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Neuroscience-Based Character Education Management at *Raudhatul Athfal Bait Qur'ani*: The Quantum Personality Method

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Abstract

Character education management based on the personality quantum approach with the Quran in early life is one of the most important predictors of human character formation. The goal of raising well-rounded, intelligent children will never be achieved without strict and practical guidance. This study used a qualitative case study method through field observations and in-depth interviews with leaders, teachers, and parents of students, with field analysis techniques to understand the strategy and management of early childhood character education with the quantum personality method. The result showed that neuroscience-based character education was structured through the curriculum, the preparation of educators, and the availability of adequate infrastructure, which was focused on the formation of cognition and morality of early childhood students. The quantum personality method through management following the Quran could shape students to think more logically and behave positively. The study concludes that the management of early childhood character education with the quantum personality method at *Raudhatul Athfal Bait Qur'ani* based on neuroscience turns out to have convergence in the learning process in *aqliyah* (logical thinking) and *nafsiyah*. This research contributes to a growing body of literature on the potential of neuroscience in the context of character education for young people. Furthermore, it is hoped that it will eventually be recognized as its field of study inside science rather than being dismissed as pseudoscience.

Keywords: Character Education Management, Neuroscience Studies, Quantum Personality Method

Introduction

Problem children are not limited to elementary and secondary school; they are already showing up in kindergarten in alarming numbers. There are five groups of problems experienced by kindergarten children: social (negativism), emotional (anxiety, fear), moral (deliberately destroying a friend's toy), understanding development (slow to understand

information or explanations), and language (speech delay).¹ Kindergarten students' behavior problems are identified in two dimensions: a) Internal problematic behavior, with indications of overly controlling emotions and impulsivity, such as withdrawing, being full of fear, feeling depressed, avoidance, and being oversensitive. Generally, the symptoms that occur in the child will suffer more than the people in their environment; b) Externally problematic behavior refers to the child's inability or failure to control his emotions and impulses, such as aggressive, disobedient, disruptive, hostile, and deviant. This behavior generally causes the environment, such as parents, siblings, peer groups, and school to be disturbed.²

In addition, the excesses of the abovementioned behaviors often lead children to become perpetrators or victims of bullying. In Jepara, it is also reported that the violence perpetrated in early childhood is relatively high. Unfortunately, the village community and teachers of Early Childhood Education (*Pendidikan Anak Usia Dini*, PAUD) still understand that cases such as bullying in early childhood are trivial problems or something that happens naturally. In cases of violence, especially for early childhood, perpetrators and victims need treatment to form a positive character and personality.³ As many as 57% of people who had experienced bullying in childhood were when they were adults. They would experience depression, low self-esteem, and interpersonal difficulties.⁴ Quality characters and personalities need to be formed and nurtured from an early age. Early age is a critical period for the formation of human nature. Many experts have explained that failure to handle character from an early age will form a problematic personality in later adulthood.⁵

Lack of attention from teachers and parents on the behavior of early childhood violence in schools so that the impact on victims and perpetrators was too late to be known by the surrounding environment. The effect causes adverse problems, such as the emergence of anxiety problems, depression, and decreased learning abilities, because they have difficulty concentrating and a memory decline, so children's academic achievement will

¹ I. Kadek Suranata, "Masalah-Masalah Yang Dialami Anak Usia Dini Dan Implikasinya Bagi Pelaksanaan Bimbingan Dan Konseling Di Taman Kanak-Kanak," *Jurnal Pendidikan Dan Pengajaran* 43, no. 2 (July 31, 2010): 89–95, <https://doi.org/10.23887/jppundiksha.v43i2.1713>.

² Anggil Viyantini Kuswanto Na'imah, "Analisis Problematika Perilaku Perkembangan Anak Usia Taman Kanak-Kanak," *Bunayya: Jurnal Pendidikan Anak* 6, no. 2 (July 1, 2020): 111–29, <https://doi.org/10.22373/bunayya.v6i2.7308>.

³ Sri Rejeki, "Pendidikan Psikologi Anak "Anti Bullying" pada Guru-Guru PAUD," *Dimas: Jurnal Pemikiran Agama untuk Pemberdayaan* 16, no. 2 (December 7, 2016): 235–48, <https://doi.org/10.21580/dms.2016.162.1091>.

⁴ Surilena Surilena, "Perilaku Bullying (Perundungan) Pada Anak Dan Remaja," *Cermin Dunia Kedokteran* 43, no. 1 (2016): 35–38, <https://doi.org/10.55175/cdk.v43i1.9>.

