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Configuration of the Values of Al-Qur'an, Pancasila, and Mathematics: Critical Study of Integration-Based Analysis in Indonesia

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Abstract

This paper presents about the values of Al-Qur'an, Pancasila, and Mathematics in the discourse on the theory of interconnection integration undergoing a demystification process. The configuration of the values of Al-Qur'an, Pancasila, and Mathematics through Islamic studies is carried out with a theo-anthropocentric process on the integralist values of Al-Qur'an to Mathematics, giving birth to

six models, namely Mathematics for Al-Qur'an, Mathematics from Al-Qur'an, Mathematics to explore Al-Qur'an, Mathematics to deliver Al-Qur'an, Mathematics to explain Al-Qur'an, and Mathematics with Al-Qur'an. In integration, there is an effort to restructure Qur'anic and Mathematical sciences, while in interconnection there are meetings in the format of complementation, comparison, confirmation, and the contribution of the verses of Al-Qur'an to the five precepts of Pancasila.

Keyword: *Configuration, Value, Pancasila, Mathematic, Al-Qur'an*.

A. Introduction

Post Modernism which began to squirm at the end of the 20th century gave rise to the spirit of deconstruction (unpacking thoughts) in the establishment which regards the Western World as the only civilization that has a monopoly on truth, including in the field of science. Then emerge alternative perspectives, which are different from those adopted by the West. The existence of different views of life, culture, religion from those developed in the West began to be recognized.

In addition, the spirit of globalization has begun to spread to various parts of the world as well. The emergence of new perspectives that are multiculturalism. Cultural diversification is also recognized for its existence and its expansion rights are respected. Among Muslims, after entering the 15th century Hijriyah, the spirit of the revival of Islamic civilization began to emerge.

The flow of the rise of Islamic civilization in the field of science stimulates to combine Mathematics and Pancasila with the Al-Qur'an as a new discourse in Islamic scholarship, it is intended to form a strong nation, oriented to science and technology, all of which are imbued with faith and piety to God Almighty. In the integration of Al-Qur'an, Mathematics, and Pancasila are very important to form a quality person. If you can integrate Islam from every mathematical and Pancasila concept, it will certainly be easier to develop it in the educational process.

A perso's moral and moral values that are formed from the internalization of various virtues are believed and used as a basis for perspective, think, behave, and act.[1] In order for moral values, Pancasila morals and Mathematics to be in line, then one way in Mathematics education is to combine and harmonize Pancasila and Mathematics material with Al-Qur'an. By harmonizing and integrating Pancasila and Mathematics with Al-Qur'an, a nation that is strong, competitive, has noble character, has morality, is tolerant, works together, has a patriotic spirit, develops dynamically, is oriented towards science and technology, all of which are imbued with faith and piety to God. The Almighty based on Pancasila.[2]

The urgency of this research is to raise the values contained in Pancasila and teach ways of thinking and acting in accordance with state ideology. One of the eroding negative influences on a country is the erosion of the noble values inherent in Indonesia today, with the many influences of globalization and foreign culture that are not in accordance with the values of Pancasila. Developing the identity of the Indonesian nation that upholds the values of Pancasila as a form of good citizenship, which is an application of the character of the Indonesian nation.

The urgency of Islamic values in teaching Mathematics is reflected in the statement that Mathematics learning must undergo changes in the context of improving the quality of education so that it can improve optimal learning outcomes. Therefore, efforts continue to be made to create innovative learning in line with current developments and technology. Besides education being aligned with technological advances, education is also expected to be able to build the values and character of each student through religious values. Al-Qur'an is the holy book of Muslims which is the source of all sources of knowledge. Its greatness will be unmatched

[1]B.H. Handojo, *Matematika Akhlak: Keajaiban Bahasa Bilangan untuk Mendidik Akhlak Mulia* (Jakarta: Kawan Pustaka, 2007), 31.

[2]B.H. Handojo, 34.

and will never be out of date. Therefore, we as Muslims should and must make Al-Qur'an the main reference for developing knowledge before referring to theory or other concepts. This view is not wrong because Al-Qur'an has a great influence on the development of the field of science. There is a very high appreciation for those who believe and have knowledge compared to people who are mediocre. This shows that Al-Qur'an is very concerned with the development of science.[3] Therefore, it is necessary for the world of education, including Mathematics learning, to integrate the values contained in the Islamic religion in every lesson. So, apart from studying Mathematics, students can also study the greatness of Allah through approaching mathematical materials.

Integrating mathematical concepts, Pancasila with Islamic values is very important to implement as a way of forming national character. So, it is necessary to continuously develop analysis of Mathematics and Pancasila material by linking the verses contained in Al-Qur'an which is the source of all sources of knowledge from which every human being can draw wisdom and lessons through Mathematics and Pancasila.

This research is supported by previous research conducted by Annisah Kurniat regarding Introducing Islamic Integrated Mathematics to Children from an Early Age. This research discusses some ways to teach Islamic integrated Mathematics to children from an early age are saying the name of Allah to start learning, using the Hijri calendar in introducing the concept of numbers, using Islamic ornaments in geometry, using Islamic terms and names in sets, and using play methods in algebra.[4]

Research on Pancasila values was carried out by Damanhuri, Wika Hardika L., Febrian Alwan B., Ikman Nur Rahman, who raised

[3]Samsul Maarif, "Integrasi Matematika Dan Islam Dalam Pembelajaran Matematika", *Infinity: Jurnal Ilmiah Program Studi Matematika STKIP Siliwangi Bandung* 4, No. 2 (2015): 223-236.

[4]Annisah Kurniat, "Mengenalkan Matematika Terintegrasi Islam Kepada Anak Sejak Dini", *Suska Journal of Mathematics Education* 1, No. 1 (2015): 1-8.

the topic of Implementing Pancasila Values as an Effort to Build National Character (Case Study in Pancasila Village, Tanjung Sari Village, Pabuaran District, Serang Regency). The research approach used in this research is a qualitative approach. The location of this research is in the Pancasila Village, Tanjungsari Village, Pabuaran District, Serang Regency, Banten Province because in this village the values of Pancasila are still implemented in people's daily lives. Research subjects are parties who are research targets or sources who can provide information selected purposively related to certain objectives. To obtain valid and competent information, the research sample is as follows: Government (district, sub-district, village), local community, cultural figures, academics. From the research results, it is known that Pancasila villages are villages that apply Pancasila values as an effort to build national character. In its implementation, the implementation of Pancasila values still lacks much support from the community and awareness of behaviour that reflects Pancasila values as strengthening national character. This requires support and encouragement from various authorities within it.[5]

Previous research has contributed to the thinking in this research. However, there are still differences, namely in this research it is more in-depth and universal, so novelty is found. Novelty in this research found a correlation between the values of Al-Qur'an, Mathematics, and Pancasila in the discourse on interconnection integration theory by experiencing a demystification process. In its application, Islamic scholarship is carried out using a Theo anthropocentric process based on the integralist value of the Al-Qur'an towards Mathematics. Meanwhile, integration found efforts to restructure the knowledge of Al-Qur'an, Mathematics, and Pancasila. The final manifestation of this process is the birth of

[5]Damanhuri, Wika Hardika L., Febrian Alwan B., and Ikman Nur Rahman, "Implementasi Nilai-Nilai Pancasila Sebagai Upaya Pembangunan Karakter Bangsa: Studi Kasus di Kampung Pancasila Desa Tanjung Sari Kecamatan Pabuaran Kabupaten Serang", *UCEJ: Untirta Civic Education Journal* 1, No. 2 (2016): 185-198.

integralist science which does not just combine, but even unites Al-Qur'an, Mathematics, and Pancasila.

