MATHEMATICS AND ISLAMIC MODERATION: INTERNALISING THE VALUE OF TAWWASUTH ON THE MATERIAL OF LINEAR EQUATIONS ONE VARIABLE

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Abstract. Internalising Islamic moderation values especially tawwasuth in mathematics is very important in mathematics education, because it can equip moderate characters and avoid extreme ideologies in Indonesia, but there are still few studies that discuss this, this study aims to internalise the value of tawwasuth on the concept of linear equations. This research is a literature research with an analogy strategy. Reviewing theories, references and other scientific literature related to mathematics and tawasuth. The result of this research is that solving linear equations focuses on finding values that equalise both sides of the equation. It involves finding the values of variables to form the solution set. The basic principle is to achieve a balance between the two sides of the equation, as in the concept of tawasuth in Islam, promoting moderation and harmony. The importance of moderate character is emphasised in mathematics learning, encouraging inclusiveness and preventing extremism, to form a peaceful and tolerant society.

Keywords: *Mathematics, Islamic Moderation, Tawasuth, Linear Equations*

INTRODUCTION

Internalising the values of Islamic moderation particularly tawwasuth in mathematics is crucial in the current educational landscape polluted by radicalism

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(Nafi'an, et al. 2023; Suud et al., 2023) Teaching Islamic moderation is essential to counter the extreme ideologies prevalent in Indonesian society (Hidayat, 2022). Integrating values with contextual approaches, can effectively instil character values in students (Komala, 2023). By utilising strategies such as analogy and open-ended problem solving, educators can foster the values of tawwasuth in mathematical problem solving, promoting tolerance and harmony in society (Riyana, 2022). This holistic approach not only improves mathematical skills but also fosters a mindset of moderation and respect for diversity, contributing to a more peaceful coexistence in pluralistic communities.

Based on the literature review, it was found that research on the internalisation of Islamic moderation values in mathematics, especially the value of tawwasuth, is still limited even though on the other hand it is very important, so far the research has been conducted by PAI teachers who have effectively integrated Islamic moderation values into the curriculum. considering the current shift towards conservative ideology in Indonesia (Nafi'an, et al 2023). So it is necessary to integrate Islamic moderation values into other subjects, especially mathematics.

The advancement of Muslim knowledge today, especially in the field of knowledge and peaceful Islamic teachings, requires an integration between the concept of tawasuth and the learning process. Based on observations at school, teachers teach the system of linear equations only focusing on material and problems, PLSV material should be associated with character aspects related to tawasuth values in order to provide understanding to students to be mediators and peacemakers in the midst of society.

Why is this important to do? If seen in the research results of the Institute for Islamic and Peace Studies (LaKIP) published in 2015, it shows that students have very strong radical and intolerant views. This is evidenced by almost 50 per cent of students and teachers approving of radical actions. The data is divided into 25 per cent and 21 per cent of teachers who also stated that Pancasila is no longer relevant. This is further exacerbated by the percentage of approval for the establishment of Islamic sharia in Indonesia, which reached 76.2 per cent of teachers and 84.8 per cent of students.

STUDY THEORETICAL

Nafi'an, (2023) explains that the internalisation of Islamic moderation values, particularly tawwasuth, in mathematics is crucial in the Indonesian educational context to counter the shift towards conservative ideologies. Educational institutions play an important role in instilling moderate values in students through education, as well as emphasising the spread of Islamic teaching values and leading by example. At the secondary education level, there is a need to integrate moderation content in lessons, optimise learning approaches, and special programmes (Komala, 2023).

Efforts to integrate the understanding of Islamic moderation (in this case tawasuth) and the learning process have actually been carried out several times. First, Imam Muddin's research on integrating the values of wasathiyah Islam with learning in the State Madrasah Ibtidaiyah. Where the integration of wasathiyah Islamic values can be done with the implementation of character education in Madrasah Ibtidaiyah Negeri. Second, research conducted by Abu Amar on the value of wasathiyah Islam in the Religious Aliyah Madrasah curriculum. Where in this study shows that the concept of tolerance in the Madrasah Aliyah Keagamaan curriculum is limited to the realm of tolerance in the diversity of religious practices and accepting other religions and groups. Third, research by Sauqi Futaqi on the construction of Islamic Moderation in the Islamic education curriculum. Where the results of this study indicate that in the aspect of curriculum, Islamic moderation can at least be developed through the formulation of curriculum development principles extracted from the principles of moderation and the use of appropriate approaches in integrating curriculum content.