⁵ Diding Nurdin, "Implementasi Manajemen Pendidikan Karakter di Taman Kanak-kanak Khas Daarut Tauhid, Bandung," *Sosiohumanika* 10, no. 1 (October 23, 2017): 35–44, <https://doi.org/10.2121/sosiohumanika.v10i1.862>.

decrease significantly.⁶One of the causes of violence, such as bullying, fights, and others at school, is the unfavorable school culture. Schools should be a place where children can acquire knowledge and develop good character.⁷

Teachers have a huge role in class dynamics. As a party deemed to have power for a learning activity, teachers should provide a calm classroom environment and permit healthy interactions between class components characterized by an understanding and awareness of the differences between each student. Lack of supervision by adults or teachers during recess, ignorance of teachers and students towards students' problems, including acts of violence such as bullying behavior, as well as the inconsistent application of non-violent regulations are conditions that foster violence in schools.⁸

Schools with several difficulties that are not conducive frequently result from unsupportive education administration, such as a lack of oversight and slack application of the rules. The authorities do not have a firm attitude and view on cases in the school environment.⁹ Although no regulation requires schools to have a non-violence program policy, in the Child Protection Law (UUPA) no. 23 of 2002, article 54 states: "*Children in and within the school environment must be protected from acts of violence committed by teachers, school administrators or their friends in the school concerned, or other educational institutions.*" The school environment contributes to shaping children's personalities and characters. The teacher's commitment in schools is a determining factor in reducing violence cases, such as bullying. It revealed that the character in the current era had become a hot discourse.¹⁰

The nature of the nation's increasingly worrying children can be seen from the various cases, including cheating, bullying at school, undisciplined, brawls, pornography, and its kind. The character crisis needs to be addressed and managed thoughtfully by various parties, from the government, schools, families, and the community.¹¹ Character education will be

⁶ Nurul Hidayati, "Bullying pada Anak: Analisis dan Alternatif Solusi," *Insan Media Psikologi* 14, no. 1 (2012): 41–48, <http://journal.unair.ac.id/INSAN@bullying-on-children--analysis-and-alternative-solution-article-4317-media-8-category-10.html>.

⁷ Surilena, "Perilaku Bullying (Perundungan) Pada Anak Dan Remaja."

⁸ Novendawati Wahyu Sitasari, "Pengetahuan Dan Keterampilan Guru Dalam Menangani Perilaku Bullying," *Forum Ilmiah* 13, no. 02 (May 1, 2016), <https://ejurnal.esaunggul.ac.id/index.php/Formil/article/view/1403>.

⁹ Michele Elliot, ed., *Bullying, A Practical Guide to Coping for Schools*, 3rd ed. (London: Pearson Education in Association with Kidscape, 2008). 184.

¹⁰ Yuyarti Yuyarti, "Mengatasi Bullying Melalui Pendidikan Karakter," *Jurnal Kreatif: Jurnal Kependidikan Dasar* 9, no. 1 (August 23, 2018): 52–57, <https://doi.org/10.15294/kreatif.v9i1.16506>.

¹¹ Efrida Ita, "Manajemen Metode Pengembangan Karakter Bagi Anak Usia Dini," *Edudikara: Jurnal Pendidikan Dan Pembelajaran* 2, no. 3 (September 30, 2017): 200–209, <https://doi.org/10.32585/edudikara.v2i3.49>.

most effective if conducted at a young age when children are enrolled in early childhood education institutions such as Kindergartens (*Raudhatul Athfal, RA*) because this is the most formative time in a person's life. Character education for early childhood can be applied through character development activities. In this situation, development involves boosting the character's potential in the child to a higher degree because the character has potential in early childhood.¹² Child development must be applied systematically and continuously using the suitable character development management method. As a result of the planning, execution, and assessment stages of the management process, among others, the efficacy of these strategies can be determined.¹³

Quantum personality theory in education administration at *RA* is a formula that combines the quantum teaching technique, which is a pleasant learning change with all of its environment or learning moments, and personality theory, which is described as the finding of a typical learning pattern. The relationship between an organism's behavior and the consequences it reinforces. Personality is essential for character education through the effective management of students in schools.¹⁴ As there are still many pressing issues in schools that have not been addressed, every available educational resource must be used toward helping each student develop the ethics and character necessary to become an asset to society and the next generation. Character education management in schools in every school activity goes through three main channels: integrated through learning activities, combined through extracurricular activities, and integrated through civilizing and habituation activities. These stages include planning, organizing, mobilizing, and controlling, which requires collaboration between educators, parents, and the community in its implementation to run effectively.¹⁵ Character education management by schools should start at a young age because this age is proven to significantly determine a child's ability to develop his potential. The results showed that about 50% of the variability of adult intelligence occurred when the child was four years old. The following 30% increase occurs at the age of 8 years, and the remaining 20% in the middle or end of the decade is the first environment for a child's character growth.¹⁶

¹² Yuyarti, "Mengatasi Bullying Melalui Pendidikan Karakter."

¹³ Ita, "Manajemen Metode Pengembangan Karakter Bagi Anak Usia Dini."

¹⁴ Warsah, I., Daheri, M. *Psikologi: Suatu Pengantar*. (Yogyakarta: Tunas Gemilang Press, 2021), 158.

