RESPONS MUHAMMADIYAH EDUCATORS IN THE ERA OF NEUROSCIENCE-TECHNOLOGY: IMPLICATIONS FOR THE DEVELOPMENT OF ISLAMIC EDUCATION

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ABSTRACT

There is a holistic differentiation of educational alliances which has received a warm response from multicultural Islamic education. The emergence of a homogeneous educational base with all its knick-knacks, giving rise to new cases or chapters in Islamic education. Haedar Nashir responded well to this in his scientific speech, as delivered on the 48th Mukhtamar Muhammadiyah day at UMS Surakarta, the content of his scientific speech was none other than the advancement of Muhammadiyah Islamic education in the Millennial era. This research responds to the polemic of Islamic education in Indonesia along with alternative approaches based on Islam in the current era. Estuary based on qualitative descriptive research about the rumors of Islamic education in Indonesia. This research is based on a qualitative approach to literature review. Data analysis was used with a content analysis approach. Notes The results of the study found that polemics about life and about learning, approaches, methods, information delivery, education management, and social media appear, in the present. The level of demands from the Ministry of Education and Culture and the Ministry of Religion that Islamic education is expected to be able to bring more enlightenment. But what is the power of Islamic education in Indonesia, it is still as usual, progressing not advancing and not retreating. Differentiation of educational alliances occurs everywhere, regardless of formal education or Islamic boarding school education. Researchers offer alternatives in the increasingly significant decline in education with several alternative approaches such as neuroscience-based learning, religious moderation-based learning, and knowledge management in Islamic education. The contribution and implications of this research lead to the improvement of Islamic education and learning based on Islamic studies, which in the current era are starting to be shunned by millennials and generation Z in the era of society 5.0. This research is a forum and foundation for the improvement and progress of Islamic civilization in the future. the integration of neuroscience and technology into Muhammadiyah education holds significant promise for advancing and enhancing the development of Islamic education.

Keywords: Neuroscience, Muhammadiyah response, Islamic Education, knowledge

ABSTRAK

Adanya diferensiansi aliansi pendidikan secara holistic di respons hangat oleh pendidikan Islam secara multicultural. Munculnya basis pendidikan yang berhomogen dengan segala pernak perniknya, sehingga memunculkan kasus atau bab baru dalam pendidikan Islam. Hal ini di respons baik oleh Haedar Nashir dalam pidato ilmiahnya, sebagaimana yang disampaikan di hari Mukhtamar Muhammadiyah yang ke 48 di UMS Surakarta, tiada lain isi pidato ilmiahnya adalah tentang majunya pendidikan Islam Muhammadiyah di era Millenial. Penelitian ini merespons tentang polemic pendidikan Islam di Indonesia bersama dengan alternatif pendekatan basis Islam di era masa kini. Muara penelitian berbasis kualitatif deskriftif tentang desas desus pendidikan Islam di Indonesia. Penelitian ini berbasis pendekatan kualitatif kajian Pustaka. Analisis data digunakan dengan pendekatan analisis konten isi. Catatan Hasil penelitian di temukan bahwa polemic kehidupan dan seputar pembelajaran, pendekatan, motede, penyampaian informasi, manajemen pendidikan, dan media sosial tayang, di masa sekarang. Kadar tuntutan dari Kemdikbud dan Kemenag bahwa pendidikan Islam di harapkan mampu membawa yang lebih mencerahkan. Namun

apalah daya pendidikan islam di Indonesia masih saja seperti biasanya, maju tak maju dan mundur tak mundur. Deferensiasi aliansi pendidikan terjadi di mana-mana, tak pandang bulu pendidikan formal maupun pendidikan pesantren. Peneliti memberi tawaran alternatif dalam menurunnya pendidikan yang kian signifikan dengan beberapa alternatif pendekatan seperti pembelajaran berbasis neurosains, pembelajaran berbasis moderasi beragama, dan knowledge managamen pendidikan Islam. Kontribusi dan Implikasi penelitian ini mengarah kepada peningkatan pendidikan Islam dan pembelajaran berbasis studi Islam, dimana di era masa kini mulai di jauhi oleh para kaum mellenial dan generasi Z di era society 5.0. Penelitian ini sebagai wadah dan tumpuan untuk peningkatan dan kemajuan peradaban Islam di masa yang akan datang. Secara keseluruhan, integrasi ilmu saraf dan teknologi dalam pendidikan Muhammadiyah memberikan harapan besar untuk memajukan dan meningkatkan pengembangan pendidikan Islam.

Kata Kunci: Neurosains, respons Muhammadiyah, Pendidikan Islam, Knowledge

1. INTRODUCTION

Haedar Nashir Delivered in his scientific speech, that "The importance of Muhammadiyah teachers and educators is in increasing the capacity of teaching skills". In the modern era, it is appropriate for teachers to improve their teaching development competencies or develop their curriculum. One thing that is reversed is that with the amount of information and the development of information technology in the digital era that is happening, young people cannot filter or control the information they receive. Accurate information is difficult to select and unstoppable. The impact of this is that students change direction. Namely, with the existence of information technology students are not enthusiastic about learning, but in fact students are closer to communication tools or (the target) (Suyadi et al., 2022).

