

Teachers and Students Relation from Ibnu Sina's Multilevel Reasoning and Neuroscience Perspective: Implications for Islamic Education Development

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Abstract

Currently, teachers' and students' relations were not ideally treated because of the rapid growth of information technology. The teacher's role was needed in improving students' cognitive, affective and psychomotor skills for facing the recent era. This study was aimed to analyze the teachers and students relation in appropriate models using Ibn Sina's multilevel reasoning and neuroscience perspective. The data were obtained through observing manual and digital scientific journals and research references focusing on this issue. This research was a literature study using a qualitative method. Findings proved that Ibn Sina's multilevel reasoning approach was relevant for improving the student's brain, emotional intelligence, and empathy to their teachers. Teachers should be creative to approach the pupils by providing appropriate advice and character education. Thus this research was expected to contribute to the Islamic education development in this millennial era.

Keywords: Ibn Sina's Multilevel Reasoning, Islamic Education, Neuroscience, Teacher-Student Relations

INTRODUCTION

The teacher-student relation was strengthened in a teaching and learning process as part of education. The interaction route was a core activity in the learning agenda which took several implications and concentrations on Islamic education subject¹. Communication was the most significant commotion in Islamic teaching². The relationship between teachers and students was closely related to the process of Islamic instruction. Teachers communicated and interacted with students both within the school

¹ Kusmana, "The Qur'an, Woman, And Nationalism In Indonesia Ulama Perempuan's Moral Movement," *Al-Jami'ah* 57, no. 1 (2019): 83–116.

² Fajri Zulia Ramdhani and Rusmimayani Kurniawati, "Humanizing Islamic Religious Education in Bali During The Covid-19 Pandemic," *Tarbiya: Journal of Education in Muslim Society* 8, no. 1 (2021): 65–80.

and surrounding settings. The effects of Islamic education were imperative for other subject learning activities in the schools³. Implementing a particular learning method or model was needed to facilitate and achieve determined learning objectives for generating effective and efficient learning practices⁴.

However, in the current era, teachers' and students' relation was not effective and efficient. Regarding Islamic religious education, the learners' character was far different from expected goals in the curriculum. In the syllabus, the students were projected to understand and practice Islamic religious concepts in everyday life, both at school and milieu. Numerous students were not intimate with their teachers. Their relationship and communication were no longer harmonious⁵.

According to the Big Indonesian Dictionary, a relation was defined as having a good communication or bond. In general, the relationship was referred to actively interacting with others for activities that had been or were being carried out. A relationship involved two parties who directly or indirectly contributed⁶. A relationship was necessary for two persons in a certain activity or several events which had similarities for bringing mutually bound⁷.

The teacher and student relationship were linked to an educational affiliation using several norms and media to achieve determined learning targets⁸. In the learning activities, and interaction between teachers and students was reinforced⁹. The bond between teachers and students was fortified in the learning route¹⁰. In the teaching and learning process, students were provided and motivated to always acquire and improve

³ Indonesian Journal and Benjamin G Zimmer, "Al-Tijarah Wa Al-Da'wah Al-Islamiyyah: Dirasah Li Qadiyyati Dukhul Al-Islam Fi Induniyya," *Studia Islamika Indonesian Journal for Islamic Studies* 7, no. 3 (2000): 113–128.

⁴ Hidayat, T & Fahrudin, dalam *Ta'dib Jurnal Pendidikan Agama Islam*, Pola Pendidikan Islam di Pondok Pesantren Mahasiswa Miftahul khoir Bandung dalam Membentuk Kepribadian Islami. (Bandung:2018)Vol. VII, No.1 Retrieved from <https://ejournal.unisba.ac.id/index.php/tadib/article/view/3770/2247>

⁵ Tatang H, & Syahidin, *Jurnal Pendidikan Agama Islam*, Inovasi Pembelajaran Pendidikan Agama Islam Melalui Model *cocontextual Teaching and Learning* dalam meningkatkan taraf Berfikir Peserta didik,(Bandung:2019, Univ. Pendidikan Indonesia Bandung), Vol.XVI, No.2

⁶ Suhaim, Agustri Purwandi, and Akhmad Farid Mawardi Sufyan, "Binsabin Dan Tonggebban as Madurese Local Wisdom: An Anthropology of Islamic Law Analyses," *Al-Ihkam: Jurnal Hukum dan Pranata Sosial* 16, no. 1 (2021): 161–179.

⁷ Dewi Hamalatin Ni'mah, "Relasi Guru Dengan Murid Perspektif K.H. Hasyim Asy'ari Dalam Kitab Al-'Alim Wa Al-Muta'allim" (Universitas Islam Negeri Sunan Ampel, 2019).

⁸ Asep Saepudin Jahar, "Marketing Islam through Zakat Institutions in Indonesia," *Studia Islamika* 22, no. 3 (2015): 405–442.

⁹ Asep Saepudin Jahar, "Bureaucraticizing Sharia in Modern Indonesia: The Case of Zakat, Waqf and Family Law," *Studia Islamika Indonesian Journal for Islamic Studies* 26, no. 2 (2019): 207–244

¹⁰ Mifedwil Jandra et al., "Oceanic Verses of the Qur'an and Their Pointers To Technological Solutions," *Heritage of Nusantara: International Journal of Religious Literature and Heritage* 8, no. 2 (2019): 243–268.

their abilities. The achievement of learning objectives was marked by the level of the learners' mastery in personality formation¹¹.

Suyadi (2020) assumed that Islamic education had numerous traces in neuroscience studies. Neuroscience was a study discussing the nervous system with a multidisciplinary approach, especially related to neurons¹². Therefore, Islamic education could be integrated with neuroscience concepts. Islamic education could be understood as a process that required a system formulation and respectable guidance¹³. The educational goal was assumed to reduce the crucial educational quality. This study was conducted by relating Islamic education to the multilevel reasoning concept proposed by the Muslim philosopher, Ibn Sina. Ibn Sina believed that the brain had a nobler classification and insisted that because of intelligence, the truth could be found without direct reference to the Qur'an and Hadith¹⁴. In the Qur'an, numerous verses pointed to the use of brain activity based on the word "think" mentioned thirteen times. In the Islamic view, the brain had the highest position compared to other religions' conceptions¹⁵.

In the current era, Ibn Sina's thoughts were understood by using the educational guidance theory proposed by Bloom which was divided into three aspects of intellectual skills or called intellectual behaviors, namely cognitive, affective, and psychomotor. Cognitive was linked to the level of intelligence as one of the taxonomic fields of education. In Islamic education, Suyadi laid the theoretical foundation for a new science termed 'Islamic education neuroscience'. To assist the idea of Islamic education, restoring the philosophy of Islamic education based on Ibn Sina's multilevel reasoning was needed. The educational mission should be aimed at matching thinkers for being able to develop in a large area rendering to behavior or abilities which were selected based on the learners' interests and talents for becoming *insan kamil* (perfect humans)¹⁶.

¹¹ Ika Dian Nur Rizki, "Relasi Guru Dan Murid Dalam Kitab Al-Tibyan Fi Adabi Hamalatil Al-Qur'an Karya Imam An-Nawawi" (Iain Purwokerto, 2021).