¹⁵ Annisa Tasya Marsakha, Hasan Hariri, and Sowiyah Sowiyah, "Management of Character Education in School: A Literature Review," *Kelola: Jurnal Manajemen Pendidikan* 8, no. 2 (December 17, 2021): 185–94, <https://ejournal.uksw.edu/kelola/article/view/5185>.

¹⁶ Tin Rustini, "Pendidikan Karakter Anak Usia Dini," *Cakrawala Dini: Jurnal Pendidikan Anak Usia Dini* 3, no. 1 (2012), <https://doi.org/10.17509/cd.v3i1.10321>.

The urgency of character education management in an early childhood education as stated in the 2003 National Education System Law Article 1 paragraph 14 states that: *Early childhood education is a coaching effort aimed at children from birth to the age of six which is carried out through the provision of educational stimuli to assist physical and spiritual growth and development so that children have the readiness to enter further education.*¹⁷ Early childhood education is a pre-*tamyiz* phase where children are prepared to enter the *tamyiz* phase. The *tamyiz* phase is the phase in which children can distinguish between good and wrong according to the rules of Allah Swt. Quality humans are obtained through discipline, self-confidence, and independence are the values of character education that need to be instilled so that children have these characteristics. Improved growth and performance are just two outcomes of character education for students. If managed effectively, character education can raise students' test scores.¹⁸

Students who excel and have good character are the goals of national education. That is stated in the National Education System Law No. 20 of 2003 article 3, which reads: *National education functions to develop capabilities and shape the character and civilization of a dignified nation in the context of educating the nation's life, aiming at developing the potential of students to become human beings who believe and fear God Almighty, have a noble character, and healthy, knowledgeable, capable, creative, independent and become a democratic and responsible citizen.*¹⁹ Schools that effectively implement character education see a rise in students' desire to learn and perform. The steps one takes in life are proper if one has good character and wrong if one has bad character.²⁰ A person's character will affect a nation's civilization if it is connected with society.²¹

The nature taught in schools is an extension of the essence, morals, or values that exist and are valued in society, known as normative social characters.²² In Islam, the surface is not only the values that live in society but the values that exist in the Quran and hadith. Character in Islam is *akhlak*, which cannot be equated with ethics or morals if the meaning

¹⁷ Presiden Republik Indonesia, "Undang-Undang Republik Indonesia Tentang Sistem Pendidikan Nasional," Pub. L. No. Nomor 20 Tahun 2003, Pasal 1 Ayat 14 (2003).

¹⁸ Nurul Hikmah, *Bait Qur'ani Sekolah Tahfidz Anak Usia Dini* (Ciputat: Bait Qur'ani Press, 2017), 135.

¹⁹ Miftah Syarif, "Pelaksanaan Pendidikan Karakter Dalam Pembelajaran PAI Di SMK Hasanah Pekanbaru," *Jurnal Pendidikan Agama Islam Al-Thariqah* 1, no. 1 (2016): 27–40, [https://doi.org/10.25299/althariqah.2016.vol1\(1\).616](https://doi.org/10.25299/althariqah.2016.vol1(1).616).

²⁰ Marvin W. Berkowitz, "Quantum Character: Commentary on Lerner and Schmid Callina," *Human Development* 57, no. 6 (2014): 354–59, <https://doi.org/10.1159/000369532>.

²¹ Thomas Lickona, *Educating for Character: How Our Schools Can Teach Respect and Responsibility* (New York: Brantam Book, 2009), 87.

²² Craig A. Cunningham, *Character Education in Public Schools: The Quest for a Suitable Ontology* (USA: National-Louis University, 2007), <http://cuip.uchicago.edu/~cac/pubs.htm>.

only refers to politeness among humans and only relates to outward behavior. It has to do with mental attitude or spirituality. In the Quran, character education includes the values of *aqidah*, worship, morals, and da'wah. It consists of understanding, caring, and behaving based on fundamental ethical values.²³

Character education management is most successful when it considers children's evolving morals and values in crafting lessons and activities. According to Piaget in Slavin, moral development includes three stages, namely (1) pre-moral, (2) moral realism, and (3) moral relativism.²⁴ Meanwhile, Power et al. stated that moral development includes (1) pre-conventional, (2) conventional, and (3) post-conventional.²⁵ The essence of the two theories is the same: in the early stages, children do not know the rules, morals, and ethics. Then, it develops into an individual who knows the rules, morals, and ethics and acts according to them. In the end, regulations, ethics, and morals exist in every child where moral considerations in him determine behavior not by laws or by the existence of others; even though there was no one else, he was ashamed to do evil and immoral things. So, for Playgroup and Kindergarten children, children's moral development is generally at the pre-moral and moral realism stages. At this stage, there are many rules, ethics, and norms that the child does not know and the child does not yet understand. For this reason, character education in RA is only in the introduction and habituation stage to behave according to existing norms, ethics, and rules. Thus, character education management will be effective if it is based on neuroscience.

