portion of their sustenance for alms. Getting used to charity will be very positive for someone, especially starting from childhood. The word alms can be interpreted by reducing

some of the assets we get to give to others, because of Allah SWT.

The concepts of alms are not only obtained by researchers through the auto│etnographic studies that have been exposed above. Researchers also use literature studies from the Qur'an to complete the auto│etnographic data. In the Qur'an there are many verses that mention and encourage people to do alms.   Quran Verses that contain the values of alms along with the Mathematical concepts contained inside are 34 verses. 13 of them are from Surah Al-Baqarah. (1) The first verse is verse 2 of the Al-Baqarah chapter. This verse contains the Mathematical concept of subtraction. (2) The second verse is verse 195 of Surah Al-Baqarah. This second verse contains the Mathematical concept of addition and subtraction. (3) The third verse is verse 196 of Surah Al-Baqarah. This verse contains the Mathematical concept of subtraction and multiplication. (4) The fourth verse is verse 215 of Surah Al-Baqarah. The mathematical concept contained is subtraction. (5) The fifth verse is verse 219 of Surah Al-Baqarah. The Mathematical concept contained is subtraction 6) The sixth verse is verse 245 of Surah Al-Baqarah. The mathematical concepts contained are subtraction and multiplication. (7) The seventh verse is verse 254 of Surah Al-Baqarah. The mathematical concept contained is addition and subtraction. (8) The eighth verse is verse 261 of the letter Al-Baqarah. The mathematical concepts contained are the concepts of subtraction and multiplication. (9) The next verse is verse 262 of Surah Al-Baqarah. This verse contains the Mathematical concept of addition. (10) The tenth verse is verse 265 of the chapter Al-baqarah. The mathematical concepts contained are the concepts of addition, subtraction, and multiplication. (11) The eleventh verse is the 267th verse of Surah Al-Baqarah. The Mathematical concept contained is the concept of subtraction. (12) The next verse is the 272 verse of Surah Al-Baqarah. This verse contains the Mathematical concepts of subtraction and addition. (13) The next verse is the 274th verse of Surah Al-Baqarah. This verse contains the Mathematical concepts of subtraction and addition.

Apart from surah Al-Baqarah, some verses contain the value of alms than other verses. (14) The fourteenth verse is verse 92 of Surah Ali Imran. This verse contains the Mathematical concepts of subtraction and addition. (15) The fifteenth verse is verse 114 of Surah An-Nisaa. This verse contains the Mathematical concepts of addition and subtraction. (16) The Sixteenth verse is verse 3 of Surat Al-Anfal. In this verse, the mathematical concepts contained are the mathematical concepts of addition and subtraction. 17) The next verse is verse 60 of Surah Al-Anfal. This verse contains the concepts of Mathematics and addition. (18) The eighteenth verse is verse 99 of Surah At-Taubah. This verse contains the concept of subtraction explicitly and the concept of addition implicitly. (19) The nineteenth verse which contains the value of alms is verse 88 of Surah Yusuf. In this verse, the mathematical concepts contained are the mathematical concepts of addition. (20) The next verse is verse 22 of Surah Ar-Ra'd. In this verse, the

mathematical concepts contained are the mathematical concepts of addition and subtraction. (21) The next verse is the twenty-first. This twenty-first verse is verse 31 of Surah Ibrahim. This verse contains the concepts of addition and subtraction. (22) The twenty-second verse is verse 67 of Surah Al-Furqan. This verse contains the mathematical concepts of addition and subtraction. (23) The twenty-third verse is verse 16 of Surah As-Sajdah. In this verse, the Mathematical concept contained is subtraction. (24) The next verse is verse 35 of Surah Al-Ahzab. This verse contains the mathematical concept of subtraction explicitly and the concept of addition implicitly. (25) The next verse is verse 39 of Surah Saba. This verse contains the mathematical concepts of subtraction and addition. (26) The twenty-sixth verse which contains the value of alms is verse 29 of Surah Father. This verse contains the Mathematical concepts of subtraction and addition. (27) The next verse is verse 7 of Surah Al-Hadid. The mathematical concept contained is subtraction and addition. (28) The next verse is verse 10 of Surah Al-Hadid. This verse contains Mathematical concepts of addition and angles. (29) The next verse is verse 18 of Surah Al-Hadid. This verse contains mathematical concepts of subtraction and multiplication. (30) The thirtieth verse is verse 22 of Surah Al-Mujadilah. This verse contains the concept of subtraction explicitly.