The problem that often occurs is that students are not active and their competence in learning results is not yet visible. Based on online data from DIKPORA, KEMDIKBUD, student learning outcomes experience a decrease in the quality of learning every year. Moreover, Muhammadiyah schools in Muhammadiyah charitable organizations under the auspices of PDM and DIKDASMEN PWM DIY, 80% of students have decreased significantly. The data was obtained from the evaluation of the PWM DIY DIKDASMEN and PP Muhammadiyah DIKDASMEN working meetings (Hamami et al., 2022). This is quite a big task for all Muhammadiyah teachers and educators. Meanwhile, basically Islamic education has been implemented so far in Indonesia, there is no dichotomy in Islamic education. However, 80% of Muhammadiyah students cannot read the Al-Qur'an and practice prayer as recommended by the Prophet and HPT Muhammadiyah.

There are very many contextual problems that need to be resolved by school stakeholders and school administrators and the school committee team. Alternatives and solutions that provide support to students, especially increasing learning outcomes, strengthening character, and independence are urgently needed by parents of students today. Because parents or guardians of students do not only abort their obligations as parents who have the obligation to send their children to school. However, there is something to be expected from the parents and those closest to them. Based on research research data sparked by UNESCO, that the concept of learning today is students as interactive centers of learning not teachers as triggers and learning activation (Juliani et al., 2019).·Students who must be active in developing or carrying out the learning process in class or in the school environment. The teacher is only an introduction and facilitator in conveying the material. But again, what appears is the fact that the teacher is active in explaining from the beginning of learning, so that most students are bored and monotonous in learning.

The UNESCO body explains that today's learning center is a center of learning (UNESCO, 2020). Students are active in developing learning materials, not teachers as actors. Students are directed to develop their potential, hone in critical thinking, and solve problems. This is also in accordance with what was proclaimed by the Minister of Culture and Education, Nadiem Makarim Anwar through his scientific speech since the emergence of the independent learning curriculum policy both in schools and in tertiary institutions. The independent curriculum is very supportive of developing students' intelligence, especially in aspects of strengthening character and increasing learning outcomes. But in reality, social facts are problems in educational institutions, both in schools, campuses, and Islamic boarding schools. The majority of parents of students and students are not as expected.

Dr. Md. Lailan Arqam (2010, 2021), as an expert on educational technology in a research thesis along with relevant journal articles states that it is important for teacher educators to upgrade / aptudate in developing learning for students (Muhammad Lailan Arqam, 2019), (Mhd. Lailan Arqam, 2010). Especially for religion-based learning and teaching. In this case, Azar Arsyad (2018), states that learning in the era of society 5.0 is synonymous with learning based on social media. Both audio-visual and internet-based learning media such as YouTube, Instagram, WhatsApp, and Facebook. It has become the

era for students in the current era, students and students are more inclined to use social media and their cellphones (JIN et al., 2022).

So far, many scientists, practitioners, intellectuals, and the government provide understanding to teachers through training, workshops, webinars, and socialization of strengthening learning. What is still popular today is the strengthening of the independent learning curriculum. This is implemented in schools or in madrasas and Islamic boarding schools. especially for Muhammadiyah institutions, this was responded well by the Central Executive of Muhammadiyah Yogyakarta and the DIY PWM Elementary Education Department. The chairmen and members of the PP Muhamamdiyah Elementary School and the PWM DIY Elementary School, launched the latest ISMUBA curriculum development concept, which is known as the integrative-holistic Ismuba curriculum. Which is still relevant to the development of the independent curriculum (Muhammadiyah et al., 2022).

Based on literature review data and systematic reviews from previous studies, the focus of this research is to respond to issues surrounding Islamic education in the current era or in the era of society. In this regard, researchers provide alternative responses or solutions based on neurotechnology approaches, knowledge management based on integrative holistic (independence learning curriculum and ISMUBA curriculum), as well as religious moderation in aspects of worship, social, and Islamic education.

The aim of the research is to respond to the polemic issues in the life of Islamic education from schools, madrasas and tertiary institutions. Especially in the aspect of students and students. This study aims to discuss in detail, in-depth and broadly about the knick-knacks of the emergence of problems of Islamic education in the modern era. Researchers offer an alternative offer that is packaged with a neuroscience learning approach or what is known as neurotechnology, namely a combination of neuroscience and the use of technology in today's world. The second is an integrative holistic-based knowledge management approach, where this alternative follows up on the roles and functions of the PP Muhammadiyah DIKDASMEN and PWM Muhammadiyah DIKDASMEN. Finally, the religious moderation approach is relevant to students and society in the era of society 5.0 both in the aspects of faith, Covid-19 and anti-corruption education.