Based on the background of the problem, it is necessary to study how to introduce Pancasila and integrated Mathematics with the values contained in Al-Qur'an. And with the above statement raises the question of how significant the correlation between Al-Qur'an in Pancasila and Mathematics is. The dynamics of the discourse on the relationship between Al-Qur'an, Pancasila, and Mathematics will be bridged by the theory of scientific building "Integration-Interconnection" which is mapped with the metaphor of the scientific "spider web". Through the paradigm of integration-interconnection theory, continuity between the sciences is expected to answer these challenges. However, before explaining the correlation between Al- Qur'an and Pancasila more deeply, it would be wise to explore the integration and interconnection of science as the basis of this study.

B. Discussion

1. Integration and Interconnection of Science, from Discourse to Scientific Paradigm

The dynamics of the discourse on the correlation of science and theology shows an increasingly rapid current of development, even tends to go global. Not only theologians, but also scientists involved in the same concern the problem of correlation between science and theology so far. The term integrative comes from the English language integrate which can be interpreted to integrate, integrate, combine, unite.[6] Integration can also be interpreted as the process of combining certain values towards another different concept so that it becomes one a coherent and inseparable unity or a process of assimilation to become one complete and rounded whole.[7]

[6]Sunardi, "Pendekatan Inklusif Implikasi Managerialnya", *Jurnal Rehabilitas Remidiasi* 5, No. 1 (2003): 110.

[7]Abdul Muhyi, "Paradigma Integrasi Ilmu Pengetahuan Uin Maulana Malik Ibrahim

Integrative means unification to become a whole or a whole,[8] with the term *at-takmil* or *al-ikmal* which means complete (complete or wholly or totally). That is, integrative means that there is no known term dichotomy or separation. Everything is one and indivisible. Liek Wilardjo translates it as "4P", namely opposition, separation, conversation, and integration.[9] John F. Haught's view is the same as Barbour's, who identifies the relationship between science and religion as conflict, contrast, contact, and confirmation. These four approaches can be seen as a kind of typology like Barbour's, but Haught sees it more as a kind of journey. For Haught, now the relationship between science and religion has reached a "confirmation" relationship. Likewise for Barbour, the "integration" relationship seems to be the most "promising" option.[10]

Among Muslims, the discourse on the relationship between science and religion, or rather science and Islam, was popular between the 1970s and the 1990s. The names that often appear are Syed M. Naquib al-Attas, Seyyed Hossein Nasr, Isma'il al-Faruqi, and Ziauddin Sardar.[11] Al-Attas calls his early ideas "Dewesternization of Science"; Isma'il al-Faruqi spoke of "Islamization of Science"; while Sardar carries the idea of "Contemporary Islamic Science". Apart from them, it should be mentioned the physicist Mehdi Golshani, who in the 1980s was popular with his work The Holy Quran and Sciences of Nature,[12] as the beginning of his efforts to integrate science with Islam.

Malang", *Mutsaqqafin: Jurnal Pendidikan Islam dan Bahasa Arab* 1, No. 1 (2018): 45-64.

[8]Hans Wehr, *A Dictinory of Modern Written Arabic* (Wiesbaden: Otto Harrassowitz, 1979), 841.

[9]Liek Wilardjo, "Ilmu dan Agama di Perguruan Tinggi: Dipadukan atau Diperbincangkan", in Zainal Abidin Bagir, Liek Wilardjo, Arqom Kuswanjono, and Mohamad Yusuf (eds.), *Ilmu, Etika, dan Agama: Menyingkap Tabir Alam dan Manusia* (Yogyakarta: CRCS, 2006), 146.

[10] Ian G. Barbour, *Menemukan Tuhan dalam Sains Kontemporer dan Agama* (Bandung: Mizan, 2005), 33.

[11] Zainal Abidin Bagir, "Pergolakan Pemikiran di Bidang Ilmu Pengetahuan", in Taufik Abdullah, et al., *Ensiklopedi Tematis Dunia Islam*, Volume 6 (Jakarta: Ichtiar Baru Van Hoeve, 2002), 137-159.

[12]Mahdi Golshani, *Filsafat Sains menurut Al-Qur'an* (Bandung: Mizan, 1988).

Then in 2004, he wrote Issues in Islam and Science.[13] Golshani makes a distinction between what he calls "Islamic science" and "secular science" on the grounds that metaphysical assumptions can often be "rooted" in a religious worldview.[14] As a discourse, "scientific integration" has so far been seen from the perspective of interfaith or "interreligious relations" and postcolonial perspectives.

The interfaith perspective generally looks at the responses of religions to challenges posed by science, such as the emergence of new theories in the fields of cosmology, physics, and social sciences.[15] While the postcolonial perspective departs from the assumption that scientific findings and the image of religion are very likely to be built on the spirit of colonialism. So that a critical attitude and reconstruction efforts are needed to build the image.[16]

Regarding the discourse of scientific integration and interconnection, the intensity of the dynamics of thought in Indonesia is also not inferior. A scientist who is quite consistent and productive in carrying out this idea is Kuntowijoyo who offers Islamic science. According to Kuntowijoyo, the two stages that have been passed are the myths that see Islam as declarative or apologetic,[17] and the ideological ones which are actually more rational, but still too a priori/nonlogical and put Islam as a rival to major ideologies, such as Socialists, Marxists, Capitalists, and etc.[18]

[13]Mahdi Golshani, *Issues in Islam and Science* (Tehran: Institute for Humanities and Cultural Studies, 2004), translated into Indonesian in *Melacak Jejak Tuhan dalam Sains* (Bandung: Mizan Pustaka dan CRCS, 2004).

[14]Mahdi Golshani, *Filsafat Sains*, 48; Mahdi Golshani, "Sacred Science vs Secular Science", in Zainal Abidin Bagir (ed.), *Science and Religion in Post-Colonial World: Interfaith Perspective* (Adelaide, Australia: ATF, 2005), 77-102.