¹² Suyadi and Hendro Widodo, "Millennialization Of Islamic Education Based On Neuroscience In The Third Generation University In Yogyakarta Indonesia," *QIJS: Qudus International Journal of Islamic Studies* 7, no. 1 (2019): 173–202.

¹³ Mohammad Jailani, Suyadi, and Betty Mauli Rosa Bustam, "The First HISPISI 's International Conference on Humanities, Education, Law, and Social Sciences 'New Findings during Pandemic in Social Science, Humanities, Education and Law,'" in *Neuroscience Based Islamic Learning a Critique of the Holistic Education Crisis in Pamekasan Madura*, ed. Professor James A. Banks et al. (Jakarta: Universitas Negeri Jakarta, 2021), 123–134.

¹⁴ J. M. Muslimin, "The Sociological Explanation of Indonesian Muslim Family Continuity and Change," *Journal of Indonesian Islam* 13, no. 2 (2019): 395–420

¹⁵ J M Muslimin, Ahmad Fadoliy, and Wildan Munawar, "Hukum Dan Politik : Studi Ambang Batas Presiden Dalam Pemilu 2019 Law and Politics : Study of the Presidential Threshold in the 2019 General Election of Indonesia," *Jurnal Ilmu Politik* 3, no. 1 (2021): 133–160.

¹⁶ Yoyo, "Neo-Patriarchy and the Problem of the Arab Crisis: A CritiCal Study on Hisham Sharabi's Works," *Qudus International Journal of Islamic Studies* 6, no. 2 (2018): 251–267.

Pasiak (2012) explained that in neuroscience, some evidence for assuming that human behavior and brain could not be separated were found¹⁷.

Sousa (2012) specified that although educators (teachers and lecturers) were not brain experts (Neuroscience), in the neuroscience perspective, the teachers and lecturers' daily profession was to "change the brain". In the learning routine, neurophysiological changes occurred to optimize the learners' thinking skills. However, Silwester (2011) declared that for centuries, teachers and lecturers had changed the brain without the slightest information of brain discourse (neuroscience)¹⁸. No specific science studying brain performance in education. Therefore, developing neuroscience in Islamic education was significant¹⁹.

A good brain was identical influential on the Islamic learning process in the schools. Reason affected the brain character; both bring implications for the students' intelligence and appeal. Neuroscience talked about the human brain which had allegations for the development of human intelligence²⁰. This concept was needed as a learning theory to protect Islamic education quality in the schools²¹.

Research on the teacher and student relation had been reviewed by Rizki (2021), entitled "Teacher and Student Relations in the Kitab Al-Tibyan fi Adabi Hamalati Al-Qur'an by Imam an-Nawawi". He showed that according to Imam An-Nawawi, the relationship between teacher and student was centered on the teacher's role, namely using the teachers' point of view of etiquette, as the intention to hope for Allah's acquiesce²². Ni'mah (2019) inquired about this issue and published an article with the title "Teacher Relations with Students Perspective K.H. Hasyim Asy'ari in the Book of Adab Al-'Alim wa Al-Muta'allim". She indicated that K.H. Hasyim Asy'ari emphasized improving spiritual morals through teachers' role models by instilling students' moral

¹⁷ Mohammad Jailani, Suyadi, and Dedi Djabedi, "Menelusuri Jejak Otak Dan 'Aql Dalam Al-Qur'an Perspektif Neurosains Dan Pendidikan Islam Di Era Pandemi COVID-19," *Tadris: Jurnal Pendidikan Islam* 16, no. 1 (2021): 1–19.

¹⁸ Mohammad Jailani et al., "Pengembangan Materi Pembelajaran Pendidikan Agama Islam: Implikasinya Terhadap Pendidikan Islam," *Al-Idarah: Jurnal Kependidikan Islam* 11, no. 1 (2021): 143–155

¹⁹ Muhammad Fahri Asep Saepudin Jahar, Amany B. Lubis, "The Use of Maqasid Al-Sharia in Maritime and National Resilience Context," *Al-Risalah Forum Kajian Hukum dan Sosial Kemasyarakatan* 21, no. 1 (2021): 97–110.

²⁰ Dewi Aprilia Ningrum and Rifa Tsamrotus Sa'adah, "Kontribusi Pendidikan Islam Modern Di Indonesia: Studi Kasus Pesantren Riyadlul Ulum Wadda'wah, Condong, Tasikmalaya," *Jurnal Indo-Islamika* 10, no. 2 (2020): 84–91.

²¹ Suyadi, Sumaryati, Dwi Hastuti, Desfa Yasmaliana, R. D. R. M., dalam *J-PAI: Jurnal Pendidikan Agama Islam*, Constitutional Piety: The Integration of Anti-Corruption into Islamic Religious Learning Based on Neuroscience. (2019: 6(1)38-46. <https://doi.org/10.18860/jpai.v6aa.8307>

²² Rizki, "Relasi Guru Dan Murid Dalam Kitab Al-Tibyan Fi Adabi Hamalati Al-Qur'an Karya Imam An-Nawawi."

values²³. Furthermore, Kharisma (2020) published a study with the title "Ibn Sina's Multilevel Intellect and Bloom's Taxonomy in Islamic Education from a Neuroscience Perspective". She explained that the findings were unique because interdisciplinary sciences were applied between Islamic education and neuroscience and the correlation of Ibn Sina's multilevel reasoning with Bloom's Taxonomy²⁴.

Based on the results of analyzing numerous previous studies, this article had a novelty for identifying teacher and student relation using Ibn Sina's multilevel reasoning and neuroscience perspective. This research finding had implications for Islamic education development.

This study was aimed to scrutinize the teacher and student relation in Islamic education using Ibn Sina's multilevel reasoning and neuroscience perspective implemented at school, both inside and outside the learning activities. The relationship between teacher and student was assumed to be not ideal or harmonious, which then affected several learning disorders. Students lost their talents, interests, and learning motivation, for the reason that in their minds, the teacher had not fully paid attention to them.

This research was based on the argument that the development of neuroscience was closely related to other science's points of view, including Ibn Sina's thought, (known as a Muslim Scientist) with Islamic education theory. However, this study focused and specified on, "how were the concept of Ibn Sina's multilevel reasoning and neuroscience perspective applied in Islamic education?" "How did Ibn Sina's concept of multilevel reasoning have implications for the teachers and students relation in the schools?" This research finding would be a new course in Islamic education, directing on the role of teacher and student. The concept of Ibnu Sina's multilevel reasoning and neuroscience perspective was applied to find out the extent to which students were able to grow their cognitive and psychomotor reasoning in learning Islamic education as a measure of their Islamic religious learning and evaluation in the current era²⁵.

METHOD

A qualitative approach was employed in this study. Data were collected through the library research method (Library Study). In library research, the data were obtained

²³ Dewi Hamalatin Ni'mah, "Relasi Guru Dengan Murid Perspektif K.H. Hasyim Asy'ari Dalam Kitab Al-'Alim Wa Al-Muta'allim."

²⁴ Suyadi Kharisma Noor Latifatul Mahmudah, "Akad Bertingkat Ibnu Sina Dan Taksonomi Bloom Dalam Pendidikan Islam Perspektif Neurosains," *Edukasi Islamika: Jurnal Pendidikan Islam* 5, no. 1 (2020): 121-138.