2. METHODOLOGY

This research refers to a descriptive qualitative-based approach to literature review. This means that the researcher uncovers and traces references, popular and up-to-date academic literature that is currently trending. This study refers to Sugiyono's theory, as a scientist in research methods and qualitative research (Sugiyono, 2017). Researchers also adjust information and cases that are hot in the current era that are still related to education, both formal education and Islamic boarding school-based education. Literature is also obtained through online information literature data in quality and reliable online news and social media. Data analysis techniques through in-depth content analysis. Data analysis was strengthened by means of triangulation analysis techniques. This means that the researcher conducted an in-depth and widespread analysis (Novia et al., 2020).

3. RESULT AND DISCUSSION

In line with that, there are many learning approaches or concepts in the era of the development of technology and information in the social 5.0 era. Researchers provide findings or novelty learning models as described below:

Implementation of Neuroscience-based PAI Learning in the Neurotechnology Era

Initially, the theory of Neuroscience developed in the era after the revelation of the Qur'an in the 7th century (Suyadi, 2020). This was responded by secularists who did not believe in the existence of this brain science discipline. The science of neuroscience is very closely related to the explanation of biology, usually science is associated with being known by scientists and the world of medical health. Dr. Dr. Taufik Pasiak as a contemporary scientist who respects neuroscience alongside Islamic education or a spiritual approach to Islam (Fitriani et al., 2021). The explanation of this theory is well known since Taufik Pasiak combined the neuroscience approach and the Islamic spiritual brain. No less important Dr. Suyadi as an expert in neuroscience and Islamic education discovers new concepts about learning, approaches to Islamic education, to research on Islamic education and Neuroscience offers new discoveries to UAD Islamic religious education Masters students actively starting to link neuroscience with learning approaches Islamic education both in interdisciplinary and multidisciplinary sciences (Suyadi, Zalik Nuryana, 2020).
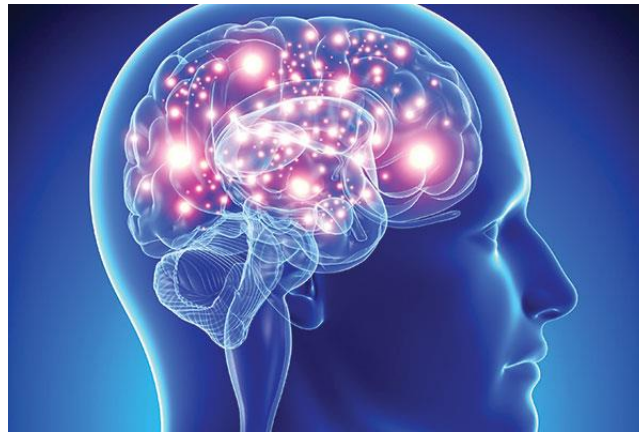
Figure 1. Neuroscience

Referring to the strengthening of the theory above, it is appropriate for educators and teachers today to implement it in schools and in the classroom. Especially towards Islamic religious learning in Ismuba subjects. So as not to watch how to teach, how to implement good knowledge, and how to practice good teaching and learning. So that students do not tend to be bored and lazy. The implementation of this science is to give a stimulus to students' brains, both right brain and left brain based on the level of intelligence of the brain. This means that teachers provide learning motivation, teachers teach through fun media, and teachers provide relaxed learning such as song-based pie learning and game-based pie learning (games) (Suyadi et al., 2021). However, the strengthening and implementation of the independent curriculum and integrative-holistic curriculum are still being delivered (H. Widodo et al., 2019).

Neuroscience-based curriculum is an effort to make the learning process in accordance with the work of the human brain to optimize learning outcomes. The integration of neuroscience into the curriculum is holistic including intra-curricular, co-curricular and extra-curricular. The application of neuroscience learning considers the level of brain development based on the age of the student, at the Kindergarten and Elementary School levels is the age when brain cells experience rapid growth, reaching 80% (Bonomo Ed. D., 2017). Stimulation from various activities and a good environment will form good character and stick throughout life. Changes in behavior and attitudes must be based on changes in the way of thinking first, because the human brain is always developing, and can change for the better or worse. Character education must touch the subconscious mind which governs habits, emotions, long-term memory, personality, intuition, creativity, perception, and beliefs and values. Teacher creations and innovations in applying character education will make the learning process in schools interesting and meaningful so that the

achievement of learning outcomes can be balanced between the cognitive, affective and psychomotor domains. The school's physical environment that influences the formation of student character includes: the arrangement of school facilities and infrastructure, (Fauzi Muhammad Ilfan, 2020).