A study in the field of neuroscience found some evidence that explains the inseparable relationship between the human brain and the behavior (character) of a human being.²⁶ Neuroscience studies brain consciousness in terms of biology, memory, and learning. The neuroscience theory for the brain and nervous system is the physical basis for the human learning process with a multidisciplinary approach. That is evidence that character education develops the potential of the human brain. All systems in the brain together build human attitudes and behavior.²⁷

²³ Quraish Shihab, *Tafsir Al-Misbah: Pesan, Kesan dan Keserasian Al-Quran*, vol. 3 (Jakarta: Lentera Hati, 2011), 147.

²⁴ Robert E. Slavin, *Educational Psychology Theory and Practice* (Boston, Ma: Pearson Education, 2006), 75.

²⁵ F. Clark Power, Ann Higgins, and Lawrence Kohlberg, *Lawrence Kohlberg's Approach to Moral Education* (USA: Columbia University Press, 1991), 254.

²⁶ Taufik Pasiak, *Tuhan dalam Otak Manusia, Mewujudkan Kesehatan Spiritual Berdasarkan Neurosains* (Bandung: Mizan, 2012), 32.

²⁷ Awhinarto Awhinarto and Suyadi Suyadi, "Otak Karakter Dalam Pendidikan Islam: Analisis Kritis Pendidikan Karakter Islam Berbasis Neurosains," *Jurnal Pendidikan Karakter* 11, no. 1 (April 29, 2020): 143–56, <https://doi.org/10.21831/jpk.v10i1.29693>.

Therefore, regulating brain performance usually will result in optimal function so that human behavior can be controlled consciously by involving several emotional and spiritual dimensions. Thus, character education can be explained in terms of the working mechanism of the brain at the molecular level, especially the six working systems of the brain. RA is an Islamic educational institution that organizes character education by internalizing the values of the Quran in *juz' amma*, which is friendly to children's brains. Based on previous studies, it has been proven that discussing the role of teachers in character education, reporting on self-reliance character learning by learning the Quran in early childhood students using the Bait Qur'an learning method.²⁸

This study aims to explore neuroscience-based character education management in early childhood through the Quantum Personality Method (QPM) as a standard or benchmark for management policies at RA Bait Qur'ani since 2015 because, in addition to its significance for measuring the level of change in student character, no QPM is applied in schools based on the Quran.

Methods

This study used a qualitative approach with a case study method.²⁹ Primary research sources are principals, teachers, and parents of students at one of RA Bait Qur'ani in Banten from June-November 2021. Informants in this study were determined by purposive sampling, namely by selecting informants who represented this study.³⁰ Field data analysis was carried out by collecting data on character education management through neuroscience, which has a QPM for early-age children, condensing the collected data, then presenting the data and making conclusions.³¹

Discussion

Character Education Curriculum Management at *Raudhatul Athfal Bait Qur'ani*

Raudhatul Athfal Bait Qur'ani is an Islamic early childhood school based on the Quran. However, it accommodates students from a familiar environment with a plural and crisis

²⁸ Zizi Syafitri and Nur Afif, "Pengaruh Metode Bait Qur'any terhadap Pembentukan Karakter Tanggung Jawab pada Program Takhasus Tahfidz Al-Qur'an di MTs Bait Qur'any Ciputat," *Al Kamal* 1, no. 1 (May 1, 2021): 31–42, <https://ejournal.staika.ac.id/index.php/alkamal/article/view/3>.

²⁹ Ellys Lestari Pambayun, *One Stop Qualitative Research Methodology in Communication* (Jakarta: Lentera Cendekia, 2013), 19.

³⁰ Mark N.K. Saunders, Philip Lewis, and Adrian Thornhill, *Research Methods for Business Students*, 6th edition (Harlow, England ; New York: Pearson Custom Publishing, 2012), 528.

³¹ Matthew B. Miles, A. M. Huberman, and Johnny Saldaña, *Qualitative Data Analysis: A Methods Sourcebook*, Third edition (Thousand Oaks, California: SAGE Publications, Inc, 2014), 8–10.

character, especially character or morals. Sometimes fights or scrambles for particular objects occur, the implementation of prayers and worship is still lacking, and family handling of children is loose. Therefore, school managers apply the QPM to reduce the moral crisis and change students to have Quranic values and characters in everyday life.

This research is generally the result of an exploration and description of neuroscience-based character education management that applies the QPM to early childhood students. Meanwhile, specifically, this study produced findings: a) curriculum planning, educators, and character education facilities; b) activities for administering curriculum, educators, and infrastructure; c) implementation of curriculum, educators, infrastructure, and character education for early childhood students; and d) supervision of curriculum, educators, infrastructure, and character education for early childhood students.

The essence of character education management is based on neuroscience through the QPM based on the dimensions of curriculum planning, teaching staff, and infrastructure.³² According to Wibowo, character education management includes learning planning,³³ as stated by the informants at RA Bait Qur'ani: principals, teachers, and parents of students through unstructured interviews. The character education management through neuroscience was carried out two months before entering the new semester. Things prepared in the neuroscience-based education planning stage start with the RA principal giving the tasks and mandates of teachers who have understood and received a neuroscience training certificate with the QPM held by the Provincial Education Office in Banten, as shown in Table 1.