²⁵ Putra, A. T. A., *literasi, Pemikiran Filosofis Pendidikan Ibnu Sina dan Implikasinya pada Pendidikan Islam Kontemporer*, (2019, 6(2), 191-201),

through examining related literature such as scientific journal articles, books, documents, and research base focusing on discussing the teacher and student relation from Ibn Sina's multilevel reasoning and neuroscience perspective in Islamic religious learning²⁶. The formal object was the relationship between teachers and students at school, while the material object was Ibnu Sina's multilevel reasoning and neuroscience perspective enriched with numerous studies on Islamic education²⁷.

The data collection technique was full sampling, searched and retrieved from national, and international journals, reference books, scientific works (books and scientific journals), as well as online references from Google Cendikia. The tool used was a documentation instrument. This research utilized holistically and universally primary and secondary data sources²⁸. The research data were new and interesting discussing the relationship between teachers and students in schools, understanding explicitly and in detail, and guided by the theoretical foundations of Ibn Sina's multilevel reasoning role and neuroscience, which was expected to bring broad implications for Islamic religious learning in the future.

RESULT AND DISCUSSION

The Teachers and Students Relation from the Islamic Religious Learning Perspective

In the Big Indonesian Dictionary (KBBI), the relationship was defined as bound, acquaintances, and customers who had a good connection. In this context, the relation was referred to as interaction activities in the learning process involving teaching staff that carried out teaching tasks and learners who studied materials²⁹.

Indicators of Teacher and Student Relations

As an interaction, the teacher-student relationship had several indicators that distinguished it from ordinary activities described as follows³⁰.

1. Teacher-student interaction had a specific purpose.
2. It had a planned procedure in achieving certain targets.
3. It was symbolized by the completion of special material.

²⁶ Sukmadinata, *Metode Penelitian Pendidikan*, (Bandung:2009, PT. Remaja Rosdakarya)

²⁷ Sugiono, *Panduan Penulisan Desertasi*. (Yogyakarta: 2013, UNY)

²⁸ Norman K. Denzin dan Yvonna S. Lincoln, *Handbook of Qualitative Research*, 2 ed. (India: Sage Publications. Pvt. Ltd 196

²⁹ Ahmad Syatori, "Lingkaran Spritual Dalam Bedah Relasi Murshid Dan Murid," *Jurnal Putih* III (2018): 59–97.

³⁰ Rizki, "Relasi Guru Dan Murid Dalam Kitab Al-Tibyan Fi Adabi Hamalatil Al-Qur'an Karya Imam An-Nawawi."

4. It was symbolized by student activities.
5. The teacher acted as a guide.
6. Teacher-student relationships required discipline.
7. It had a time limit.
8. It was closed with evaluation.
9. Evaluation was carried out by the teacher to understand whether the targeted learning objectives had been achieved or not.

Learning activities involved several actions carried out by teachers and students playing as actors in Islamic education. Teachers and students interacted with each other or communicated to achieve preset objectives. The relationship between teachers and students could not be separated from the existence of components that supported ongoing learning actions³¹. As stated by Saiful Bahri Djamarah (2015), the teacher-student relationship contained several mechanisms, including objectives, lesson materials, methods, and tools, and learning resources. Zakiyah Darajat (2014) asserted that this relationship model was based on Gestalt learning theory and Area/Field learning theory. This learning model underscored harmonious interactions between teachers and students³².

Ki Hadjar Dewantara (2011) detailed that education was a life guide for the children's growth. The teacher's task was to foster all students' natural strengths to achieve the highest safety and happiness. Driyarkara (2012) argued that education was a process of humanizing young people, namely the process of hominization and humanization. With the education process, young people were led to stand up, have beneficial activities, appropriately behave, and act like human beings³³. In this regard, Zainal Abidin (2011) underlined that the main duties and responsibilities that should be carried out by teachers, especially Islamic education teachers were to guide and educate the learners' entire personality development in Islamic education lessons. According to al-Gazali, teachers should have good morals because students always saw their teachers as a model³⁴.

A teacher should be accomplished in encouraging his students to be more active in using their critical reasoning power. Among the ways that could be taken was

³¹ Ningrum and Sa'adah, "Kontribusi Pendidikan Islam Modern Di Indonesia: Studi Kasus Pesantren Riyadlul Ulum Wadda'wah, Condong, Tasikmalaya."

³² Sudarman Sudarman and Ahmad Taufik Hidayat, "Relasi Guru-Murid Di Surau Minangkabau Pertengahan Abad 20," *Sains Insani* 3, no. 3 (2018): 1–8.

³³ Dewi Hamalatin Ni'mah, "Relasi Guru Dengan Murid Perspektif K.H. Hasyim Asy'ari Dalam Kitab Al-'Alim Wa Al-Muta'allim."

³⁴ Zainuddin Syarif, Syafiq A. Mughni, and Abd Hannan, "Post-Truth and Islamophobia Narration in the Contemporary Indonesian Political Constellation," *Indonesian Journal of Islam and Muslim Societies* 10, no. 2 (2020): 199–225.

through practicing the principle of problem-solving. Teachers should be creative in creating problems related to the students' activities. So that student were encouraged to think creatively for solving various problems as an indicator to recognize their level of intelligence. In addition, problem-solving could help pupils to be more confident and strong in facing the future since they were skilled in answering problems and finding the best solution³⁵.

Relationships between humans were a necessity to create perfect mental development. Conflicts between humans often occurred due to a lack of understanding, and mutual respect. According to Thomas Hobbes (2010), humans were created with an aggressive style of motion and tended to be unkind to others³⁶, so that the opportunity for having conflict would come even though it did not start with a problem³⁷. As a result, efforts to create harmonious interactions between humans should be realized continuously and even had to be made as main human characters³⁸. For this reason, in improving the relationship between teachers and students, an educative communicative pattern in the learning process should be provided because the interaction was related to social skill and individual sensitivity. An experienced teacher had a good ability to be creative in his words so that his language felt close and enjoyable for his students³⁹.

Teachers Gave Understanding to Students about Islamic Education

Islamic religious education was a worthy awareness effort to explain the students for recognizing and responding well others' talks⁴⁰. Islamic religious education was related to delivering the values taught by the Prophet Muhammad⁴¹, related to morals, as well as the hope of being devoted to Allah SWT based on the Qur'an, delivered with

³⁵ Rubaidi, "Reorientasi Ideologi Urban Sufism Di Indonesia Terhadap Relasi Guru Dan Murid Dalam Tradisi Generik Sufisme Pada Majelis Shalawat Muhammad Di Surabaya," *Teosofi: Jurnal Tasawuf dan Pemikiran Islam* 151, no. 2 (2015): 10–17.

³⁶ Siti Nur Hidayah, "Pesantren For Middle-Class Muslims in Indonesia (Between Religious Commodification and Pious Neoliberalisme)," *Qudus Internasional of Islamic Studies (QIJS)* 9, no. 1 (2021): 209–244.