Good Actions The habit of doing commendable actions based on knowledge, awareness, freedom and love will shape the experience of goodness, continue to feel love of goodness, then this experience of kindness will eventually shape character. There is a Bi'ah Islamiyah program that conditions all members of the school community to follow Islamic customs on a regular basis such as: Duha prayer, Dhuhur prayer in congregation, reciting the Koran every morning before starting to study general lessons, praying every time starting and ending class, shaking hands with the teacher when arriving and leaving school, praying together before and after meals and so on (Jailani, Widodo, et al., 2021). Rewards and consequences are also given routinely to each student every weekend, every 3 months and at the end of each academic year with various criteria aimed at motivating them to compete in winning both short and long term awards. These criteria, for example, are: arriving at school on time or before school activities start, entering the prayer room before the call to prayer is sounded, the desk is cleanest, the most disciplined in class, actively participating in class, helping friends in need and so on. Everything is recorded and written on the big board. Because every day they will see the achievement of their group's total score, they will be happy to reflect and motivate themselves to be better the next day. This pleasure will lead him into character.

The Islamic Religious Education curriculum is oriented towards the process of transferring knowledge, ways of thinking (mindset), attitudes (behavior), and behavior (attitude) through a set of knowledge and values contained in the Qur'an and al-Hadith. With the development of science, Islamic Religious Education is also required to be able to develop itself both from theoretical and applicable aspects so that its role in building the psychological-ideological framework of students can be implemented through efforts and the process of instilling something (education) continuously, and there is a reciprocal relationship between educators, students , and akhlakul karimah as the ultimate goal while still paying attention to epistemological aspects related to fostering and optimizing potential; planting Islamic values in the soul, taste and thought; as well as compatibility andbalance (Jailani, Suyadi, & Djubaedi, 2021).

Islamic Religious Education as an integral part of the entire national education system, must be developed and implemented in a systemic and holistic manner through the three main pillars of the implementation of the educational process, namely the educational unit, family and community. This is also consistent with the concept of national education responsibility which lies with schools, families and communities. Each pillar is an educational entity that develops values (ideal values, instrumental values, and practical values) through a process of intervention (interference between educational elements) and habituation (life in the world of education) in this context (Jailani, 2021).

Strengthening Knowledge Management Based on Integrative-Holistic Ismuba Curriculum

The holistic integrative Ismuba curriculum development policy launched by the Central Executive of Muhammadiyah is the first step to increase the capacity of students' abilities in Muhammadiyah schools. It can be seen that so far most students have not been independent in expanding and developing their learning abilities. Everywhere there is still dependence on the teacher. This is because students are not yet independent and do not have good learning objectives. 80% based on data from the PWM DIY Basic Education, students in the Ismuba exam are still very low (Arqam, Mhd Lailan,. Somae, Erik Tauvani,. Atmojo,. Ahmad Muslih , Akbar, 2021). As for the ability to read the Koran, it is still said that they cannot read the Koran. The prayer readings are still about iftitah prayers and other prayer readings, and that is not in accordance with the HPT Muhammadiyah (Muhammadiyah et al., 2022).

Figure 2. Socialization and Implementation of Holistic Integrative-Based Ismuba Curriculum

Holistic integrative is a series of concepts and systems that are related to one another. The output of the subjects of fiqh, Qur'an, Arabic, Aqidah, and Aqeedah Akhlak

are closely related. This aspect with the holistic integrative Ismuba curriculum is very relevant to the independent learning curriculum, which has the same goal. Namely aims to improve the competence of students learning and students to be more independent in solving problems. In other words, it provides a learning space for students in Muhammadiyah schools.

Education is one of the important sectors in development in every country. According to Law no. 20 of 2003. To achieve the goals of National education, education management that is good, intelligent, and able to compete is required to be rational, future-oriented, open, respect time, creative, independent, and innovative. While the information society is characterized by mastery of information technology, being able to compete, being curious, imaginative, being able to turn challenges into opportunities and mastering various methods of solving problems (Abdulmuhsin et al., 2021).

The development of information technology does play an important role in the concept of knowledge management. Almost all activities of human life are characterized by mastery of information technology, so it is important for teachers to be equipped and supported by increasing the development of their competencies (Oliveira et al., 2021). In particular to the development of abilities in improving student learning outcomes and student achievement results. However, in reality teachers have not been able to improve and develop their competencies. This is due to the absence of support and policies from schools to assist teachers in improving their abilities (Nuryana et al., 2019).

Religious Moderation as a Learning Approach in the Era of Society 5.0

Religious moderation is a policy initiated by the Minister of Religion Yaqut Qoumas (2021), where in 2021 the policy of religious moderation will be launched. Initially the religious moderation approach was directed at increasing capacity and security in the background chapter on worship. However, with the passage of time and the rapid increase in knowledge about the polemic of the problems of the Indonesian people, it is increasing. It appears until a time that relates to strategies or alternatives in social, religious, economic and educational aspects, especially in aspects of Islamic education.

One example of the importance of this moderation in religion was created in an area of Madura, namely Pamekasan, Sumenep, Bangkalan, and Sampang, where the society is very diverse in terms of intent and sensitivity with Islamic understandings. For example between NU and Muhammadiyah, yes again about the difference in understanding between NU and Muhammadiyah. Over time, with the existence of religious moderation,

the Madurese people began to understand and realize that it was proven by significant changes. This is evident in the data on the increase in worship and the lack of itcases of understanding problems in Madura, submitted by the Religious Supervisory Board of the Ministry of Islamic Religion in Madura.