Table 1. Curriculum Planning Stage

Activities	Explanation	Principal
Academic Calendar	The academic calendar contains important days of education and playing by the QPM for students for one year consisting of semesters 1 and 2 equipped with information on National holidays during the 2019/2020 school year.	Principal and teaching staff
Subject Schedule	The QPM scheduling includes several activities: study time and study schedule starting from 7.00-12.00 West Indonesia Time.	The leadership and teaching staff
Forming a supervision team	The supervision aimed at RA Bait Qur'ani students is to help children by mentoring, supervising, and controlling in class and outside the classroom around the school environment.	The supervision team: certified teacher in QPM

³² Raja Suzana Fitri, "Manajemen Pendidikan Karakter (Studi Kasus Di Sekolah Pulau Penyengat)" (Ph.D, Jakarta, Universitas Negeri Jakarta, 2020), <http://repository.unj.ac.id/6569/>.

³³ Agus Wibowo, *Manajemen Pendidikan Karakter di Sekolah* (Yogyakarta: Pustaka Pelajar, 2013), 94.

The planning stage of a neuroscience-based character education curriculum that is specifically carried out is to prepare curriculum devices in the form of an academic calendar, which is a detailed schedule of neuroscience-based character education activities and learning with the QPM of early childhood students. As explained by a teacher RA Bait Qur'ani, this is arranged between the principal and teaching staff to facilitate the arrangement of the learning agenda planned for one year.

Whereas the subject schedule is vital to implement neuroscience-based character education can run correctly and on target. Students are in school generally starting in the morning until noon. To accommodate this neuroscience-based character education learning activity, the teaching staff forms a lesson schedule so that it can be seen the division of study hours for each subject in a day, especially those containing neuroscience-based character education, which uses the QPM. According to the hour release category, the learning time is a neuroscience-based character education activity for several hours, usually one to two hours of classes. It is carried out once or twice a week. While the school teacher explains the neuroscience-based character education lesson schedule, a list or table of activities is made, or an activity plan is equipped with implementation time and time division based on the work order arrangement plan. The character education schedule coordinates four things: students, teachers, rooms, and periods. Scheduling activities are carried out jointly between school leaders and teachers, especially teachers who understand curriculum management. They, at one time, become particular schedulers.

Supervision is needed and implemented in schools to correct, direct, teach, demonstrate teaching techniques, evaluate and revise³⁴ neuroscience-based curriculum and character education. The school teacher explained straightforwardly to the supervision team that the leadership supervised neuroscience-based character education, especially teachers with certified neuroscience training with the QPM. The results of supervision are usually by holding seminars, workshops, discussions, or group meetings with teachers and parents of students discussing issues surrounding neuroscience-based character education. For example, when asking children to pray, not only make it a habit but by instilling the thought that prayer and prayer are a form of gratitude to Allah Swt because Allah Swt has given eyes, nose and ears, helps parents and loves parents for educating and giving birth, love to friends because of Allah, parents, and friends will love merciful people, as shown in Table 2.

³⁴ Abd. Kadim Masaong, *Supervisi Pengajaran dan Pengembangan Kapasitas Guru*. Bandung: Penerbit Alfabeta (Bandung: Alfabeta, 2013), 184.

Table 2. Infrastructure Planning Stage

Activity	Explanation	Principal
The academic achievement and noble character of students, as a predetermined goals.	The school teacher explained that an example of his activity was providing a stimulus to the child to relate the facts Rasulullah Saw with the Quranic information he had obtained. Can you steal mangoes or not? Why? Is it okay to lie or not, and why? Is it permissible to open an <i>aurat</i> in public or not?	The school teacher
A comfortable and conducive environment and equipment according to the age of the students.	The school teacher explained the QPM every 1-2 hours once a week. Alternatively, it is carried out in short, medium, and long periods. Suppose students have shown understanding and can show examples of the attitudes toward the Quranic values that have been explained. In that case, the teacher invites the child to choose something according to his Quranic understanding.	The school teacher
The school assigns parents to home	The principal and teacher motivate parents to carry out their roles at home by making daily reports in the school group and attaching photos of activities.	The principal and teacher staff, parents
The development of communicating intelligently	The school teacher explained that, for example, allowing students to criticize the facts around them and classifying which ones are following Allah's rules and which are contrary to causal, concrete thinking and something that children often encounter and is closest to the child's life	The teacher team

Essential elements must be included in an educational institution to achieve educational goals, such as students and their representatives, teachers, administrative division, treasurer, and parents. These elements are vitally needed to receive and receive assistance to perfect a plan. As the principal explained, that planning for neuroscience-based character education through the QPM is endeavored to always lead to predetermined targets based on the size through learning and playing activities carried out by early childhood students.