[15]Robert Setio, "Universitas pada Era Pascakolonial", in Zainal Abidin Bagir, Jarot Wahyudi, and Afnan Anshari (eds.), *Integrasi Ilmu dan Agama: Interpretasi dan Aksi* (Bandung: Mizan, 2005), 128-144.

[16]Zainal Abidin Bagir, "Islam, Science, and Islamic Science: How to Integrate Science and Religion?", Zainal Abidin Bagir (ed.), *Science and Religion*, 37-64.

[17]Kuntowijoyo, *Muslim Tanpa Masjid* (Bandung: Mizan, 2001), 102.

[18]Kuntowijoyo, *Islam Sebagai Ilmu: Epistemologi, Metodologi, dan Etika* (Bandung: Teraju, 2004), 65.

Thus, Islamic knowledge is a demystification and objectification process at the same time.[19]

The demystification process is a thought process that moves from the text to the human social and ecological context, while the objectification process is a mindset that avoids the domination of religious understanding from one group over another, and leads to the discovery of the sentence *sawa'* (there are common ground, consensus, common sense, denominator) on fundamental matters, although there are differences in more detailed matters.

In its application, Islamic knowledge is carried out by the process of fusion of sources of knowledge and truth, namely religion as God's revelation contained in Al-Qur'an. Then, the religious truth is embodied in the form of truths achieved by the human mind, with the standards of logic and scientific ethics, this is called Theo anthropocentrism. That way there will be dedifferentiation, namely the unification of religion in every activity of life, whether political, economic, legal, or cultural. The result of this process is the birth of integralist science, namely science that not only combines, but also unifies revelation and the results of human reason.[20]

Another intellectual whose thoughts continue to echo to this day is Amin Abdullah. His anxiety about the separation of science, especially Islamic Studies with the fields of social humanities and natural sciences, makes the Islamic sciences no longer able to answer contemporary problems, and more than that makes the separation of Muslims in the arena of modern culture and lags in contemporary life. In this regard, Amin Abdullah offers a scientific building "Integration-Interconnection" which is mapped with the metaphor of a scientific "spider web". These two terms are used, because in integration there is an effort to restructure science,

[19] Kuntowijoyo, 66.
[20] Kuntowijoyo, 55.

while in interconnection there is no scientific restructuring, but a meeting takes place in the format of complementation, comparison, confirmation, and contribution.[21]

So for sciences that are not possible, not yet possible, or still need a long process for integration to occur, it is enough to use interconnection. In this spider web, Al-Qur'an and the Sunnah are the two central sources of knowledge. In the second, third, and so on, they do not close themselves off, but interact with each other, dialogue, and respect each other and consider suggestions from these various things. This interaction occurs because the spider web metaphor uses dotted lines, wet pores, ventilation lines, or what Rolston calls semipermeable lines.[22] This theory is used as the basis for the correlation of the values of Al-Qur'an, Mathematics, and Pancasila in this study.

2. Mathematics in Epistemology, Ontology, and Axiology Approaches

Before going further on the correlation of Al-Qur'an, Mathematics, and Pancasila, we systematically discuss philosophical Mathematics with several approaches. First, an epistemological approach that needs to be developed, to know the position of Mathematics in the scientific context. One way is to use "analog" language. In addition, the position of Mathematics is "isomorphic" with other knowledge in philosophical studies.[23]

The ontological approach is a reflection to capture mathematical reality. Mathematical reality can be understood as it is with all its content, density, autonomy, and communication potential both materially, formally, normatively and transcendently.

[21] Syamsul Anwar, *Interkoneksi Studi Hadis dan Astronomi* (Yogyakarta: Suara Muhammadiyah, 2011), 1-3.

[22] Waryani Fajar Riyanto, *Integrasi-Interkoneksi Keilmuan: Biografi Intelektual M. Amin Abdullah (1953-...)* (Yogyakarta: SUKA Press, 2013), 1183.

[23] P. Ernest, *The Philosophy of Mathematics Education* (London: The Falmer Press, 1991).

Ontological awareness tries to reflect and interpret mathematical reality and then implicitly presents it as knowledge that is useful in interacting with other people and can be explicitly formulated in formal forms to obtain appropriate themes.

Materially, mathematical objects can be in the form of concrete objects, pictures or cube models, colourful symbols of large or small numbers, squares, pyramids, right triangles, circles. While formally, the object of Mathematics axiological approach studies philosophically the nature of the value or value of Mathematics.

According to Hartman, value is a phenomenon or concept; the value of something is determined by the extent to which the phenomenon or concept reaches its meaning or meaning. According to him, the axiology of Mathematics contains at least four dimensions: Mathematics has value because of its meaning, Mathematics has value because of its uniqueness, Mathematics has value because of its purpose, and Mathematics has value because of its function. Each dimension of the value of Mathematics is always related to the nature of values that are intrinsic, extrinsic, or systemic. If a person master's Mathematics only for himself then his mathematical knowledge is intrinsic; if he can apply Mathematics to everyday life, then mathematical knowledge is extrinsic; and if he can develop Mathematics in the social arena of Mathematics society then his mathematical knowledge is systemic.[24]

Pragmatically, Mathematics is a set of truth values consisting of theorems and their proofs. Meanwhile, the philosophy of Mathematics appears when there is a demand for accountability for the truth of Mathematics.

[24] Marsigit, "Gerakan Reformasi Untuk Menggali Dan Mengembangkan Nilai-Nilai Matematika Untuk Menggapai Kembali Nilai-nilai Luhur Bangsa Menuju Standar Internasional Pendidikan", Conference of Nilai Luhur Bangsa Dan Pembelajaran Matematika Di Sekolah Dalam Menuju Standarisasi Sekolah Nasional Dan Bertaraf Internasional, Universitas Negeri Yogyakarta, 2008.

3. Definition, Objectives, and Position of Mathematics in Scientific Perspective of Al-Qur'an

The etymology of Mathematics comes from the Greek, namely "Mathema" which means something to be learned or something that needs to be known. "Mathema" is derived from the word "manthano" or its equivalent to the word "mathaino" which means learning. The adjective form is "mathematikos" which means things related to learning or liking to learn.[25] Nasoetion stated that Mathematics can be interpreted as knowledge obtained by thinking. Mathematics grows and develops because of the thought process so that logic is the basis for the formation of Mathematics.[26]

Based on the etymological understanding of Mathematics, it shows that Mathematics develops thinking and reasoning abilities. Thinking skills with the development of thinking include systematic, logical, analytical, critical, and creative thinking. Reasoning ability includes reasoning correctly deductively, ignoring inductive reasoning. Developing the potential for thinking and reasoning is highly recommended by Al-Qur'an. There are three terms used by Al-Qur'an to stimulate humans to use their intellectual potential, namely *afala tatafakkarun* (does not think) as in Q.S. al-An'am [6]: 50 and Q.S. ar-Rum [30]: 8, *afala ta'qilun/ya'qilun* (does not make sense) as in Q.S. al-Baqarah [2]: 44, Q.S. Ali 'Imran [3]: 65, Q.S. Hud [11]: 51, Q.S. Yasin [36]: 68, or Q.S. ash-Shaffat [37]: 138, and *afala tadzakkarun* (whether not learning) as in Q.S. ash-Shaffat [37]: 155.