Changes in time, seconds, minutes, and changes in information until it arrives at a period called the era of society 5.0. Where Indonesian people are starting to get to know a lot of new and modern knowledge. Until the Islamic Education Agency of the Ministry of Religion responded with a religious moderation learning approach in Islamic religious education subjects and courses. With the aim that students and students understand more about harmony and peace, a difference of opinion, understanding, vision, mission, and beliefs. Of course, supported by an adequate religious moderation approach, such as *tawasuth, moderate,*and *tasamuh*. ethnicity, language, religion, race, class and culture are very diverse. This is a very large cultural capital base. Indonesian society is plural, this is a gift from Allah SWT. What needs to be grateful for, Indonesia is a miniature of the word of God. (QS. Al Hujurat: 13) There are no less than 500 ethnic groups in Indonesia who are the source of the wealth of the Indonesian plural nation (Akhmadi, 2008).

Diversity in the archipelago must be managed properly and appropriately. Not just managing diversity to be tolerant and respectful (Faidi et al., 2021), but more than that, cultural plurality or the diversity of ethnicities, languages, religions, races, classes and cultures that exist is a challenge in itself. How is this nation able to manage various rich cultural identities to become a national identity. Without having to deny the distinctive identity of each culture.

a. Aqidah (belief) material that is relevant to the concept of religious moderation in madrasas

Aqidah comes from the word *'aqoda-ya'qudu-'aqiidatan* which means the rope that binds something to another, so that it becomes a unit that cannot be separated. If it can still be separated, it means that there is no binder and at the same time it means that there are no rules. In popular discussions, *aqidah* is defined as faith, belief or belief (Hatim, 2018).

In Islamic studies, *aqidah* means the rope that binds the human mind to what he believes is God Almighty who deserves to be worshiped and the creator and regulator of this universe. Aqidah is a belief in a real nature that does not accept doubts and objections. Meanwhile, M. Syaltut said that *aqidah* is the foundation upon which sharia law is built. Shari'ah is the embodiment of *aqidah*. Therefore, a strong law is a law born from a strong

faith. There is no creed without *shari'ah* and it is impossible for *shari'ah* to be born if there is no *Aqeedah* (Akidah Akhlak: Ministry of Religion, 2014: 4) (Main, 2019).

The purpose of the Islamic creed is to make sincere intentions and worship only to Allah, free the mind and mind from anxiety that arises from weak faith, calm the soul and mind, not worry, straighten goals and deviate actions in worshiping Allah and relate to others based on the teachings of al-Qur'an. -Qur'an and guidance Rasulullah Saw. And be serious in everything by not taking away a good opportunity to do good deeds.

Morals in language come from the Arabic al-akhlak, which is the plural form of the word khuluq which means character, manners, habits or customs. While understanding in terms, morals are a condition inherent in the human soul, which gives birth to easy actions without going through a process of thought, consideration or research. If this situation gives rise to good and commendable actions according to the view of reason and Islamic law, it is called good morals. If the actions that arise are not good, they are called bad morals. Because morals are a condition that is inherent in the soul, then new actions are called morals if several conditions are met, namely:

1) This action was repeated. If the action is only done occasionally then it cannot be called morals. For example, one day a person who rarely gives gifts suddenly gives money to someone else for some reason. Actions like this cannot be called generous with a generous character because it is not inherent in his soul.

2) The action arises easily without thinking or researching it first so that it really is a habit.

Morals occupy a very important position in Islam, so that every aspect of this religious teaching is always oriented towards the formation and development of noble morals, which is called al-akrak al-karimah.

Kinds of Morals (Wad'iyyah morals are norms that teach humans by referring to human thought and experience. Meanwhile, Islamic Morals in the form of religious norms are morals that teach morals to humans by taking the guidance that has been given by Allah Swt and Rasulullah SAW in Al-Qur'an. -Quran and hadith (Akidah Akhlak: Ministry of Religion, 2014: 33).

The material for the Akhlak Aqidah at the madrasah tsanawiyah level is based on the Decree of the Minister of Religion Number 183 of 2019 concerning the Curriculum of Islamic Religious Education and Arabic Language in madrasas contains the following:

Objectives and Scope of Islamic Education and Arabic Subjects Madrasah Tsnawiyah (MTs) Akidah Akhlak