The last four verses with the context of alms found in Surah At-Taghabun, Surah At-Talaq, Surah Al-Lail, and Surah Al-Munafiqun. (31) The thirty-first verse is verse 16 of Surah At-Taghabun. The verse contains the Mathematical concept of subtraction. (32) The next verse is verse 7 of Surah At-Talaq. The Mathematical concept contained is subtraction. (33) The thirty-third verse is verse 5 of Surah Al-Lail. In this verse, the Mathematical concept contained is subtraction. (34) The last verse or verse thirty-four is verse 10 of Surah Al-Munafiqun. This verse contains the Mathematical concept of subtraction.

Based on the results of literature studies that have been conducted by researchers through surahs in the Qur'an, there are 34 verses that contain the context of the value of alms in various problems in human life. Mathematical concepts that appear based on the context table above include: (i) the concept of subtraction and addition (ii) the concept of measuring angles. The concept that most often arises among the other concepts is the Mathematics concept of subtraction and addition . The concept appears in all verses that researchers explore. The concepts the researcher describes in the following description:

3.1. The Concept of Multiplication and Division

Mathematical concepts in addition and subtraction operations appear there are also other arithmetic operations concepts. The concept is the multiplication and division operations. The concept of multiplication and division

operations is one of the important concepts to be studied. Steve says that the multiplication operation is a very fast sum calculation operation [22]. Meanwhile, according to Chanifah multiplication is a repetitive addition or it can also be interpreted as a sum of some of the same numbers [23]. Based on the results of the literature study and the autoetnographic results of the concept of multiplication operations are contained in story 4. The concept of multiplication contained in the 4th story can be seen implicitly. The concept can be seen through the word *"Set aside 25,000 for a week"*.

In the Qur'an verses which are explored by multiplication operations there are surah Al-Baqarah verses 196, 261, 245, 261, 165 and in surah Al-Hadid verse 10. In verse 196 the concept is implicitly seen in the context of fasting such paying fidyah. It means that a person who has to pay fidyah must multiply a lot of fidyah that must be paid. In verse 196 the concept of multiplication is also seen implicitly in the phrase "A grain grows seven points". This is in accordance with the above theory which means multiplication with repeated addition. This can be seen in setting aside 25,000 for a week, which means adding 25,000 seven times. or a grain that grows seven points. In verses 245, 261, and 265 there is the word multiply which in the interpretation is explained there is a word doubling. Perhaps the verse does not directly mention multiplying. But implicitly and in quantity can be seen that the statement twice can be interpreted as multiplication. Similarly, the statement twice the sea or seven times the mountain. In that verse, it can be proven that there is a multiplication operation in the verses that contains the value of alms which is interpreted as implicit

The last operation is the division operation, which is the opposite of the multiplication operation. These arithmetic operations are contained in story 2 and story 3 which are generated through the auto│etnographic process. In the second story the concept of division is explicitly seen in the phrase *"Dad gave out allowance"*. In story three there is in the sentence "give half more" and share with several children.

3.2. Angular Concept

In learning mathematics, angles are defined as fields between two lines that meet at a point. In verses that contain the concept of alms, there is a concept of angles which are found from implicit verses. The concept is found in verse 10 of Surah Al-Hadid. In that verse explicitly *"higher degrees"*. In the interpretation of Ibn Kathir is a differentiator or distance between people who do not give alms to those who do charity. The purpose of the interpretation is that the field between the charity person and the person who does not do charity forms an angle with a degree unit. This is relevant to the opinion of Mariana who said that *"each body movement in wrong shapes a certain angle"*. In this verse it is not stated how many degrees there are only a few degrees which can be inferred more than 1 degree [6].

3.3. The Concept of Addition and Subtraction

As it is known that in addition to numbers, the addition and subtraction calculation operations are one of the crucial concepts in elementary school, because all aspects of Mathematics learning require these arithmetic operations to be well mastered. Count has the meaning of numerating (adding, subtracting, multiplying, and so on). The word *"calculate"* which gets the prefix me, will be the verb *"count"* which means: (1) looking for the amount (the remainder, the income) by adding up, subtracting, etc.; (2) numerating to find out how many (number); (3) determine or determine according to (based on) something [23]. Based on this understanding, it can be concluded that the arithmetic operation is an act to determine the value or solution of something through a mathematical process that is the process of adding, subtracting, multiplying, dividing, and so on.

Basic arithmetic operations include addition, subtraction, multiplication, and division [12]. These operations have a very close relationship, so understanding the concepts and skills of conducting operations will affect the understanding of concepts and other operating skills [24]. Learning this arithmetic operation, can be found in all aspects of human life, including the Qur'an itself. Abdussakir writes in his book Mathematics 1: An integrative study of Mathematics and the Qur'an that the basic arithmetic concepts contained in the Qur'an are the concepts of addition, subtraction and division [12]. The concepts of arithmetic operations are scattered in all surahs in the Qur'an. But the concept of arithmetic operations most commonly found is the concept of substraction. The theory delivered by Abdussakir, is in accordance with the findings of researchers who explored about 30 verses of the Qur'an, all of which contain explicit mathematical concepts of subtraction and some of them contain concepts of summing mathematics explicitly and implicitly[12].