The planning sought in its formulation follows a series of problems with the character of early childhood students that need to be adequately addressed by teachers. QPM that will be carried out must be in a comfortable and conducive environment and equipment according to the age of the students. This neuroscience-based character education method uses the QPM according to wisdom to achieve character or morality for early childhood students. Quantum is a leap. The child's Islamic personality is obedience to Allah Swt and Rasulullah Saw, which is seen in every child's attitude born from the Quranic way of thinking

(understandings that are permanently bound and following the rules of Allah or the Quran) and taken from feelings that are always bound law of Allah Swt. The school teacher explained that the personality leap taught in this child is attempted as seriously as possible in the *pre-balig (pre-tamyiz)* period, which is 0-6 years. So that our children can optimize their potential so that there is a personality leap through the internalization of Quranic values into their daily activities. We provide an understanding that the brain is Allah Swt's creation into the brain system of children, and it is hoped that they will submit to the creator. For this reason, by thinking logically, habituating through examples in daily activities, and understanding the Qur'an, children can help solve their everyday problems.

The understanding given to RA Bait Qur'ani students by teachers through various media, as explained by school teachers, is that the learning patterns used in the character learning process are through the QPM by integrating visual and audio practices. The visible learning pattern is through films' help to visualize the Qur'an values children memorize. In the aspect of school leaders, teachers, personnel staff, as well as parents are the parties responsible for the implementation of neuroscience-based character education with locations, tasks, and powers that are tailored to their respective capacities. They control habituation and coaching at home with reports of children's daily activities, which include mandatory worship and *sunnah*, morals for parents in the form of helping parents in home activities, playing with affection for friends and brothers, and playing according to the values of the Qur'an. The character-based education activity should be carried out by RA Bait Qur'ani as a debriefing for early childhood students, according to Pambayun, not only good cognitive development so that they can think logically but also communicate intelligently with character according to the guidance of the Quran and the Rasulullah Saw.³⁵

Neuroscience-Based Character Education Management

The QPM at RA Bait Qur'ani manages character education based on principles from the neuroscience literature. These principles inform curriculum development, teacher training, and school infrastructure. The management of character education planning for early childhood students has been related to the management function. The curriculum planning function is carried out by determining a neuroscience-based character education curriculum development team led by the Principal and teaching staff who already have a QPM training certificate from the Banten Provincial Education Office. They are tasked with

³⁵ Ellys Lestari Pambayun, *Communication Quotient: Kecerdasan Komunikasi Berbasis Emosional dan Spiritual*. (Bandung: Rosdakarya, 2012), 23.

compiling and directing how to design an integrated curriculum with character education. Furthermore, in the planning function, principals and teaching staff have positions and duties by competencies in neuroscience with the QPM. Likewise, the infrastructure planning process is entrusted to teachers who the principal directly appoints to teach staff, treasurer, equipment, and logistics.

The objective of implementing QPM-based character education management is so that students can apply standard quantum theory tools in cognition to see flexibility, instability, and individual relationships in self-interpretation through conscious experience. For example, personal awareness can be seen in language and words that slide freely in polyvalent states: different learning.³⁶ It is because the nature of tiny particles, like the word, is not absolute and can be determined through observation.³⁷ For example, the spirit of fear cannot be proven in words until the individual realizes they are afraid. Similarly, impressions, ideas, and opinions are a conceptual collection of analogies that quantum theory needs to analyze.³⁸ In practice, the quantum personality method at RA Bait Qur'ani can be further detailed by referring to Herdian's thoughts in Hartono in eight strategies,³⁹ as shown in Figure 1.

³⁶ Pupuh Fathurrahman and Sobry Sutikno, *Strategi Belajar Mengajar Melalui Penanaman Konsep Umum dan Islami* (Bandung: Rafika Aditama, 2007), 56.

³⁷ Ellys Lestari Pambayun, *Communication Quotient: Kecerdasan Komunikasi Berbasis Emosional dan Spiritual* (Bandung: Rosdakarya, 2012), 42.

³⁸ Diederik Aerts, Marek Czachor, and Bart D'Hooghe, "Towards a Quantum Evolutionary Scheme: Violating Bell's Inequalities in Language," in *Evolutionary Epistemology, Language and Culture: A Non-Adaptationist, Systems Theoretical Approach*, ed. Nathalie Gontier, Jean Paul Van Bendegem, and Diederik Aerts, Theory and Decision Library A: (Dordrecht: Springer Netherlands, 2006), 453–78, https://doi.org/10.1007/1-4020-3395-8_20.

³⁹ Fondaline Sri Hartono, "Penerapan Model Pembelajaran Kuantum Tipe Tandur Untuk Meningkatkan Motivasi Dan Kemampuan Menulis," *Basastra* 1, no. 3 (April 1, 2014): 463–77, https://jurnal.fkip.uns.ac.id/index.php/bhs_indonesia/article/view/4044.