Table 1. SMA Akhlak Material

Objective	Scope
1. Fostering and enhancing students' understanding, appreciation, application, routine practice, and experiential learning of Islamic beliefs to nurture them into individuals who continually strengthen their faith and devotion to Allah (SWT). 2. Cultivating a society of Indonesians characterized by exemplary virtues and the avoidance of undesirable moral conduct in their daily lives, both at the individual and societal levels, as reflections of Islamic teachings and values.	1. The Aqidah aspect encompasses the foundational principles and goals of Islamic belief, including the Beautiful Names of Allah (Al-Aziz, Al-Basith, Al-Ghaniyy, Ar-Ra'uf, Al-Barr, Al-Fattah, Al-Adl, Al-Hayy, Al-Qayyuum, Al-Latif), the obligatory, impossible, and permissible aspects of Allah SWT, supported by both textual and rational evidence. It also covers the duties and characteristics of angels, as well as other supernatural entities like jinns, devils, and demons. Additionally, it explores the significance of belief in the Last Day, divine decree (Qadla' and Qadar), and miracles and extraordinary events (Karamah, Maunah, and Irhas), as well as supernatural occurrences related to the Last Day (Alam Barzah, Yaumul Ba'ats, Yaumul Hisab, Yaumul Mizan, Yaumul Jaza', Shirat, Heaven, and Hell). 2. The aspect of commendable morals includes virtues such as repentance, obedience, steadfastness, sincerity, effort, trust, contentment, patience, and gratitude. It highlights the key characteristics of the unwavering determination of the apostles, Ulul Azmi, and virtues like positive assumptions, humility, tolerance, cooperation, diligence, creativity, productivity, and innovation. 3. The aspect of despicable morals addresses negative traits like hypocrisy, arrogance, selfishness, despair, anger, greed, envy, grudges, backbiting, slander, gossip, and deviant behavior in adolescent interactions such as alcohol consumption, gambling, courtship, and conflicts. 4. The aspect of adab (manners) covers the etiquette and virtues associated with prayer and remembrance (Istighfar,

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	Shalawat, and Laa ilaaha illallaah), Quranic reading, and prayer. It also includes proper conduct towards parents, teachers, social media, relatives, friends, neighbors, walking, eating, drinking, and dressing. 5. The aspect of exemplary stories includes narratives about Prophet Sulayman, Prophet Ibrahim, Prophet Musa, the companionship of Abu Bakr (may Allah be pleased with him), the friendship of Umar bin Khattab (may Allah be pleased with him), the esteemed Aisha (may Allah be pleased with her), the companionship of Usman bin Affan (may Allah be pleased with him), and the friendship of Ali bin Abi Talib (may Allah be pleased with him).

In implementing this curriculum, it is also supported by the Implementation of Religious Moderation, Strengthening Character Education, and Anti-Corruption Education.

1. Each subject teacher is required to instill the value of religious moderation, strengthening character education and anti-corruption education to students.

2. Planting the value of religious moderation, strengthening character education, and anti-corruption education for students in the form of a hidden curriculum in the form of habituation, acculturation and empowerment in everyday life.

3. The implementation of instilling religious moderation values, strengthening character education and anti-corruption education for students above does not have to be contained in the teacher learning administration (RPP), but teachers are required to condition the classroom atmosphere and carry out habits that allow the formation of a culture of moderate thinking in religion, the formation character, and anti-corruption culture, as well as conveying moral messages to students.

1. **Impact of Covid-19**

On December 31, 2019, a group of people in China experienced an acute respiratory disease which was later confirmed as a coronavirus on January 7, 2020, this outbreak spread very quickly from human to human. Coronavirus (nCov) is a

large family of viruses that cause illness from mild to severe symptoms. Coronavirus Disease (Covid-19) is a new type of virus that has never been found in humans before. Corona viruses are included in zoonoses (transmitted between animals and humans). Covid-19 has become a global problem that causes severe respiratory infections in humans (Nuryana et al., 2022).

In China, they have taken various ways to deal with this outbreak, such as isolating people identified as coronavirus, carrying out quarantine, and practicing social distancing. Not only that, the Chinese government has also made steps to prevent Covid-19 by imposing social distancing, using masks by the entire community, closed public transportation. Quarantine is carried out to limit activities or separate someone who is exposed to an infectious disease while isolation is carried out to separate sick people from healthy people so that they can get treatment carried out in health services (Bhatnagar, 2021). In Indonesia, this outbreak was only discovered in mid-February 2020, the government immediately provided steps so that the Indonesian people would practice social distancing, implementing online learning would limit gatherings with many people, limiting public transportation. Social distancing is done to control the spread of disease. Because it is not allowed to gather with many people. This has an impact on the education sector in Indonesia, so the steps that can be taken by the government are to conduct online learning. This also has an impact on the emotional intelligence of students because students experience anxiety due to this outbreak. According to Goleman (1997) emotional intelligence is a person's ability to motivate himself and endure frustration, control moods, and take care not to get stressed which causes paralysis of the ability to think, empathize and pray (Suyadi: 2019). In order for students to concentrate and online learning conducted by students to be effective, students need to have positive emotions. Positive emotions, namely the ability to manage thoughts and feelings so that they have life values, which cause a person to behave appropriately. Including instilling the values of religious moderation which was carried out during the Covid-19 (Jailani, Suyadi, & Muallimah, 2021).

Muhammadiyah educators in the era of neurotechnology from the perspective of Islamic education

In exploring Muhammadiyah educators in the era of neuroscience-technology, it is essential to acknowledge the evolving landscape of educational methodologies. The integration of neuroscience and technology has profound implications for the development of Islamic education, providing unique opportunities for a more comprehensive understanding of pedagogical approaches.