METHOD

This research is a literature research with an analogy strategy. Library research or also known as library research is a type of research conducted by examining literature or written sources in libraries or other places. According to Sugiyono, library research is a study of theories, references and other scientific literature related to the culture, values and norms that develop in the social situation under study. This research aims to obtain relevant information and data about the internalisation of the value of tawasuth in the system of linear equations. The internalisation of the value of tawasuth is analogous to

the concepts that exist in the concept of school mathematics. Duit asserts that the use of analogies can make research seem more appealing. Research can be made more comprehensible and engaging for readers by using analogies. Glynn contends, however, that analogies can be utilized to enhance comprehension of difficult or abstract ideas. Analogies can be useful in bridging these ideas with previously held beliefs.

RESULT AND DISCUSSION

Integration of *Tawwasuth* values in Linear Equation of One Variable (PLSV)

Linear equations of one variable are part of algebraic material in schools that students need to understand (Nafi'an, 2017). An equation is an open sentence that uses the hyphen "=" and has only one variable of rank one. Variables (variables) are symbols in open sentences that can be replaced by any member of a predetermined set.

The principle of one-variable linear equations is equality and balance between the left and right segments, this is what is called equivalence, two or more equations are said to be balanced (equivalence) if they have the same solution set and are denoted by the symbol "↔". The conditions for an equation to be expressed as a balanced/equivalent equation are by (1) adding or subtracting both segments with the same number, and (2) multiplying or dividing both segments with the same number. Linear equations of one variable are important to be taught in solving mathematical problems so that students can be creative and behave positively, especially in justifying a truth (Nafi'an, 2015, Nafi'an, 2016, Nafi'an 2020), the principle of balance in PLDV is logically analogous to the value of tawwasuth in Islamic moderation, which means Tawassuth in Islamic moderation refers to maintaining a balanced and moderate approach in religious practice and daily life, avoiding extremes and tendencies towards certain groups or ideologies. This concept is emphasised in Islam as a way to promote peace, justice and harmony among individuals and society.

This concept of tawasuth is basically applied as an effort to create a tolerant, peaceful ummah, and not to go to extremes in the name of belief. It is a middle-of-the-road attitude that is based on the principle of life that upholds the necessity of passing impartially and avoiding tatharuf (extreme) attitudes.

This is legislated from the words of Allah SWT in QS. Al-Baqarah, 143:

وَكَذَٰلِكَ جَعَلْنَٰكُمْ أُمَّةً وَسَطًا لِّتَكُونُوا۟ شُهَدَآءَ عَلَى ٱلنَّاسِ وَيَكُونَ ٱلرَّسُولُ عَلَيْكُمْ شَهِيدًا ۗ وَمَا جَعَلْنَا ٱلْقِبْلَةَ ٱلَّتِي كُنتَ عَلَيْهَآ إِلَّا لِنَعْلَمَ مَن يَتَّبِعُ ٱلرَّسُولَ مِمَّن يَنقَلِبُ عَلَىٰ عَقِبَيْهِ ۚ وَإِن كَانَتْ لَكَبِيرَةً إِلَّا عَلَى ٱلَّذِينَ هَدَى ٱللَّهُ ۗ وَمَا كَانَ ٱللَّهُ لِيُضِيعَ إِيمَٰنَكُمْ ۚ إِنَّ ٱللَّهَ بِٱلنَّاسِ لَرَءُوفٌ رَّحِيمٌ

Meaning : And likewise We have made you (Muslims) a just and chosen people, that you may bear witness to the deeds of men, and that the Messenger (Muhammad) may bear witness to your deeds. And We did not establish the Qiblah to which you are now turning but that We might know (so that it would be clear) who follows the Messenger and who defects. And indeed (the transfer of the Qiblah) is very hard, except for those whom Allah has guided; and Allah will not waste your faith. Indeed, Allah is the Most Compassionate, the Most Merciful to mankind.

The following is the internalisation of linear equation of one variable (PLSV) material with the value of tawwasuth by analogy method.

Find the solution to the following equation!

2x+2=6

As an illustration of the above one-variable linear equation, consider the following balance model.
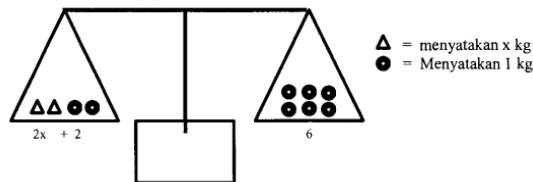

Figure 1

Suppose the left side of the scale weighs (2x+2) kg and the right side of the scale is 6 kg, and both sides of the scale are balanced so that it becomes an equation: 2x+2=6

$2x + 4 = 8$ .... (equation 2)

Equation 2

As an illustration of the linear equation of one variable above, consider the following model of the scales. Both sides of the scales plus 2 kg, then both sides of the scales remain balanced.