Mathematics is taught with the main aim of developing problem solving abilities, communication skills, and reasoning abilities to deal with every situation and problem in life. Another goal that is more dominant is to develop an attitude of love for the truth, honest, thorough, careful, not careless, diligent, tenacious, patient, confident, never give up, and never give up. So, learning

[25]Abdussakir, *Ketika Kyai Mengajar Matematika* (Malang: UIN-Maliki Press, 2007), 65.
[26]A.H. Nasoetion, *Landasan Matematika* (Jakarta: Bhratara Karya Aksara, 1980), 12.

Mathematics is very closely related to the formation of *al-akhlaq al-karimah*.[27]

Mathematics also teaches the importance of time and even Mathematics is the key to unlocking the mysteries of God's attributes.[28] Mathematics is not only used for the development of science, technology, and Mathematics itself. Other areas of life such as economics, psychology, health, politics, social, art, music, and communication also require Mathematics. Therefore, Mathematics is called a universal language.[29] Bringing real-world objects into the language of Mathematics is called abstraction and realizing Mathematics in the real world is called application.

Mathematics is an abstraction from the real world, so that mathematical objects are abstract and in the language of symbols. So that Mathematics is between the world of *shahadah* and *ghaibiyah*. Thus, Mathematics is "half real and half invisible". To understand real objects, a rationalist, empirical, and logical approach is needed (*bayani* and *burhani*). Meanwhile, to understand the unseen object requires an intuitive, imaginative, and metaphysical approach (*'irfani*). The main strength in Mathematics lies in imagination or intuition which is then accepted after being proven logically or deductively. Thus, to study Mathematics, it is necessary to integrate the three approaches, namely *bayani*, *burhani*, and *'irfani*. The paradigm of thinking that combines the three approaches is the *ulu al-albab* paradigm.[30]

From an Islamic perspective in Al-Qur'an, *ulu al-albab* is a figure who simultaneously develops the potential of *dzikr* and

[27] Abdussakir, 67.

[28] Damon, "Top 10 Reasons to Learn Math: a Hed-Manifesto", 2012, https://wildmath.org/2012/07/18/top-10-reasons-to-learn-math-a-hed- manifesto/, accessed September 26, 2018.

[29] B. Owen, "Why Do We Study Mathematics?", 2012, http://onlinelearningtips.com/2012/07/11/why-do-we-study-mathematics/, accessed September 20, 2018.

[30] Abdussakir, "Matematika dan Al-Qur'an", Conference of Integrasi Matematika, Al-Qur'an, dan Kehidupan Sosial, Topografi Komando Daerah Militer V Brawijaya Malang, August 3, 2005.

thought to produce pious deeds. The potential of *dzikr* plays a role in dealing with supra-rational objects, and can sharpen emotional, intuitive, and spiritual abilities. The potential for thinking plays a role in dealing with rational objects. *Dzikr* represents activity in the *ghaibiyah* aspect and thought represents activity in the *shahadah* aspect.[31]

This *ulu al-albab* paradigm can be used in learning Mathematics. Intellectual ability alone is not enough to learn Mathematics but needs to be supported simultaneously with emotional and spiritual abilities. Deductive and logical thinking in Mathematics relies heavily on intuitive and imaginative abilities.

Because Mathematics is between the realm of the *shahadah* and the realm of the *ghaibiyah*, then Mathematics needs to be studied with both human potentials, physical and spiritual, *aql* and *qalb* simultaneously.

Studying Mathematics through the spiritual path or called the *kasyaf* method. *Kasyaf* (opening of the veil) will be obtained through spiritual practice or *riyadhah*, namely *tazkiyah an-nafs*. People who have reached *kasyaf* are called people who are *mukasyafah*. Learning Mathematics through physical pathways, is called the *kasab* method. *Kasab* is a physical optimization of the body, for example studying hard or the term through physical endeavours. The idealism is to do both methods simultaneously, *kasab* and *kasyaf* at the same time. Another term by learning while praying and optimizing the use of potential Spiritual Quotient (SQ), Emotional Quotient (EQ), and Intellectual Quotient (IQ) at the same time.

The ability to think clearly (intellectual) or the ability to concentrate is strongly influenced by feelings (emotional), and emotional is strongly influenced by religious understanding

[31] Abdussakir, *Matematika 1: Kajian Integratif Matematika dan Al-Qur'an* (Malang: UIN-Maliki Press, 2009).

(spiritual). If the heart is calm, spacious, as wide as the ocean, then the mind will be able to work optimally. Peace of mind, according to the guidance of Al-Qur'an, will be achieved through *dzikr* activities. *Dzikr* in a very broad sense is contained in the word of God in Q.S. ar-Ra'd [13]: 28. Patience, *tawakkal*, *qana'ah*, and pleasure are capital for peace and tranquillity. The form of spiritual intelligence is manifested in *istiqamah* (consistency), sincere (sincerety), *kaffah* (totality), *tawazun* (balance), *ihsan* (integrity and comprehensive) all of which lead to the characteristics of *akhlaq al-karimah*.

In addition, Q.S. al-A'raf [7]: 179 which implies that the heart can understand (*faqiha*). Likewise, in Q.S. al-Hajj [22]: 46 it implies that the heart can reason (*'aqala*). Knowing the definitions, objectives and positions will lead to an understanding of how the integration and interconnection between Mathematics and Al-Qur'an is.

4. Integration and Interconnection of Mathematics and Al-Qur'an

The integration model offered is an initial idea and it is still possible to re-simplify or develop further. The integration of Mathematics with Al-Qur'an is an effort to restructure science, while in the interconnection there is no scientific restructuring, but it is certain that a meeting will take place in the format of complementation, comparison, confirmation, and the contribution of Al-Qur'an to Mathematics

The formulation of the integration model of Mathematics and Al-Qur'an is as follows: *First*, Mathematics for Al-Qur'an: Using Mathematics to implement Al-Qur'an. In this case, Mathematics is used to carry out the commands of Allah contained in Al-Qur'an.[32] For example, the use of Mathematics in the context of Fiqh, namely determining the size of two *kulah*, prayer, *zakat*, fasting, *hajj*, and

[32] Fahmi Basya, *Matematika Al-Qur'an* (Jakarta: Pustaka Quantum Prima, 2023), 57.

division of inheritance (*faraidl*). In *faraidl*, Muslim Mathematicians study Mathematics, especially for making calendars, calculating prayer times, determining the value of zakat, determining the direction of Qibla, and for other *muamalah*.[33] Mathematical material is taught to carry out the duties of servitude as well as the task of the caliphate, both on a micro and macro scale. In learning practice, Mathematics is taught to develop intellectual potential as well as spiritual potential.[34] The mention of *afala tatafakkarun* (whether not thinking), *afala ta'qilun*/*ya'qilun* (whether not reasoning), and *afala tadzakkarun* (whether not learning) encourages humans to develop their intellectual potential

Intellectual potential must be accompanied by spiritual potential, because Al-Qur'an also mentions spiritual potential to be empowered in a balanced way, for example in Q.S. Ali 'Imran [3]: 13, Q.S. al-A'raf [7]: 179, and Q.S. al-Hajj [22]: 46. The brain (head/cognitive) and heart (heart/affective) are developed through learning Mathematics to produce good deeds (hand/psychomotor). Learning Mathematics through problem solving strategies, cooperative learning, realistic approaches, or open-ended approaches needs to be done to develop cognitive, affective, and psychomotor domains.