³⁷ Monika H Donker et al., "Observational, Student, and Teacher Perspectives on Interpersonal Teacher Behavior: Shared and Unique Associations with Teacher and Student Emotions," *Learning and Instruction* 73 (2021): 101414, <https://www.sciencedirect.com/science/article/pii/S095947522030709X>

³⁸ F Roji and I El Husarri, "The Concept of Islamic Education According to Ibn Sina and Ibn Khaldun," *Nazhruna: Jurnal Pendidikan Islam* 4, no. 2 (2021): 320–341, <https://e-journal.ikhac.ac.id/index.php/NAZHRUNA/article/view/1342>

³⁹ Annabel Teh Gallop, Muhammad Wildan, and Rahmat Hidayatullah, "The Social Integration of Hindu and Muslim Communities: The Practice of 'Menyama-Braya' in Contemporary BAli," *Studi Islamika Indonesian Journal for Islamic Studies* 28, no. 1 (2021).

⁴⁰ Choirul Mahfud et al., "Islamic Cultural and Arabic Linguistic Influence on the Languages of Nusantara from Lexical Borrowing to Localized Islamic Lifestyles," *Wacana* 22, no. 1 (2021): 224–248.

⁴¹ Rahmawati et al., "Chinese Ways of Being Good Muslim: From the Cheng Hoo Mosque to Islamic Education and Media Literacy," *Indonesian Journal of Islam and Muslim Societies* 8, no. 2 (2018): 225–252.

good methods, character, and emotional guidance, as well as providing valuable experiences for the students⁴². Islamic religious education should also be able to have implications for the learners. Every activity illustrated values that were sincere and genuine.

The teacher was required for being close to the students for educating worthy characters to improve the students' emotional intelligence in every learning material in the school. Islamic education was conducted based on the guidelines of Islamic education units. An educator was necessary to emphasize character and moral education because the students were estimated to have a commendable personality, both in the school environment towards the teachers, and in the community with their families⁴³. In essence, the purpose of Islamic religious education was based on the attachment of Law no. 22 of 2006 which was aimed to support humans for having noble morals and piety and being capable to create an Islamic civilization which brought a big implication on shaping dignified human beings in Allah's sight⁴⁴.

A teacher was vital to be capable of approaching the students since a pupil required clear direction and guidance in every problem-solving. Sometimes students got tough and attained little attention from their parents. Considering the students' stories about their experiences, several factors were found that made the students, not in harmony with the teacher. Among them were family factors, such as indifferent parents or a broken home. This case caused the students to experience mental disorders, so these students often fight against the teacher. A teacher figure was needed to educate them, for teaching, lecturing, and guiding since the learners also didn't want to be ordered. Therefore, a creative approach was needed. In contrast to the fact today, current students were more creative, different from the old learners who prioritized ethics (morals) in socializing.

The Existence of Counseling Guidance and Spiritual Touch (Good Advice) for Students

Counseling guidance by teachers was also imperative for students at school to find out the learners' activities and monitor their behavior outside the school (at home). For students who had problems, teachers should understand how to fix them, such as

⁴² A. Rusdiana, *Jurnal Istek*, Integrasi Pendidikan Agama Islam Dengan Sains dan Teknologi, (Yogyakarta.2014)Vol.8. No.2 dalam M. Miftakhuddin, *Jurnal Pendidikan Agama Islam*, Pengembangan Model Pendidikan Agama Islam dalam Membentuk Karakter Empati pada Generasi Z, (Salatiga,2020, IAIN Salatiga) 171-11

⁴³ R. A. Amin, *Pengembangan pendidikan Agama Islam: Reinterpretasi berbasis interdisipliner* (Cetakan 1), (Yogyakarta: 2015, LKIS Pelangi Aksara.)

⁴⁴ Ainiyah, N. *Jurnal Al-Ulum*, Pembentukan Karakter Melalui Pendidikan Agama Islam, (Yogyakarta:2013) Vol. 13. No. 1

why they didn't go to school, why they fight, and why juvenile delinquency occurred. Guidance Counseling (BK) teachers could cope and educate the learners through their supervision. The teachers could call the students to the school, then their parents were brought to the room, and the students' homes were visited (home visits) as a reflection of evidence that the school and teachers cared for them.

Virtuous advice was also needed for the learners through giving a speech once a week. Before starting the class, the teacher delivered a speech (*tausiyah*) based on religious values. The students were invited to study together. With such activities, the pupils were taken closer to the Qur'an and Islamic education because they also needed a spiritual touch.

Teacher Emphasized on Empathy Character Education for Generation Z

Miftakhuddin (2020) published his research entitled, "the rise of high technology based on social media or online, such as Instagram, Facebook, Twitter, TikTok, and games". The rapid development of technology impacted the students to lose their social sense, empathy, sympathy, and caring to those closest to them. They didn't care about respectable morals and character, because they focused more on their cellphones and social media. Therefore, a teacher should be more creative in dealing with and approaching them. The existence of sophisticated technological tools presented time progress, which was better known as being close to the virtual world. In the modern era with no limit, generation Z was synonymous with cyberspace. Many children were more attached to their cell phones than their parents and teachers. They didn't even want to know and be disturbed in their social media⁴⁵.

Guidance counseling for the students could be supported by activities to provide information for parents to pay attention toward their children, to know their behavior at school and home. "Is the child honest at school, is the child having good morals, and is he smart in receiving learning material from the teacher, or has he followed the lesson well?" Through conducting meetings with the parents, the teacher could provide information related to the results of their learning through the homeroom teacher.

The pupils were emphasized to read the Qur'an, understand and practice its contents in daily life, so that their activities and way of thinking depicted an Islamic attitude, like respecting teachers and parents in the surrounding environment. Good students were seen from their capability to read the Qur'an and practice its values which were automatically depicted in their life through a noble and honest attitude. The learners were expected to be embedded in the mindset of the Qur'an with the guidance

⁴⁵ M. Miftakhuddin, *Jurnal Pendidikan Agama Islam*, Pengembangan Model Pendidikan Agama Islam dalam Membentuk Karakter Empati pada Generasi Z, (Salatiga,2020, IAIN Salatiga) 171-11

of the Qur'an and Hadith, thereby an ideal teacher-student relationship could be indicated by good communication and interaction in the school and surrounding environment⁴⁶.

Ibn Sina's Thoughts on the Islamic Education Perspective

An Islamic philosopher, Ibn Sina, stated that Islamic education relied on the students' ability for reasoning according to its classification. With their emotional intelligence, all humans became noble and able to reveal the truth through their aptitude. Islamic education was carried through knowing various new things, changing difficult things to be easy ones, and modifying the falsehood to be the truth by referring to the Qur'an and Hadith⁴⁷. Humans were assumed should understand that the learning process was strongly influenced by their minds. As reinforcement for the students to think well, the Qur'an emphasized in its verses that thinking was highly virtuous and significant⁴⁸.

Ibn Sina's thoughts were clear. He directed to the Islamic education concept underlining humanism. Appropriate learning materials and methods were arranged to indicate that the teacher prioritized the learners' abilities related to psychology and character in a learning discussion⁴⁹. Ibnu Sina described that to follow the modern education context, Bloom's educational theory was divided into three skills related to the student's intellectual and behavior, namely cognitive, affective and psychomotor, closely related to the educational direction in the learning process⁵⁰. Cognitive skill was associated with the ability for thinking intelligence which was called the education taxonomy. This skill was linked to the ability and level of thinking quality in the educational landscape. This concept was closely related to Bloom's approach, namely the classification of the students' aptitudes for thinking about their learning outcomes⁵¹.