Figure 1. The Character Education Management Based on QPM in RA Bait Qur'ani

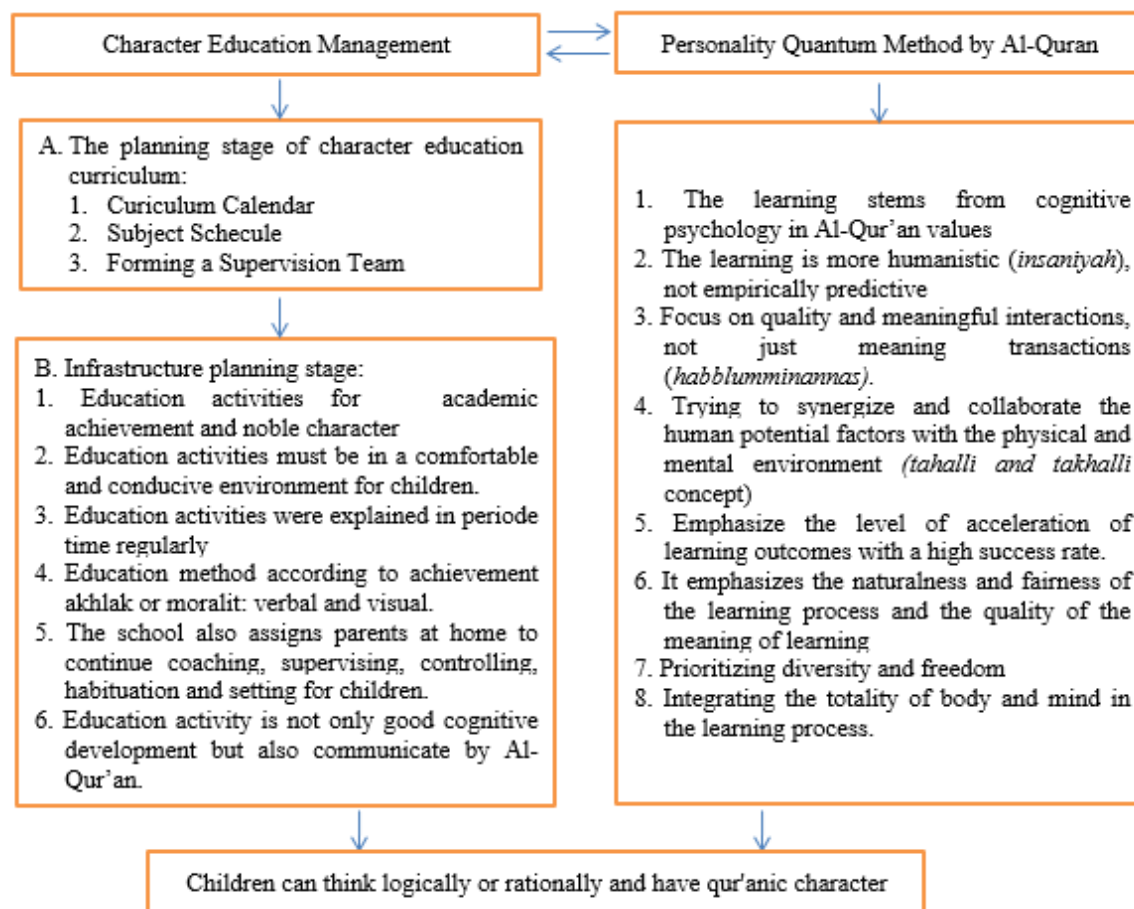


Figure 1 can be explained in more detail: *First*, the learning stems from cognitive psychology. Teachers arrange to learn through a rational (mental) thinking approach so that children can understand or think about something, namely by linking facts with the initial information that the child already has: linking the events experienced by the child with the understanding of the Quran that they already have. Through this rational cognitive approach, it is hoped that children will have the independence to think and solve each problem so that this understanding of the Quran can appear reflexively and flexibly in the daily lives of early childhood students at RA Bait Qur'ani. Berkowitz has also conducted previous research on the quantum character in Missouri, USA,⁴⁰ and for the neuroscience-based character building of Lickona in Wathon,⁴¹ which according to him, is very influential in shaping children's character.

Second, learning is more humanistic, not empirically predictive. Thinking processes that are not accustomed to egocentric, where individuals run their characters, not for their

⁴⁰ Berkowitz, "Quantum Character: Commentary on Lerner and Schmid Callina," 355.

⁴¹ Aminul Wathon, "Neurosains Dalam Pendidikan," *Jurnal Lentera : Kajian Keagamaan, Keilmuan dan Teknologi* 13, no. 2 (September 15, 2015): 236–45, <http://ejournal.kopertais4.or.id/mataraman/index.php/lentera/article/view/1324>.

own happiness, such as getting affection, because early childhood is very happy to be loved and pampered. In line with the assumptions of the behaviorism theory, human behavior is controlled by rewards or reinforcement from the environment.⁴² *Third*, focus on quality and meaningful interactions, not just significant transactions. The teachers provide an understanding built on the Quran-based thinking therapy for children by thinking about cause and effect, why to do certain actions, and why to leave specific activities. Thus, the process of meaningful thinking appears in these early childhood children.