Second, Mathematics from Al-Qur'an: Developing Mathematics from Al-Qur'an.[35] In this integration model, Mathematics is explored and studied from Al-Qur'an. Some of the mathematical ideas in Al-Qur'an are explicit and some are implicit. Numbers, number relations, sets, number operations, ratios and proportions, and measurements are examples of mathematical materials that are explicitly included in Al-Qur'an. Relation,

[33] Muniri, "Kontribusi Matematika dalam Konteks Fikih", *Ta'allum* 4, No. 2 (2016): 193-214.

[34] M.A. Djauhari, "Integrasi Matematika dan Islam", Guest Lecture in Jurusan Matematika, Fakultas Sains dan Teknologi, Universitas Islam Negeri Maulana Malik Ibrahim Malang, May 17, 2008.

[35] Fahmi Basya, *Matematika Al-Qur'an* (Jakarta: Pustaka Quantum Prima, 2023), 56.

estimation, statistics, functions, and mathematical modelling are examples of mathematical materials that are implicitly mentioned in Al-Qur'an. For example, in statistics. Statistics as a branch of Mathematics that has to do with data collection, data processing, data presentation, data analysis, and drawing conclusions. A major activity in statistics is data collection. In the problem of collecting data, namely recording, or recording data, Al-Qur'an also talks about it which is contained in the Q.S. al Kahfi [18]: 49, Q.S. az-Zukhruf [43]: 80, Q.S. al-Jatsiyah [45]: 29, and Q.S. al-Qamar [54]: 52.

In addition to collecting data, statistics also really need accuracy. In Q.S. Maryam [19]: 94 which means: Verily Allah has determined their number and counted them with an accurate count. Thus, Al-Qur'an has contributed concrete evidence about statistics. In Al-Qur'an there is a statistical miracle in the pronunciation of words. There is accuracy and balance in the number of mentions of a word associated with consequences, causes, synonyms, antonyms, or even with the reality of everyday life.

Third, Mathematics to explore Al-Qur'an: Using Mathematics to uncover the mathematical wonders of Al-Qur'an. In this format, Mathematics is used to explore mathematical wonders in Al-Qur'an.[36] For example, Al-Qur'an mentions 38 different numbers. Of the 38 numbers, 30 are natural numbers and 8 are rational numbers.

Regarding the relation of numbers in Al-Qur'an, Allah swt. says in Q.S. ash-Shaffaat [37]: 147 which explains that the prophet Yunus was sent to the people of 100000 people or more. Mathematically, if there are x people of the prophet Yunus, then x is equal to 100000 or x is more than 100000. In mathematical language, it can be written $x = 100000$ or $x > 100000$. The writing can be summarized as x 100000.

There are still several verses in Al-Qur'an that mention the relation of numbers. Number relations in Al-Qur'an are mentioned

[36] Basya, 58.

in several editorials, for example, *adna* (less than), *aktsara* (more than), and *fauqa* (more than). In addition, Al-Qur'an also talks about basic arithmetic operations on numbers, namely addition, subtraction, and division operations.

Fourth, Mathematics to deliver Al-Qur'an: Using Mathematics to convey Al-Qur'an. In this integration model, Mathematics is used as a means to teach and convey the material content of Al-Qur'an.[37] For example, in explaining the concept of a set using examples of the names of obligatory prayers, sunnah prayers, names of days or months in Islam, names of prophets, names of angels, names of prophets *ulu al-azmi*, names of letters in Al-Qur'an, names of letters Madaniyah, or the name of Makkiyah's letter. In explaining the relationship and function, use examples of the name of the prayer and its *raka'at*, the name of the letter and the number of verses, or the deeds of deeds and their rewards.

Fifth, Mathematics to explain Al-Qur'an: Using Mathematics to explain Al-Qur'an. In this model, Mathematics is used to provide explanations for verses of Al-Qur'an related to mathematical calculations or other mathematical aspects.[38] For example, Mathematics is used to explain how long Noah a.s. lived with his people or how long Ashhabul Kahfi slept in a cave. In Q.S. al-'Ankabut [29]: 14 which means: "And verily We sent Noah to his people, so he lived among them a thousand years (*sanah*) less than fifty years (*'am*). So, they were hit by a big flood, and they are the wrongdoers." In Q.S. al-'Ankabut [29]: 14, the operation to reduce 1000 *sanah* (referring to the Syamsiyah year) by 50 *'am* (referring to the Qamariyah year) cannot be carried out directly because of different units, except change from one unit to another. In Q.S. at-Taubah [9]: 40 and Q.S. al-Ahzab [33]: 9 it is mentioned that the army of angels helped the army of the prophet Muhammad. This

[37] Basya, 60.
[38] Basya, 59.

army of angels is invisible to humans. Regarding Q.S. al-A'raf [7]: 27, Q.S. at-Taubah [9]: 40, and Q.S. al-Ahzab [33]: 9, is it possible for Mathematics to provide an explanation related to dimensions using the concept of a coordinate system starting R1, R2, R3, ..., Rn, and so on.

Sixth, Mathematics with Al-Qur'an: Teaching Mathematics with the values of Al-Qur'an. In this latest integration model, Mathematics is associated with the content of the values of Al-Qur'an.[39] Mathematics is based on the values of Al-Qur'an to develop *al-akhlaq al-karimah* to create humans into *khaira ummah* who are covered with *'amil ash-shalihah*. The values of Al-Qur'an are internalized through learning Mathematics.