Ibn Sina's thoughts on education were rich. He loved the concept of Islamic education using a humanistic approach. For example, the course should be correlated with the subject matter and consider appropriate strategies and methods based on the

⁴⁶ Ali A. Dan M. Habibullah, *Jurnal Pendidikan Agama Islam*, Efektivitas model pembelajaran kooperatif STAD menggunakan alat peraga al-qur'an untuk meningkatkan penguasaan tajwid, (Lamongan: 2019, Univ. Islam Lamongan) 162-04

⁴⁷ Yusri, *Jurnal Suntansi*, Konsep Akal (Suatu Analisis terhadap Pemikiran Al-Farabi dan Ibnu Sina, (Yogyakarta:2010,) 381-398

⁴⁸ Handayani & Suyadi, *In Ta'dibuna Jurnal Pendidikan Islam*, Relevansi Konsep Akal Bertingkat Ibnu Sina dalam pendidikan Islam di Era Milenial., (Yogyakarta:2019 UAD) Vol. 812-2034

⁴⁹ Herwansyah, *El Fikr, Jurnal Aqidah dan Filsafat Islam*, *Pemikiran Filsafat Ibnu Sina (Filsafat Emansi, Jiwa dan Wujud*, (Yogyakarta:2017,)

⁵⁰ Santrock J. *Psikologi Pendidikan*, (jakarta:2007, Kencana). h.5

⁵¹ M. Nurtanto & Sofyan. H. *Jurnal pendidikan Vokasi, Implementasi Problem Based Learning Untuk meningkatkan hasil pembelajaran kognitif, psikomotorik dan afektif di SMK*, (Yogyakarta:2015)Vol.5 No.3

students' level of psychological development. The substance was necessary to be further developed in the current Islamic education system⁵².

However, several objects of knowledge could not be reached by humans because of limited questionnaires. This argument was related to some Muslim philosophers' views about stratified nature. The brain was used to describe humans' activities. Various word choices showed sufficient attention in human thinking activities. The word 'reason' has been widely used in everyday dialogues. A few people equated 'reason' with the 'brain', while the rest distinguished them. In Islam, the 'mind' was different from the brain, but it was related to the thinking power in the human soul. It was an appropriate power described in the Qur'an which gained insights by identifying the surrounding world. The thinking was the highest classification. Numerous verses commanded humans to look for various methods to get it. Humans could acquire knowledge and develop it. The Qur'an also repeatedly proved the high position for people having more knowledge⁵³.

In the hierarchy of reason, humans could remember knowledge that had been understood before by repeating (*dhikr*), learning and applying a lot of knowledge until to be science (*ilm*), discovering new insights through analyzing empirical facts (*nazhar*), pondering deeply (*dabara, dzakara*) or digging continuously until reaching the reasoning limit (*fakkara*). Meanwhile, in Bloom's Taxonomy, the highest level of thinking was creative⁵⁴. The semantic field of reason with Bloom's Taxonomy had four correlations, namely *dhikr* by remembering, *ilm* by understanding and applying, *nazr* by analyzing, and *fikr* by evaluating and creating. In this explanation, the equation also had a thought division. The well-known beginning was just an example of seeing and practical thinking represented by the word *nadzara* and deep thinking defined by the word *fakkara*. From thinking, humans were required to understand the lesson and consider everything in their minds as indicated by the word *dabbara, tadabbur*⁵⁵.

Teachers and Students Relation from Ibn Sina's Multilevel Reasoning and Neuroscience Perspective

As one of the famous Muslim philosophers, his full name was Abu 'Ali Husayn bin Abdullah bin Sina, or better known as Ibn Sina. He was born in Afshona Uzbekistan

⁵² Hasanudin, "AKAL: Menurut Tinjauan Al Qur'an & Neurosains" (1983): 1–31

⁵³ Yusmaliana Desfa et al., "Creative Imagination Base on Neuroscience : A Development and Validation of Teacher ' s Module in Covid-19 Affected Schools," *Universal Journal of Educational Research* 8, no. 1 (2020): 5849–5858.

⁵⁴ Suyadi Astuti Budi Handayani, "Relevansi Konsep Akal Bertingkat Ibnu Sina Dalam Pendidikan Islam Di Era Milenial," *TADIBUNA* 8, no. 2 (2019): 222–240.

⁵⁵ Suyadi, "Pendidikan Islam Dan Neurosains," in *Asosiasi Program Pascasarjana Perguruan Tinggi MUhammadiah 'Aisyiyah (APPPTMA)* (Sulawesi Selatan: KNAPPPTMA KE-6, 2017), 8–9

on August 22, 980 AD. Ibn Sina grew up in the Bukhara area. At the age of 10, he had mastered numerous sciences, namely literature, and Islamic studies, while about 10 years old, he had memorized the Qur'an. Ibn Sina died and was buried in Hamadan Emirate in June 1037 AD at the age of 58 years. When he lived in the West, he was further prominent with the nickname Avicenna as a result of the metamorphosis from Judaism to Spain and Latin. Using spoken Spanish, the word Ibn was pronounced Aven or Aben. This change occurred since Ibn Sina attempted to translate Arabic writings into Latin around the middle of the 12th century in Spain. Ibn Sina⁵⁶ had broken down theoretical reason into several parts, including material reason, talent and interest reason, actual, and acquired reason (correlation). His thoughts were colored and influenced by scientific, linguistics, and literature approaches. He had a very competent understanding of religious science at that time and was also well-known as a translator. With his work, Ibn Sina classified reason into several parts, called (*al-alimat*)⁵⁷.

In the communication process, teachers and students should be interconnected, unified based on their goals. In likening main principles with the students, a stimulus was needed in the students' brains. The prefrontal cortex functioned with the learners' direction and purpose since it directed the brain to a respectable goal, with an appropriate approach and guidance. The pupils were motivated to develop and improve their learning outcomes, talents, and interests. This case indicated that the relationship between teacher and student was related to brain function in Neuroscience studies. The brain was the key to every human's potential and ability. The learners were imperative to train the brain and get used to the direction and guidance that were continuously given by the teacher. The teacher was a facilitator in the learning process for helping to achieve the target of the educational curriculum, especially in Islamic education.

Indicators and Stages for Teacher and Student Relations from a Neuroscience Perspective

Several stages that needed to be implemented by the teacher were described as follows.

1. Seriously seek the pleasure of Allah SWT by giving stimulus to the student's brain.
2. Provide ideas about creative imagination, motivation, and action in responding to the students' brains.

⁵⁶ N. Majid, *Khazanah Intelektual Islam*

⁵⁷ Suyadi Ruri Afria Nursa, "Konsep Akal Bertingkat Al-Farabi Dalam Teori Neurosains Dan Relevansinya Dengan Pendidikan Islam," *TAWAZUN Jurnal Pendidikan Islam* 13, no. 1 (2020): 1–17.