Fourth, trying to synergize and collaborate the potential human factors with the physical and mental environment. The quantum personality learning process in character education with the values of the Quran is a learning that stimulates the child's big brain following the limits of development and self-potential of early childhood. The teachers try to concretize every quranic value with gestures, voice, and facial expressions during storytelling, video time, teachers, and friends as modeling to provide concrete examples in children's activities at school. As explained by Suryadi, neuroscience-based character education plays a vital role in regulating cognition, affect, and psychomotor.⁴³

Fifth, emphasize the acceleration of learning outcomes with a high success rate. In this stage, the teacher tries to make parameters to measure children's character and attitudes based on the school's curriculum. Children are given tools, tests and games, indoors and outdoors, that can explain any changes in their character and attitude, both in the family and at school. *Sixth*, it emphasizes the naturalness and fairness of the learning process and the quality of the meaning of learning. The teacher gives character lessons without coercion and is adjusted to the potential of all children. Children learn to develop all their potential, both verbal, visual, and auditory. Allah Swt gives the talents pleasure and joy in the form of games and other elements of creativity.

Seventh, prioritizing diversity and freedom. In addition, the neuroscience curriculum also has the variety and flexibility of methods and forms of value cultivation that can shape character, artistic values, cultural values, intelligence, skills, and religion. With this in mind, neuroscience originates, apart from revelation, as an intangible area that is rational, empirical, and intuitive. *Eighth*, integrating the totality of body and mind in the learning

⁴² Zul Fahmi, "Indikator Pembelajaran Aktif dalam Konteks Pengimplementasian Pendekatan Pembelajaran Aktif, Kreatif, Efektif dan Menyenangkan (Pakem)," *Al-Ta lim Journal* 20, no. 1 (February 20, 2013): 278–84, <https://doi.org/10.15548/jt.v20i1.24>.

⁴³ Suyadi Suyadi, "Hybridization of Islamic Education and Neuroscience: Transdisciplinary Studies of 'Aql in the Quran and the Brain in Neuroscience," *Dinamika Ilmu* 19, no. 2 (December 15, 2019): 237–49, <https://doi.org/10.21093/di.v19i2.1601>.

process. The character learning process using the QPM at RA Bait Qur'ani combines logical thinking and behavioral approaches. The process can be seen in the effort to enter Quranic information in children by memorizing, translating, and explaining the Quran, then linking these values with children's daily attitudes at school and home. Then in the learning process at school, the teacher accustoms children to behave following the importance of the Quran that has been instilled, and the teacher becomes an example. It is confirmed by research from Muhaimin that character education involves aspects of knowledge (cognitive), feelings (feeling), and action (action).⁴⁴ The eight strategies of the QPM are very relevant to character education at RA Bait Qur'ani. Through management carried out by the leadership and selected teachers, they have the neuroscience abilities to achieve the academic achievement of early childhood students, especially their morality until adulthood.

Conclusion

The QPM at RA Bait Qur'ani implements the findings of the analysis and discussion on neuroscience-based character education management by creating a character education curriculum, training teachers to have high levels of competence, and ensuring the school is a safe, welcoming environment for kids of all ages. In addition, neuroscience-based character education is immensely loaded with the values contained in the Quran in terms of the convergence concept of the learning process: the *aqliyah* approach (logical/rational thinking) and *nafsiyah* (behavior). The management carried out by RA Bait Qur'ani is also philosophical. Apart from the national education system, it can also be seen in optimizing children's thinking potential with a logical approach and environmental stimulants through a behavioral approach. From its resources, neuroscience-based character education through management based on trustworthiness, *tasamuh*, *wasathiyyah*, *sidiq*, *fathanah*, and *rabbaniyah*, it is proven that children's attitudes change at an early age to carry out disciplined, happy, and polite learning. Thus, the QPM at RA Bait Qur'ani can develop children's thinking potential. The school and family environment needs to be optimized to form a rational and Quranic character.

QPM's significance in preschool settings is that it provides a model for reorienting human-centered management structures toward God's design for education. Implementing

⁴⁴ Ahmad Muhaimin, "Manajemen Pendidikan Karakter Santri Dalam Menjawab Tantangan Modernitas Zaman Di Era Globalisasi (Studi Multisitus Di Pondok Pesantren Al-Hikmah Melathen Tulungagung Dan Pondok Pesantren Al-Anwar Trenggalek)" (Thesis, Tulungagung, IAIN Tulungagung, 2020), <http://repo.uinsatu.ac.id/22187/>.

QPM makes schools more innovative, comfortable, and liberating because all leaders, teaching staff, students, and parents work together to develop their own appropriate and appropriate curriculum for Islamic-based students. Teachers are required to be able to plan their subject matter based on their capacity to achieve predetermined academic and moral competencies. It differs from the previous curricula that came from and were made by the Central Government. Schools only had to implement them, so it almost did not provide space and challenges for developing ideas and creativity from the educational institution as *al-tariqah ahmmu min al-madah*.

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