The strategies for internalization that can be done include: *First*, Analogy (learning Mathematics by analogizing the value of goodness). *Second*, Infusion (in teaching Mathematics, emphasizing the value aspects of Al-Qur'an in the material). *Third*, *Uswah Hasanah* (learning Mathematics by showing exemplary behaviour related to Mathematics such as obedience, honesty, sincerity, accuracy, and thoroughness). *Fourth*, learning narratives by telling stories related to Muslim mathematicians and mathematicians to be learned from.[40]

5. History, Definition, and Utility of Pancasila as Philosophy: Axiological Level

Pancasila as the basis and ideology of the state, the material already existed before the Indonesian nation existed, but its formal formulation was only realized around 1945. If there is a statement about the birthday of Pancasila being June 1, 1945, this is just a label, not Pancasila material. Pancasila as the basis of state philosophy can be defined as a state ideology based on humanity,

[39] Basya.
[40] Fahmi Basya, *Matematika Islam* (Jakarta: Republika, 2005), 70.

unity, democracy, and justice. Indonesian state figures formulated Pancasila with deep reflection from the daily life of the Indonesian people, which was then desired by the Indonesian people in the state as the basis of state philosophy. Thus, the position of Pancasila in addition to being the basis and ideology of the state, Pancasila is also the identity and personality of the Indonesian nation.[41]

Pancasila is known as Indonesian philosophy. In fact, the definition of philosophy in Pancasila philosophy has been deconstructed and interpreted differently by Pancasila. Pancasila has become a discourse for several Indonesian philosophers since 1945. Pancasila philosophy has been reconstructed according to the demands of the ruling regime, so that differentiation occurs from time to time.

Pancasila is an adaptive concept of western philosophy. This refers to the speech "Sukarno at Investigation Agency for Preparatory Efforts for Indonesian Independence (Badan Penyelidik Usaha-usaha Persiapan Kemerdekaan Indonesia, BPUPKI) and many of the nation's founders were university alumni who studied western European philosophy as their intellectual treasure". Pancasila was inspired by the concepts of humanism, rationalism, universalism, and socio, parliamentary democracy, German socialism, and German nationalism.[42]

The Pancasila philosophy was then developed by Soekarno from 1955 until the end of his reign in 1965. At that time Soekarno always stated that Pancasila was an original Indonesian philosophy taken from Indonesian culture and traditions and acculturation of Indian culture (Hindu-Buddhist and Christian), and Arabic (Islam). According to Soekarno, "divinity" is derived from native Indonesia.

[41] Kansil, *Pancasila dan Undang-Undang Dasar 1945* (Jakarta: Pradnya Paramita, 1971), 35.

[42] Radjiman Wedyodiningrat, *Lahirnja Pantja Sila* (Yogyakarta: Oesaha Penerbitan Goetoer, 1947), 43.

"Social justice" was inspired by Soekarno's concept. It is never fair that one propagates or offends "unity".

During the Suharto era, the Indonesianization of Pancasila was developed through Indonesian philosophers sponsored by the Ministry of Education and Culture. All western elements are removed and replaced by their interpretation in indigenous Indonesian culture. To produce the Indonesian Pancasila, all the precepts in Pancasila are original Indonesian and Pancasila is described in more detail in the points of Pancasila.

Based on the explanation above, the definition of Pancasila philosophy in general is as deep as the thoughts or results of thinking are from the Indonesian people who are considered, trusted, and believed to be the truest, most correct, fairest, wisest, and most appropriate values, norms, reality. for the Indonesian people. Pancasila philosophy calculates the existence of deferential truth and degradation, including sensory truth (ordinary knowledge) scientific truth, science, philosophical truth (religious philosophy) or religious truth.

The main function of Pancasila philosophy for the Indonesian nation and state, first, Pancasila philosophy as a way of life for the Indonesian people. With this view of life, a nation will look at the problems it faces and determine the direction and ways of overcoming political, economic, social, and cultural problems

Second, Pancasila as the state foundation of the Republic of Indonesia. The BPPK session has unanimously accepted the Pancasila as the basis for an independent Indonesian state. In the decision of the PPKI session, then on August 18, 1945, was officially stated in the Preamble to the Indonesian Constitution, which became a source of state administration that contains strong basic elements for the state and the whole nation, and has a function as the basis of the state. This is clearly stated in paragraph IV of the Preamble to the 1945 Constitution, so that all laws and regulations

of the Republic of Indonesia, be it MPR decrees, substitutes for laws, government regulations, presidential decrees, and other regulations, and implementation of regulations refer to Pancasila. The content and purpose of the laws and regulations of the Republic of Indonesia must not deviate from the provisions in the Pancasila text. Pancasila, in MPRS Number XX/MPRS/1966 emphasized that Pancasila is the source of all sources of law.

Third, Pancasila as the soul and personality of the Indonesian nation. According to the national drafting council, what is meant by the personality of the Indonesian nation is the overall distinctive characteristics that distinguish the Indonesian nation from other nations. The overall characteristics of the Indonesian people reflect the dynamics of the growth and development of the Indonesian nation of all time.[43]

6. Interconnection of Al-Qur'an with Pancasila

The harmony and compatibility of Pancasila with Al-Qur'an is reflected in its five precepts.[44] This alignment is based on the paradigm of integration-interconnection theory, so that the continuity between Pancasila and Al-Qur'an will be answered. Because in integration there is an effort to restructure science, while in interconnection there is no scientific restructuring, it is still certain that a meeting will take place in the form of complementation, comparison, confirmation, and contribution. So, in the context of the correlation between Pancasila and Al-Qur'an, it is more appropriate to use the interconnection method between the five precepts and the verses of Al-Qur'an. With the description below. First, the first precept which reads "Belief in One Supreme

[43] Syahrial Syarbaini, *Pendidikan Pancasila di Perguruan Tinggi* (Jakarta: Ghalia Indonesia, 2002), 87.

[44] Alamsjah Ratu Perwiranegara, *Islam Dan Perkembangan Politik Di Indonesia* (Jakarta: Haji Masagung, 1987), 24.

God" means that the Indonesian nation is based on God Almighty.[45] The principle of the Almighty God in Pancasila is in principle confirmed that the Indonesian nation and every citizen must acknowledge the existence of God. Therefore, everyone can worship his God according to their respective beliefs. All Indonesian people practice and carry out their religion in a civilized manner, namely respect and respect one another.[46]

Indonesian citizens are given the freedom to choose one belief, from several beliefs recognized by the state. In the Islamic concept, this is in accordance with the term *hablun min Allah*, which is the joint of monotheism and the embodiment of the relationship between humans and Allah swt. Al-Qur'an in several verses mentions and always teaches its people to always unite God. Among them is what is reflected in Q.S. al-Baqarah [2]: 163. In the perspective of Islam, God is Allah alone, but in the view of other religions, God is the one who governs human life, who is worshiped.

Second, the second precept which reads Just and Civilized Humanity means that the Indonesian people respect and respect the rights inherent in the human person. This principle emphasizes that Indonesian nationality is from humanity universal, which is required to develop world brotherhood based on values fair and civilized human values.

In the Islamic concept, this is in accordance with the term *hablun min an-nas*, namely the relationship between human beings based on mutual respect. Al-Qur'an in several verses mentions and always teaches its people to always respect and respect others. Among them are those that are reflected in Q.S. al-Ma'idah [5]: 8.