This arithmetic calculation plays an important role and the principles and arithmetic strategies used by students are very important for students' cognitive and conceptual development to advance more complex concepts [25]. The operation is basically a rule that connects each pair of numbers with other numbers, or it can also be mentioned by combining the number of two or more numbers so that it becomes a new number [23].

The concept of Addition is found in: Surah Al-baqarah verses 195, 196, 215, 262, 265, 267, 272, 274, Surah Ali-Imran verse 92, Surah An-Nisaa verse 114, Surah Al-Anfaal verse 3, Surah Al-Anfaal verse 60, Surah Taubah verse 99, surah Yusuf verse 88, Surah Ar-Ra'd verse 22, Surah Ibrahim verse 31, Surah Al-Furqan verse 67, Surah As-Sajdah verse 16, Surah Al-Ahzab verse 35, Surah Saba '39, Surah Faathir verse 39, Surah Hadid verses 7, and 10. In these verses explicitly and implicitly written commands of Allah that contain this important concept.

The concept of addition found above, is implicitly contained in the surah translation. The concept of addition

appears in spending (part of your treasure) in the way of Allah. The concept of addition can arise if we give alms in large quantities (spending money to provide food to orphans consisting of several types of food and being added together. into the sum because sometimes some people not only offer their wealth in the form of money, but can be in other forms such as food, clothing and so forth.

The concept that are opposite to the addition is subtraction operation. All stories and all verses that the researcher explores and which contain the context of alms, contain the concept of subtraction . The concept of subtraction is derived from the words *"giving alms",* treasuring wealth, earning wealth in the way of Allah. In the interpretation of Ibn Kathir explained that the meaning of the word charity is to reduce some of the wealth generated from sweat or our work with the intention and purpose to obtain a reward from God. In verses and stories not only money can be offered but also the staples that we usually consume daily.

The discovery of the above Mathematical concepts both frequently appearing or which only occasionally appear relevant to the modern views) which says that Mathematics is a social constructivism, with the aim to explain that Mathematics can be widely understood [2]. This is evidenced by the many problems that exist in the Surahs - the surah that contains the context of alms in it also contains many Mathematical concepts in it, which also not only contain many numbers in it or activities with logical reasoning [26].

In the verses that we find the concept of mathematics in it, is a form and guidance from God to solve various problems. On alms discussion which in all the verses contains the concept of Mathematics that is explicit reduction. When explored further, it is very important that a human understands reduction. If there is no reduction, living things will find it difficult to share with one another, a Muslim must think repeatedly to do charity and give alms. Based on the example of the problem, it can be seen clearly that Mathematics is not only about logic or certainty [2]. Mathematics exists to help humans solve many problems both in terms of world problems and the afterlife.

4. CONCLUSION

Through the results of auto│etnography obtained 5 types of stories from research subjects related to the value of alms in its role as educators and students. The stories are titled: (1) First time (2) Almsgiving in Good Time (3) Almsgiving: Do it with Heart's Sincere (4) Alms is like Planting Corn Seeds in a Fertile Sourced Field (5) Spiritual Paradigms: Learning Stimulus and Student morals. While the Literature study found about 34 verses that contain the context of alms in the Qur'an include: Surah Al-Baqarah in verses: 3, 195, 196, 215, 219, 245, 254, 261,262, 265, 267, 272, 274, Surah Ali Imran verse 92, Surah An-Nisaa 114, Surah Al-Anfaal verses 3 and 60, Surah At-Thaubah verse 99, Surah Yusuf

verse 88, Surah Ar-Ra'd verse 22, Surah Ibrahim verse 41, Surah Al-Furqan verse 67, Surah As-Sajdah verse 16, Surah Al-Ahzab verse 35, Surah Saba 'verse 39, Surah Faathir verse 29, Surah Al-Hadid verses 7, 10, 18, Surah Al-Mujadilah verse 12, Surah At-Thaghabun verse 16 , Surah Ath-Thalaaq, and Surah Al-Lail verse 5, Surah Al-Munafiqun verse 10. Mathematical concepts generated through the two data collection techniques include: (i) the concept of arithmetic operations on money that is includes the concepts of subtraction, division and multiplication, (ii) the concept of arithmetic operations related to basic needs, and (iii) the concept of measuring angles. The concept that most often appears in each story and verse is the concept of operations of addition and subtraction.

To suggest, we propose that the learning system in SD IT can use the Islamic context from the Koran, hadiths, stories of the prophets and other Islamic sources in Mathematics learning as in this study or other learning because this is already in the latest 2013 curriculum which integrates KI namely religious values into learning activities.

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