One significant aspect is the development of aqidah (faith) among students through neuroscientifically informed methods. By incorporating knowledge about cognitive processes and emotional intelligence, educators can enhance students' appreciation, practice, and habituation of Islamic beliefs, fostering a deeper and more enduring connection to their faith.

The utilization of neurotechnology also plays a crucial role in shaping moral character. With insights from neuroscience, educators can design strategies to instill commendable morals, such as repentance, obedience, sincerity, and patience. This approach ensures a holistic development of students, aligning their moral compass with Islamic teachings (Siti Muhayati, 2021).

Conversely, neuroscientific knowledge can be employed to address despicable morals. Understanding the neural underpinnings of behaviors like envy, greed, and gossip allows educators to implement targeted interventions, fostering an environment that discourages negative traits in both individual and social contexts. The integration of neuroscience and technology extends to the realm of pedagogical delivery. Adaptive learning technologies can cater to diverse learning styles, ensuring that Islamic education remains engaging and accessible. This inclusivity is crucial for accommodating the varied cognitive needs of students (Suyadi, 2018).

Neuroscience provides a lens through which to examine the cognitive processes involved in comprehending complex theological concepts. Educators can leverage this understanding to tailor their instructional methods, making abstract ideas more accessible and promoting a deeper understanding of Islamic principles (Kasim, 2020).

Exploring Muhammadiyah educators in this context also involves considering the neurological aspects of memory and learning retention. Strategies informed by neuroscience can enhance the long-term retention of Islamic teachings, ensuring that students carry their knowledge forward into their lives.

The role of neurotechnology in assessing and addressing cognitive challenges among students is paramount. Through neuroscientific assessments, educators can identify learning difficulties early on and implement targeted interventions, ensuring that each student has the opportunity to thrive in their Islamic education.

Furthermore, the era of neuroscience-technology calls for a critical examination of the ethical considerations surrounding its application in Islamic education. Balancing technological advancements with the preservation of traditional values is a delicate task that requires careful consideration. In conclusion, exploring Muhammadiyah educators in the era of neuroscience-technology unveils a promising landscape for the advancement of Islamic education. By embracing the insights provided by neuroscience and technology, educators can tailor their approaches to better meet the needs of students, fostering a generation deeply rooted in Islamic faith and moral values.

The era of neuroscience-technology has ushered in a paradigm shift in educational theories, emphasizing a more holistic understanding of cognitive processes. This shift holds significant implications for Muhammadiyah educators as they navigate the development of Islamic education in this technologically advanced age.

Neuroscientific theories underscore the intricate interplay between cognitive functions and emotional responses. Muhammadiyah educators can leverage this understanding to design instructional methods that not only impart knowledge but also foster an emotional connection to Islamic teachings, contributing to a more profound impact on students.

The concept of neuroplasticity is particularly relevant in the context of Islamic education. It posits that the brain can adapt and reorganize itself based on experiences. Muhammadiyah educators can capitalize on this concept to create immersive learning experiences that leave a lasting imprint on students' understanding and practice of Islamic faith (Arifin, 2016).

Cognitive load theory, a fundamental concept in educational neuroscience, offers insights into the optimal amount of information a learner can process. Applying this theory allows Muhammadiyah educators to structure their teachings in a way that ensures students absorb and retain crucial Islamic principles without overwhelming cognitive capacities (H. W. Widodo, 2019).

The Zone of Proximal Development (ZPD) from Vygotsky's sociocultural theory gains new relevance in the era of neuroscience-technology. It emphasizes the importance

of scaffolding – providing support tailored to students' current abilities. Muhammadiyah educators can apply this concept to facilitate gradual and effective learning of complex Islamic concepts. Connectivism, a learning theory in the digital age, asserts that learning is a networked process. In the context of Muhammadiyah educators, embracing this theory involves leveraging technology to create interconnected learning experiences, fostering collaborative exploration and understanding of Islamic education.

Social cognitive theory, championed by Albert Bandura, accentuates the role of observation and imitation in learning. Muhammadiyah educators can integrate this theory by incorporating real-world examples and role models, both within and outside the Islamic context, to inspire students and reinforce positive behaviors (Ickert et al., 2021).

The concept of metacognition becomes pivotal in the context of Islamic education. Muhammadiyah educators can empower students to become aware of their own thinking processes, encouraging them to reflect on and refine their understanding of Islamic beliefs and practices. The concept of multiple intelligences, introduced by Howard Gardner, recognizes diverse cognitive strengths among individuals. Muhammadiyah educators can use this theory to tailor their teaching methods, acknowledging and nurturing various intellectual capacities, ensuring a more inclusive and effective educational experience (Ahmad, 2015).

In conclusion, the integration of neuroscience and technology into Islamic education prompts Muhammadiyah educators to reevaluate and adapt their teaching theories and concepts. By incorporating these insights, educators can create a dynamic and effective learning environment that aligns with the cognitive and emotional needs of students in the contemporary era.