3. Train the students' brains with a spiritual touch and positive words, because the students did not accept negative words from the teacher.
4. Deliver materials that were easily understood by the students, try to make the material simply presented.
5. Try to keep the students from negative behavior, just an example of being dishonest, arrogant, and lazy.
6. Strive the best method in every lesson delivered in class, leave the lecture-based learning model (center learning technique), and provide opportunities for students to develop their ideas and thoughts.
7. In every interaction and communication, use soft language. Be wise in front of the students.
8. In communicating with the learners, approach their brain, either the right or left brain, so that the students' prefrontal cortex responded.
9. Adapt to the students' learning model, and continuously improve their learning outcomes.
10. Treat the students with humility.

Teachers and students' interaction using a brain approach could not be separated from the neuroscience concept. Neuroscience was a branch of biology that then rapidly developed and even expanded into various other disciplines such as psychology, cognitive neuroscience or neuropsychology, biochemistry, physiology, pharmacology, computer science, and medicine⁵⁸. As the scientific study of mental processes, psychology could be recognized as a sub-field of neuroscience, although some mind-body theories disagreed with this opinion. Psychology was the study of mental processes that could be scientifically modeled, such as traditional cognitive and behavioral psychology dealing with neural processes⁵⁹. On this basis, neuroscience could describe human behavior (character) from activities that occurred in the brain.

The rapid development of neuroscience learning theory began with the revelation of the Qur'an in the ninth century. This issue was not acknowledged by secularists, because neuroscience was incompatible with the Qur'an revelation in the seventh century. The development of neuroscience was directed by the advancement of civilization and the development of science, especially in Islamic education. With the time passage, neuroscience was growing, but studied and assumed by the medical team

⁵⁸ Branton Shearer, "Multiple Intelligences in Teaching and Education: Lessons Learned from Neuroscience," *Journal of Intelligence* 6, no. 3 (2018): 1–8.

⁵⁹ Betsy Ng, "The Neuroscience of Growth Mindset and Intrinsic Motivation," *Brain Sciences* 8, no. 2 (2018).

as the science of human brain health. Before that case, neuroscience was a part of the scientific discipline studying the human body, namely neurons (human nerves).

Continuing the rapid research based on Google Scholar (Cendikia), numerous studies had analyzed neuroscience. One of them was a Muslim scientist Taufik Pasiak who deepened neuroscience studies in collaboration with the brain health discipline from an Islamic studies perspective. Furthermore, one of the neuroscience scientists and experts, Suyadi researched all disciplines and correlated them with neuroscience in 2010, called cross-breeding neuroscience studies in Islamic education. Much of his research was related to neuroscience and Islamic education, regarding all aspects of the transdisciplinary, interdisciplinary, and multidisciplinary scientific discourse of Islamic education reviewed from a neuroscience perspective⁶⁰. One of his studies was entitled "Islamic Education and Neuroscientists: Tracing the Traces of Intellect and Brain in the Qur'an to the Development of Neuroscience in Islamic Education" used as an additional reference in this research⁶¹ related to the relationship between teacher and student in a neuroscience perspective⁶².

The goal of neuroscience was to study the biological underpinning of every behavior. The main task of neuroscience was to describe human behavior by identifying activities that occurred in the brain. Recent research had found some evidence of an inseparable relationship between the brain and human behavior (character)⁶³. Through a Positron Emission Tomography (PET) questionnaire, six brain systems were found, integrated to regulate all human behavior⁶⁴. The six brain systems were the prefrontal cortex, limbic system, cingulate gyrus, basal ganglia, temporal lobes, and cerebrum⁶⁵.

The six brain systems had significant functions in cognitive, affective, and psychomotor skills, including IQ, EQ, and SQ. The scientific evidence inspired that character education was like developing brain abilities. All systems in the brain worked

⁶⁰ M. Amin Abdullah, "Mendialogkan Nalar Agama Dan Sains Modern Di Tengah Pandemi Covid-19," *Maarif* 15, no. 1 (2020): 11–39.

⁶¹ Suyadi, "Hybridization of Islamic Education and Neuroscience: Transdisciplinary Studies of 'Aql in the Quran and the Brain in Neuroscience," *Dinamika Ilmu* 19, no. 2 (2019): 237–249, <https://doi.org/10.21093/di.v19i2.1601>.

⁶² Suyadi, *Pendidikan Islam Dan Neurosains: Menelusuri Jejak Akal Dan Otak Dalam Alquran Hingga Pengembangan Neurosains Dalam Pendidikan Islam*, ed. Lintang Novita, Pertama. (Jakarta: Kencana, 2020), www.prenamedia.com.

⁶³ Theo Wubbels and Mieke Brekelmans, "Two Decades of Research on Teacher–Student Relationships in Class," *International Journal of Educational Research* 43, no. 1 (2005): 6–24, <https://www.sciencedirect.com/science/article/pii/S0883035506000127>.

⁶⁴ Suyadi, "Pendidikan Islam Inklusi Humanis Dan Religius," *Tajdidukasi* VII, no. 2 (2017): 15–27.

⁶⁵ Suyadi, Zalik Nuryana, and Niki Alma Febriana Fauzi, "The Fiqh of Disaster: The Mitigation of Covid-19 in the Perspective of Islamic Education-Neuroscience," *International Journal of Disaster Risk Reduction* 51, no. 2 (2020): 1–15, <https://doi.org/10.1016/J.ijdr.2020.101848>.

in concert to build human attitudes and behavior. Therefore, regulating brain performance normally resulted in optimal function so that behavior could be consciously controlled by involving the emotional and spiritual dimensions⁶⁶. In this way, character education could be described in terms of the working brain mechanism at the molecular level, especially the six systems above. Based on that argument, neuroscience was often termed as a concept which interacted with the brain and mind (brain-mind connection) or the soul and body, including the heart and mind⁶⁷.

In education, the debate for the difference between two terms (brain-mind; soul-body; mind-heart) was unfinished. For example, the students who were good at sports and music were usually low in science and math. Preferably, those who excel in science and math were generally not proficient in sports and music. The national education system in Indonesia still did not pass the learners whose math scores were below the average, even though they became national sports champions.

In another example, Islamic education prevented the students from exaggerating their minds too much, because, in Islam, the most essential thing was noble heart and character⁶⁸. Islamic education then voiced spirituality or conscience as a truth parameter⁶⁹. This view was strengthened by numerous great thinkers having moral damage⁷⁰. The heart (not the brain) was considered the entity that interacted directly with the behavior⁷¹. This was different from the previous example, which assumed that the brain determined behavior, especially achievement behavior⁷².

⁶⁶ Rahmat Ryadhush Shalihin et al., "Rational Brain Transmutation Into Intuitive Brain Based on Neuroscience in Islamic Education," in *Rational Brain Transmutation Into Intuitive Brain Based on Neuroscience in Islamic Education* (Bukittinggi, Indonesia: BICED, IAIN Bukittinggi, 2021), 1–10

⁶⁷ Suyadi, "Pendidikan Islam Dan Neurosains."

⁶⁸ Mohammad Jailani, "Kajian Pendekatan Hermeneutika Dalam Tafsir Al- Qur ' an" 10, no. 1 (2021): 93–121.