Third, the third precept reads "Unity of Indonesia" means that the Indonesian nation is a one nation and a state. The Principles

[45] Majelis Permusyawaratan Rakyat RI, *Empat Pilar Kehidupan Berbangsa dan Bernegara* (Jakarta: Sekretariat Jenderal Majelis Permusyawaratan Rakyat RI, 2014), 45.

[46] Oetojo Usman amd Alfian, *Pancasila Sebagai Ideologi Dalam Berbagai Bidang Kehidupan Bermasyarakat, Berbangsa Dan Bernegara* (Jakarta: BP-7 Pusat, 1991), 164.

of Indonesian Unity (Indonesian Nationality) in Pancasila on in principle, it emphasizes that the Indonesian nation is a national state. A nation that has the will to unite, has a unified temperament because unity of fate, a nation bound to its homeland.

In the concept of Islam, this is in accordance with the terms *ukhuwah Islamiyah* (unity of fellow Muslims) and *ukhuwah Insaniyah* (unity of fellow human beings). Al-Qur'an in several verses mentions and always teaches its people to always maintain unity. One of them is contained in Q.S Ali 'Imran [3]: 103.

Fourth, the fourth precept reads Democracy Led by Wisdom of Wisdom in Deliberation/Representation means that in making joint decisions, it must be done through deliberation based on wisdom. Popular Principles Guided by inner wisdom deliberation/representation (consensus/democracy) in Pancasila on in principle, it emphasizes that the Indonesian people will continue to maintain and develop a spirit of deliberation to reach deep consensus representative.

In the Islamic concept, this is in accordance with the terms *mudzakarah* (difference of opinion) and *syura* (deliberation). Al-Qur'an in several verses mentions and always teaches its people to always be wise in dealing with life's problems and always emphasize deliberation to solve them in a democratic atmosphere. This is in accordance with Q.S. Ali 'Imran [3]: 159.

Fifth, the fifth precept reads Justice for All Indonesian People, which means that the State of Indonesia as a supreme organization has an obligation to prosper all Indonesian people. Social justice for all Indonesian people (prosperity) in Pancasila in principle, it emphasizes that there should be no deep poverty Indonesian independence. The Indonesian nation not only has political democracy, but also economic democracy. Indonesia must have a just and fair life prosperity for all Indonesian people.

In the Islamic concept, this is in accordance with the term fair. Al-Qur'an in several verses commands to always be fair in all

things, fair to oneself, others, and nature. Among them are those that are reflected in Q.S. an-Nahl [16]: 90.

Based on the explanation above, Pancasila as the basis and ideology of the state is in harmony with Islamic teachings. The attitude of Muslims in Indonesia who accept and approve of Pancasila and the 1945 Constitution can be fully accounted for from all aspects of consideration.

7. Exploration of Al-Qur'an and Pancasila to Transform Context in Mathematics

Exploring the values of Al-Qur'an and Pancasila as an effort to transform the context in Mathematics, namely changing the context of Mathematics from the previous view. Transformation here means a process of gradual change so that it reaches the ultimate stage, changes made by responding to the influence of external and internal elements that will direct changes from previously known forms through the process of repeatedly multiplying or multiplying. Mathematics which was previously seen as learning with the context of numbers and calculations and separated from Pancasila and Al-Qur'an, has turned into a context that contains the values of Pancasila and Al-Qur'an through exploration of the values of Pancasila and Al-Qur'an that can be used as contexts in education. This is an extrinsic value of Mathematics, namely the values of Pancasila and Al-Qur'an which are complemented in the concept of Mathematics.

The results of the exploration of the values of Al-Qur'an and Pancasila which are used as the context of Mathematics are as follows: *First*, Exploration of Divine Values as Transformation of Mathematical Context. "Belief in One Supreme God" is the sound of the first precepts of Pancasila. The first precept contains divine values or religious values, one of which is the value of monotheism. According to the 1945 Constitution Article 29 paragraph 2, the divine value in the first precept also means that every Indonesian

citizen is free to embrace religion and carry out religious law in accordance with their respective beliefs.[47]

The value of divinity comes from Al-Qur'an which is explained by verses in Al-Qur'an that explain the oneness of God or the unity of God. The verses of Al-Qur'an about the monotheism of Allah can be used as a mathematical context. The verses of Al-Qur'an about monotheism related to the concept of Mathematics are Q.S. al-Baqarah [2]: 133, Q.S. al-Baqarah [2]: 163, Q.S. an-Nisa' [4]: 171, Q.S. al-Ma'idah [5]: 73, Q.S. al-An'am [6]: 19, Q.S. at-Taubah [9]: 31, Q.S. Yusuf [12]: 39, Q.S. Yunus [10]: 16, Q.S. Ibrahim [14]: 48, Q.S. Ibrahim [14]: 52, Q.S. an-Nahl [16]: 22, Q.S. an-Nahl [16]: 51, Q.S. al-Kahf [18]: 110, Q.S. al-Anbiya' [21]: 108, Q.S. al-Hajj [22]: 34, Q.S. al-'Ankabut [29]: 46, Q.S. ash-Shaffat [37]: 4, Q.S. Shad [38]: 5, Q.S. Shad [38]: 65, Q.S. az-Zumar [39]: 4, Q.S. Ghafir [40]: 16, Q.S. Fussilat [41]: 6, Q.S. al-Ikhlas [112]: 1.

All these monotheistic verses in general indicate that the number of Allah is one, Allah Almighty. Esa which means one is a cardinal number. A cardinal number is a number that expresses the number of members of a set.

In the explored verses of monotheism, the number 2 is also mentioned and the number 3. The number 2 is mentioned in Q.S. Yusuf [12]: 39 which shows the number of prison inmates who are asked to testify that God is One. In addition, Q.S. ar-Ra'd [13]: 16 which shows the number of creations that are requested to be compared with Allah's creation, as well as Q.S. an-Nahl [16]: 51 which states that God is not 2. While the number 3 is mentioned in Q.S. an-Nisa' [4]: 171 and Q.S. al-Ma'idah [5]: 73 which states that God is not 3.

Second, Exploration of Human Values as a Transformation of Mathematical Context. Human values are translated into human beings. Indonesians are part of the world's citizens who believe in

[47] Oetojo Usman and Alfian, 164.

the principle of equality of dignity, status, and dignity as servants of God, as well as upholding justice among human beings. The translation of these values can be used as a mathematical context in the concept of data processing and decimal numbers and arithmetic operations. This is stated in Q.S. at-Tin [95]: 4, Q.S. al-Isra' [17]: 70, Q.S. al-Hujurat [49]: 11, Q.S. al-Ma'idah [5]: 2, Q.S. al-Insan [76]: 8-9.