Figure 2
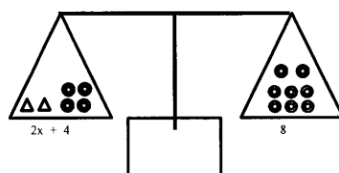
From the illustration above, we get:

If both segments of an equation are added with the same number, the equation obtained is equivalent to the original equation.

2x+2 =6

2x+2+2=6+2

2x+4 =8
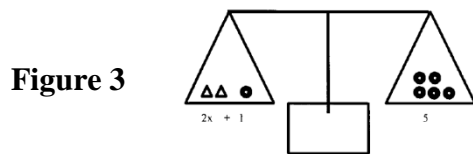
So $2x+2=6 \leftrightarrow 2x+4=8$

Equation 3

Both sides of the scale are reduced by 1 Kg, then both sides of the scale remain balanced

from the illustration above obtained

Figure 3

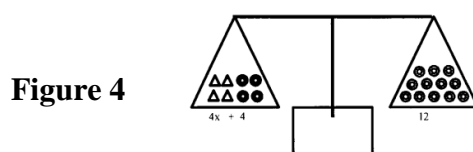If both segments of an equation are reduced by the same number, the equation obtained is equal to the original.

$2x+2=6$

$2x+2-1=6-1$

$2x+1=5$

So $2x+2=6 \; 2x+1=5$

Equation 4

The two sides of the scale are again filled with twice the original charge, so the two sides of the scale remain equal.

Figure 4

From the above illustration, it is obtained:

If both segments of an equation are multiplied by the same number, the equation obtained is equivalent to the original equation.

2x+2 =6

2x.(2x+2)=2.(6)

4x+4 =12

So 2x+2=6↔4x+4=12

Equation 5

Both sides of the scale are taken to be half of the initial load, so both sides of the scale remain in equilibrium.
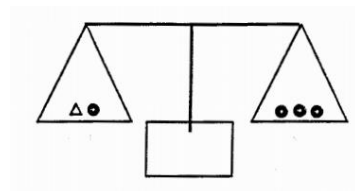
Figure 5

From the above illustration, it is obtained:

If both segments of an equation are divided by the same number, the equation obtained is equivalent to the original equation.

2x+2 =6

(2x+2):2=(6):2

x+1 =3

So x+1=3↔2x+2=6

First Subheading (Subheading level 2)

An equation remains balanced or equivalent if (1) both sides are added or subtracted by the same number and (2) both sides are multiplied or divided by the same number. The above algorithm for a system of linear equations shows that linear equations are solved by finding values that make both sides of the equation equal. This means finding the values of the variables that fulfil the equation and finding the set of

solutions to the equation $x+1=3 \leftrightarrow 2x+2=6$. One of the principles of solution is basically to achieve a balance between the two sides of the equation, so that the left side is equal to the right side. This can be analogised to the concept of tawwasuth in religious moderation, with the value of tawwasuth in Islamic moderation, which means maintaining a balanced and moderate approach in religious practice and daily life, avoiding extreme right and extreme left or tendencies towards certain groups or ideologies. This concept is emphasised in Islam as a way to promote peace, justice and harmony among individuals and society. On the other hand, the concept of tawasuth is useful for avoiding extremism and inclusiveness, encouraging followers to adopt a moderate middle path (Samsul, 2023). This moderation is very important in instilling tolerance, compassion, and mutual respect among students, shaping them into peaceful and constructive individuals (Muhtar, 2021; Salam, 2022).

CONCLUSIONS AND ADVICE

Solving linear equations emphasises finding values that make both sides of the equation equal. This requires finding the values of the variables that satisfy the equation, thus forming the solution set. The basic principle of solving linear equations is to achieve a balance between the two sides of the equation, where the left side is equal to the right side. An analogy is drawn between solving linear equations and the concept of tawasuth in religious moderation, particularly in Islam, which emphasises a balanced and moderate approach in religious practice and daily life. This concept is emphasised in Islam to promote peace, justice and harmony among individuals and society. The importance of moderate character is also emphasised in mathematics learning to help students understand values such as tolerance, compassion and mutual respect.

The concept of tawasuth also plays a role in preventing extremism and encouraging inclusiveness, forming peaceful and constructive individuals. Thus, the conclusion highlights the importance of moderation in various aspects of life, both in the context of mathematics and in religious practice, with the aim of building peaceful, tolerant and harmonious individuals and societies.

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