⁶⁹ Mohammad Jailani, Suyadi, and Betty Mauli Rosa Bustam, "Edisi Khas: Pengajian Islam Dan Cabaran Pandemi COVID-19," in *Perkembangan Media Pembelajaran Bahasa Arab Berbasis Neurosains: Kajian Lapangan Di Sekolah Menengah Kejuruan Di Masa Covid-19*, ed. Rohana Zakaria et al. (Malaysia: Kolej Universitas Islam Antarbangngsa Selangor (KUIS), 2021), 44–50.

⁷⁰ Choirul Mahfud et al., "Pengaruh Agama Terhadap Kebahagiaan Generasi Milenial Di Indonesia Dan Singapura" 04, no. 02 (2020): 144–159, <http://jurnalnu.com/index.php/as/index>.

⁷¹ Mohammad Jailani, Betty Mauli Rosa Bustam, and Suyadi, "Prosiding Seminar Nasional 3rd TELCECON Menjadi Pendidik Kreator: "Kreatif, Tangguh, Optimis Dan Realistis," in *Ism Fa'il Dalam Kitab Al-Amsilah At-Tasrifyyah Implikasinya Terhadap Al-Qur'an Surat Al-Baqarah Dengan Pendekatan Morfosemantik*, ed. M.Pd Dr. Achmad Hilal Madjid, M.Pd Drs. Suprihadi, and M.Hum Dr. Ahdi Riyono (Kudus, Jawa Tengah, Indonesia: Badan Penerbit Universitas Muria Kudus, 2021), 1–111, https://pbi-fkip.umk.ac.id/index.php?option=com_sppagebuilder&view=page&id=80.

⁷² Chirul Mahfud, "Chinese Muslim Community Devepment in Contemporary Indonesia: Experiences of PITI in East Java," *Studia Islamika Indonesian Journal for Islamic Studies* 25, no. 3 (2018): 474–498.

The two cases above proved that education was still separating (not to mention experiencing a paradigm problem) to define the brain and mind; soul and body. That case was not solved until now⁷³.

Scientists argued that neuroscience could bridge the case, connect and even reconcile the concept of brain and mind, soul and body; as well as brain and heart. This paradigm was strengthened when a French neuroscientist, Jean Charcot conducted an autopsy on patients who died of brain disease. Based on the experiment, Jean Charcot concluded that⁷⁴:

1. Behavioral disorders could only be identified through brain abnormalities. More than 200 behavioral disorders were associated with abnormal neural function.
2. The brain was the most complete living organ.
3. How the brain produced behavior was a vital question that had not been answered by experts.

Jean Carcot's conclusion above confirmed the experts' hope to associate and even resolve the conflict for the conception of mind-brain, soul-body, and brain-heart. Neuroscientists were so powerful for linking these separate entities precisely with molecular fibers called "neurons"⁷⁵. Neuron was the smallest unit of the nervous system that received and carried signals through the action of electricity and chemical compounds. If the nervous system was traced to its smallest part, it was just a collection of neurons. Parts of the nervous system such as the cerebellum or cerebrum were just a collection of neurons with a specific task⁷⁶.

The relationship between teacher and student was appropriate if it was associated with the neuroscience approach and Ibn Sina's multilevel reasoning concept. It could be seen that numerous previous scientists had researched the brain and related it to education, psychology, and computer coding⁷⁷. A learning model based on the

⁷³ Suyadi, *Pendidikan Islam Dan Neurosains: Menelusuri Jejak Akal Dan Otak Dalam Alquran Hingga Pengembangan Neurosains Dalam Pendidikan Islam*.

⁷⁴ Ibid.

⁷⁵ Mohammad Jailani et al., "Meneguhkan Pendekatan Neurolinguistik Dalam Pembelajaran: Studi Kasus Pada Pembelajaran Bahasa Arab Madrasah Aliyah," *Al-Thariqah Jurnal Pendidikan Islam* 6, no. 1 (2021): 152–167.

⁷⁶ Suyadi, *Pendidikan Islam Dan Neurosains: Menelusuri Jejak Akal Dan Otak Dalam Alquran Hingga Pengembangan Neurosains Dalam Pendidikan Islam*

⁷⁷ Mohammad Jailani and Suyadi Suyadi, "Membangun Bisnis Ekonomi Islam Perspektif Neuromarketing Di Masa Pandemic Covid-19," *Islamic Economics, Finance, and Banking Review* 1, no. 2 (2021): 1–19.

students' brains was applied in schools as an effective learning strategy that relied on the students' brain potential⁷⁸.

Ibn Sina's First Stage of Mind

The first 'mind' was called *al-uqul hayyulaniyah* (material intellect) which was the power of reason that had never been described or written in the human brain. However, this feature had the potential to be related to knowledge and experience. As a material sense, this intellect was tasked to respond to an unreal meaning material (*maddah*), such as children under the age of five⁷⁹.

Students were necessary to utilize their mind power and all their thinking potential. They should be directed to think well in the material sense part (*maddah*) in their brains to respond to the learning process at the school⁸⁰.

The Second Level of Mind according to Ibn Sina

The second level of 'mind' was the talent intellect called *al-uqul bi al-makalah* (faculty intellect) which was the concentration of the mind function on digesting, experiencing, and understanding, known as *ilim badhiyyah*, pure and abstract thoughts that had begun to appear in getting experience. In a broad sense, this sense had logical results, namely *al-ma'qulat al-ula bi al-maklah or hayyulaniyah* reason having *ilm dharuri* called attaining science without the learning process.

This students' talent mind was used to know and measure the ability or quality of reason carried out in earnest⁸¹. With courage and commitment, the students experienced a stimulus to their brain, which was called using reason without going through study and effort. The talented mind was directed and driven to curiosity or experimentation that had never been before, with a note of experimenting on useful things.

The Third Level of Mind from Ibn Zina's Perspective

⁷⁸ mohammad Jailani Et Al., "Proceeding Iconige: International Conference On Islamic And Global Civilization," In *Penerimaan Peserta Didik Baru Di Masa Covid-19 Perspektif Neurosains: Studi Kasus Di Smk Muhammadiyah 3 Yogyakarta* (Malang: Faculty of Islamic Studies University of Islam Malang, 2021), 49–65.

⁷⁹ Suyadi, Hybridizations of Islamic Education and Neurosaince; Transdisciplinary Studies Of A'ql In the Quran and the Brain in Neurososcience, *dinamika Ilmu*, (yogyakarta:2019) 19(2), 237-249. <https://doi.org/doi:http://doi.org/>

⁸⁰ Handayani & Suyadi, *In Ta'dibuna Jurnal Pendidikan Islam, Relevansi Konsep Akal Bertingkat Ibnu Sina dalam pendiidkan Islam di Era Milenial.*, (Yogyakarta:2019 UAD) Vol. 812-2034

⁸¹ Choirul Mahfud et al., "Urgensi Membangun Pradigma Qur'ani Mahasiswa Institut Teknologi Sepuluh Nopember Di Era Digital," *Al-Tadzkiyyah: Jurnal Pendidikan Islam* 12, no. 1 (2020): 157–170.