Recent research findings suggest that Muhammadiyah educators are increasingly recognizing the potential of incorporating neuroscientific principles into their teaching methodologies. This shift has been spurred by the growing body of evidence highlighting the positive impact of neuroscience-technology integration on the development of Islamic education (Adib Al Husein, Dwi Ertanti, M. Wahyudin, Malika Sukmawati, Ricky Jaka Setyawan, 2019).

Studies indicate that the understanding of cognitive processes, facilitated by advancements in neuroscience, has led to more effective strategies for teaching aqidah (faith) to students. Educators are utilizing neuroscientific insights to tailor their approaches, creating a more engaging and personalized learning experience for students.

The research also highlights the role of neurotechnology in promoting moral development among students. Findings suggest that interventions informed by neuroscience contribute to the cultivation of commendable morals, fostering a positive ethical framework rooted in Islamic teachings (Ranu Suntoro, 2020).

One significant finding is the use of neuroscientific assessments to identify and address cognitive challenges among students. By employing brain-based assessments, educators can provide targeted support, ensuring that every student receives personalized attention to thrive in their Islamic education. Research underscores the importance of adaptive learning technologies in accommodating diverse learning styles within the Islamic education context. This inclusivity ensures that neuroscientifically informed tools cater to the varied cognitive needs of students, fostering a more equitable educational environment (Wahdan et al., 2020).

Cognitive psychology findings have influenced the development of instructional methods that enhance students' comprehension of complex theological concepts. By leveraging neuroscientific understanding, educators can make abstract ideas more accessible, leading to a deeper understanding of Islamic principles. Studies emphasize the significance of neuroscience in enhancing memory retention of Islamic teachings. Neuroscientifically informed strategies contribute to the long-term retention of knowledge, ensuring that students carry their understanding of Islamic principles into their daily lives.

The ethical implications of incorporating neurotechnology in Islamic education have also been a focus of recent research. Scholars are investigating the ethical considerations surrounding the use of technology, striving to strike a balance between technological advancements and traditional Islamic values. Research findings point to the need for ongoing professional development for Muhammadiyah educators in the realm of neuroscience-technology integration. Continuous training and support are crucial to ensure that educators remain adept at incorporating the latest neuroscientific insights into their teaching practices (Jailani, 2022).

In conclusion, the research collectively suggests that the exploration of Muhammadiyah educators in the era of neuroscience-technology is a dynamic and evolving field. The implications derived from recent findings underscore the transformative potential of integrating neuroscience into Islamic education, paving the way for a more enlightened and effective pedagogical approach.

4. **CONCLUSIONS**

Based on the results and linguists and answers from the research objectives, it can be described with the conclusion that Islamic education in the era of society 5.0 must indeed be demanded by improving the quality of learning and developing Islamic-based knowledge management. Based on information from online data from the Ministry of Education and Culture, the Ministry of Research and Technology and Higher Education, and the management general of Islamic education, the problems related to Islamic education and learning are very diverse and have increased significantly. It is marked by the existence of 80% data between the government's expectations and targets which are not in line with the practices of teachers, lecturers, ustadz, and kiyai in the field (madrasas, schools, and tertiary institutions). This happened because the teachers, the government, and practitioners were not on the same page and were unified in taking the right policy steps.

Alternative approaches directed at pre-teachers and practitioners, especially Muhammadiyah teachers, lecturers at PTMA and academics at AUM Muhammadiyah, should maximize the implementation of a neurotechnology-based learning approach, namely neuroscience-based learning, focusing on the brain and maximizing teaching material facilities, social media, and learning media. in the millennial era. The Ismuba holistic integrative curriculum-based approach is based on knowledge management so that it is aligned with the development of the implementation of the independent learning curriculum. Finally, the concept of religious moderation is very relevant to learning in schools and MadrasahsMuhammadiyah. The three aspects of this approach contribute and have implications for the development of Islamic education in the era of society 5.0. As this information was conveyed by Dr. Haedar Nashir at the 48th Mukhtamar Muhammadiyah at UMS Surakarta. This is also the awareness of academics, practitioners and the government that educational cases and conflicts have increased quite significantly, from data from the Ministry of Education and Culture 80% - 96% of student learning outcomes have decreased not in accordance with learning achievement targets (RPP and syllabus).

The exploration of Muhammadiyah educators in the era of neuroscience-technology signifies a transformative shift in Islamic education, where the integration of neuroscientific insights and technology offers promising avenues for more effective and personalized pedagogical approaches. These implications underscore the potential to

cultivate a generation of students deeply rooted in Islamic faith and moral values, propelled by the advancements in neuroscience and technology.

Suggestions and input from researchers for future editions of researchers, to focus more on learning or patterns of approaches to inveronmental multicultural Islamic education that are no less important are in line with the development of educational currents in the current era. One of the factors is shared awareness about the importance of Islamic education in the future.

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