Third, Exploration of the Value of Unity as a Transformation of Mathematical Context. The values of unity are translated into Unity of Indonesia which covers the Indonesian nation as a union of ethnic groups that inhabit the territory of Indonesia, has patriotic values, and respects the sense of nationality as a dynamic reality. The elaboration of the unity values can be used as a mathematical context that is inserted in the concept of addition and subtraction of numbers and the concept of roman numbers. The statement above is strengthened by the word of God in Q.S. al-Hujurat [49]: 9, 10, and 13 and Q.S. an-Nisa' [4]: 59.

Fourth, Exploration of People's Values as a Transformation of Mathematical Context. People's values are shown by deliberation for consensus. For example, the election of the class leader is done by voting or based on the votes of class members. When counting the votes, the class leader shows a Mathematical concept, which is about presenting data. The data is presented in tabular form, then the name of the candidate for class leader with the most votes is the mode, calculating the mean (average) and median (middle value), data presentation, data processing. In addition to deliberation, populist values are also shown through the value of cooperation. *Gotong royong* can be used as a Mathematical context when studying the concepts of worth comparison and inverse comparison. This discussion is contained in Q.S. asy-Syura [42]: 38 and Q.S. al-Mujadilah [58]: 9 and 11.

Fifth, Exploration of the Value of Justice as a Transformation of Mathematical Context. One of the values of justice is shown by justice in the social life of the Indonesian people covering the

fields of ideology, politics, economy, social, culture, and national security defence. In the life of the Indonesian people, justice that can be used as a mathematical context is the type of commutative justice (*Justitia Commutativa*) and distributive justice (*Justitia Distributiva*). Rindjin explained that commutative justice means justice to give what is right based on human equality, so that every human being will get an equal share.[48] Meanwhile, distributive justice is justice to give what is the right or share based on human differences, such as achievement, age, and position, so fair based on distributive justice every human being will not get the same share, but is adjusted to the portion and placement. Distributive justice in the life of the Indonesian people, for example the payment of Land and Building Tax. This can be used as a mathematical context in the concept of percent numbers to calculate the nominal tax payments to be paid using arithmetic operations involving percent numbers and mixed arithmetic operations.

Commutative justice in the life of the Indonesian people, for example, economic equality. In the context of economic equity and human resources in Indonesia by calculating the average, highest value, lowest value, median, mode, and presenting data on the distribution of contributions and equity into tables and bar charts. Social justice for all Indonesian people is described in Q.S. an-Nahl [16]: 71, Q.S. Ali 'Imran [3]: 180, Q.S. al-Furqan [25]: 67, Q.S. al-Hadid [57]: 11, Q.S. adz-Dzariyat [51]: 19, and Q.S. al-Ma'un [107]: 1, 2, and 3.

This is descriptive about exploring the value of Al-Qur'an and the five precepts of Pancasila as an effort to transform the context in Mathematics.

[48] Ketut Rindjin, *Pendidikan Pancasila Untuk Perguruan Tinggi* (Jakarta: Gramedia Pustaka Utama, 2012), 173.

8. Implementation of Al-Qur'an and Pancasila Mathematics Education in Character Education in Schools

The implementation of Mathematics, Al-Qur'an, and Pancasila education in character education in schools can emphasize the relationship between humans in its dimensions and appreciate individual differences both in ability and experience. If Mathematics is seen as absolute and definite truth, but the role of the individual in the perspective of Al-Qur'an and Pancasila is very prominent in its achievement and students can be seen as developing beings (progress). Therefore, Mathematics is seen as more humane, among others, can be considered as a language, human creativity. Opinion is highly valued and emphasized. Students have individual rights to protect and develop themselves and their experiences according to their potential. The ability to work on math problems is individual.

Learning theory assumes that every student is different from one another in mastering Mathematics, this is in line with Al-Qur'an and the humanistic teachings of Pancasila. Students are considered to have different mental readiness and abilities in learning Mathematics. Therefore, each individual needs different opportunities, treatments, and facilities in learning Mathematics. The implementation of character education for learning Mathematics has implications for the function of the teacher as the best possible facilitator so that students can learn Mathematics with the values of Al-Qur'an and Pancasila optimally. Mathematics is seen not to be taught by teachers but to be learned by students. Students are placed as the centre point of learning Mathematics. The teacher oversees creating an atmosphere, providing facilities and others and the role of the teacher is more as a manager than a teacher. Learning is carried out in a conducive atmosphere, namely an atmosphere that is not so formal. Students work on different math activities with different targets. The teacher has three main functions, namely: as a facilitator, as a source of teaching and

monitoring student activities. Thus, teachers can develop various learning methods: lectures, discussions, assignments, seminars, and others. Learning resources or references are the central point in learning Mathematics. A variety of learning resources or references are needed including books, journals, and access to the internet. The assessment is carried out using an assessment approach, portfolio, or authentic assessment.[49]

C. Conclusion

The configuration between the values of Al-Qur'an, Mathematics, and Pancasila in the discourse of interconnection integration theory undergoes a demystification process, namely the thought process that moves from the text to the human social and ecological context, while also actualizing the objectification process with a mindset that avoids the domination of religious understanding and towards at the meeting point, consensus, common denominator on fundamental matters, although there are differences in more detailed matters.

In its application, Islamic studies carried out with a Theo anthropocentric process on the integralist value of Al-Qur'an to Mathematics gave birth to six models, namely Mathematics for Al-Qur'an (using Mathematics to implement Al-Qur'an), Mathematics from Al-Qur'an (developing Mathematics from Al-Qur'an), Mathematics to explore Al-Qur'an (using Mathematics to reveal the mathematical wonders of Al-Qur'an), Mathematics to deliver Al-Qur'an (using Mathematics to explain Al-Qur'an), Mathematics to explain Al-Qur'an (using Mathematics to explain Al-Qur'an), and Mathematics with Al-Qur'an (teaching Mathematics with Qur'anic values) through four internalization strategies, namely analogy, infusion, *uswah hasanah* and narration.

[49] Marsigit, "Pengembangan Nilai-nilai Matematika dan Pendidikan Matematika Sebagai Pilar Pembangunan Karakter Bangsa", Conference of Pengembangan Nilai-nilai dan Aplikasi dalam Dunia Matematika Sebagai Pilar Pembangunan Karakter Bangsa, Universitas Negeri Semarang, 2011.

In integration there is an effort to restructure Qur'anic and Mathematical sciences, while in interconnection there is a meeting in the format of complementation, comparison, confirmation, and the contribution of the verses of Al-Qur'an to the five precepts of Pancasila.

The result of this process is the birth of an integralist science that does not just combine, but even unifies, Al-Qur'an, Mathematics, and Pancasila. So, it gave birth to a descriptive about the exploration of the value of Al-Qur'an and the five precepts of Pancasila as an effort to transform the context in Mathematics. In this way, de-differentiation will occur, namely the unification of religion in every activity of national life based on Pancasila and the 1945 Constitution. The findings of this research show a close correlation and can be applied in the field of education in Indonesia.

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