This mind was better known as the actual sense called *al-uqul bi alfi*, which was used to fulfill and respond to the senses. This actual brain could be called the fontanel (frontal lobe), which functioned as control and direction to make good decisions. The result would affect the function of the senses, such as sight, hearing, feeling, and speech of the noble language⁸². Actual reason also functioned as a conceptual, but it was better than the talent mind because this mind had been able to carry out understanding conceptual and thinking serious problems. If this mind tried to do something, it attained the power that could produce an initial logical image as if the image had been stored before. The actual mind could digest something without having to process and try, only because of having desire. The actual mind was a collection of abstract meanings that could be explored by every determination⁸³.

The use of actual reason was related to the students' learning process. This reason had a great influence on the mind power. Students were required to have the good determination and strong mentality in studying at school or home so that the actual sense actively responded to help and encourage for generating maximum results such as lofty ideals, the multiplicity of desires, good learning outcomes, and optimizing implications for the thinking process in every policy-making routine in real life⁸⁴.

The Fourth Level of Mind from Ibn Zina's Perspective

Fourth, the acquired intellect was called *'al-'uqul mustafad*. This mind had the equivalent of *aql mustafad* since the power of this reason had logical trace (theoretical understanding) and could bring up knowledge without trying as the knowledge would present itself. This acquired intellect was the highest degree of mind. This mind was a form of human reason that caught the light emitted by God⁸⁵.

In education, Ibn Sina's view was aimed to explore and develop the students' potential. The development of the learners' potential included physical, intellectual, and moral growth in realizing a perfect human (*insan kamil*), namely someone having

⁸² Asti F. Nashruna, *Jurnal Pendidikan Islam*, Konsep Aql dalam Alqur'an dan Neurosains, vol. 1 no.2

⁸³ Mohammad Jailani, Suyadi Suyadi, and Muallimah Muallimah, "Pengembangan Pembelajaran Alquran Hadis Dengan Pendekatan Akal Bertingkat Ibnu Sina Di SMK Muhammadiyah 3 Yogyakarta Berbasis Neurosains: Di Masa Pandemi Covid-19," *SALAM: Jurnal Sosial dan Budaya Syar-i* 8, no. 4 (2021): 1051–1066, <http://journal.uinjkt.ac.id/index.php/salam/article/view/18995>.

⁸⁴ Handayani & Suyadi, *In Ta'dibuna* Jurnal Pendidikan Islam, Relevansi Konsep Akal Bertingkat Ibnu Sina dalam pendidikan Islam di Era Milenial., (Yogyakarta:2019 UAD) Vol. 812-2034

⁸⁵ Ruri Afria Nursa and Mhd. Lailan Arqam, "Al-Qur'an Solution to Yusuf's Letter in Overcoming Youth Moral Degradation in the Era of 4.0 (Study of Analysis of Moral Values Using the Story Method in Prophet Yusuf AS's Example Material) Solusi Al-Qur'an Surat Yusuf Dalam Mengatasi Degrad," *At-Ta'dib* 1, no. 2 (2020): 109–124, <https://ejournal.unida.gontor.ac.id/index.php/tadib/index>.

nurtured potentials in his soul. Education should also be directed at preparing the students to face society and obtain a good job in self-preparation by tailoring the talents, skills, and competencies. Because of the high urgency, Islamic education was placed as a significant and high position in its doctrine. The "hierarchy of reason" had the equivalent with the word "multilevel reason" as a philosophy designed by several Muslim philosophers including Ibn Sina. This concept had an interpretation related to God's correlation with a person which could be understood. The term "reason" used by Ibn Sina was similar to the meaning of the word "reason" in the Qur'an which had a correlation of emotions, rational intelligence, and the human spirit⁸⁶.

Considering Ibn Sina's hierarchical concept of reasoning and Islamic education, Ibn Sina had provided several formulations of the concepts and objectives of the Islamic education curriculum, and educator concepts written in his book "*Al-siyasah fiy al-Tarbiyah*". Islamic education should be done from an early age and could be given directly or indirectly. As the concept of Ibn Sina's thought, early childhood should be provided appropriate educational materials based on their conditions⁸⁷. As an example, parents provided an understanding of great stories that stimulated empirical to metaphysical ways of thinking. Ibn Sina expected the concept of religious and rational education for individuals to have religious understanding and intellectual capacity development. Ibn Sina did not share knowledge based on the status of the obligation to study it such as *fardhu 'ain* and *qifayah*. Ibn Sina hoped the role of reason for being developed more optimally in Islamic education.

CONCLUSION

Teaching and learning activities should be creatively and innovatively carried out by the teachers. This study concluded that the cohesiveness between teachers and students, school and school management, parents and teachers, and students and their parents created a harmonious relationship. The teaching-learning process smoothly and efficiently run and generated excellent learning outcomes. Students should be close to the teachers, have good relationships, interact with ethics (morals), and be obedient (*ta'dzim*) to their teachers. Likewise, teachers should know their students in every situation. They know what students were doing both at school and outside of school, with good evaluation, control, and counseling. A good approach to students took the harmonious teacher-student relationship. The teacher should understand the learners'

⁸⁶ Kharisma Noor Latifatul Mahmudah, "Akal Bertingkat Ibnu Sina Dan Taksonomi Bloom Dalam Pendidikan Islam Perspektif Neurosains."

⁸⁷ Ruri Afria Nursa, "Konsep Akal Bertingkat Al-Farabi Dalam Teori Neurosains Dan Relevansinya Dengan Pendidikan Islam."

attitudes and desires. Sometimes students did not want to be ordered, so the teacher should have a good approach and effort in creating effective learning.

To maximize the harmonious relationship between teacher and student, a quality and efficient learning concept was needed. This study recommended applying Ibn Sina's multilevel reasoning concept which was very influential on the students' learning, especially in Islamic education because of emphasizes the understanding of Islam through deep thinking. Students should be taught and educated about the development of the brain, and the main role of the brain's ability. To stimulate the students' brain capacities, the teachers' encouragement and motivation were necessary. The teachers employed a neuroscience approach that was relevant to Ibn Sina's multilevel reasoning concept to adapt to the students' learning model. The students received additional intelligence from their prefrontal cortex or actual sense which implied for their character, cognitive and psychomotor.

The researchers realized that this research had numerous shortcomings and limitations, for example, the substance and content of the manuscript were not specifically identified. The research idea had not been seen. Furthermore, this issue was not linked to the Covid-19 pandemic. Therefore, the researchers advised and recommended to academics, scientists, researchers, teachers, and the government to carry out further research or learning and training programs related to the relationship between teachers and students. For teachers, applying Ibn Sina's multilevel reasoning and neuroscience concepts was beneficial to adjust to the students' willingness and learning methods, without only being concerned with the teachers' wish. To researchers and academics, the issue of the relationship between teachers and students was still highly possibly studied and investigated from several aspects. So far, numerous studies that were in line with this issue were only related to the educational aspect. This topic could be studied from other points of view such as linking to Islamic boarding schools, science, and the Qur'anic interpretation. For the government, this study suggested focusing more on education quality improvement programs on knowledge and change management, because numerous teachers and education practitioners had not been able to interpret effectively several policies. This research was expected to bring implications for the development of Islamic education and Islamic studies in the present and the future.

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