



Analysis of Cognitive Development in Hayy Bin Yaqzhan's Novel and Its Implications for Education

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ABSTRACT :

Human cognition always develops with age. Human cognitive development is closely related to the learning process experienced throughout his life. This research aims to determine the concept of cognitive development according to Ibn Thufail's thoughts contained in the book Hayy bin Yaqzhan and its implications for education. This research is a type of qualitative research with a literature study approach. Research data was obtained from books, journals and relevant scientific research. The data obtained is then sorted and analyzed, then conclusions are drawn according to the research objectives. The results of the research show that cognitive development according to Ibn Thufail as contained in the book of Hayy bin Yaqzhan occurs through five phases, namely (1) Childhood Phase, (2) Mumayyiz/Puberty Phase, (3) Akil Baligh Phase, (4) Adult Phase, (5) Old Age. Meanwhile, the implications of Ibnu Thufail's thoughts regarding human cognitive development for the world of education relate to how to acquire knowledge, learning methods and the role of teachers in the classroom.

Key words: *Cognitive Development; Ibn Thufail; Hayy bin Yaqzhan*

INTRODUCTION

Human cognitive development is a process by which individuals are able to improve their ability to use their knowledge. Along with the development of cognitive abilities, a child can easily master extensive knowledge so that he is able to perform his functions reasonably in relation to interactions in society and his social environment.¹

Development can be interpreted as a process of quantitative or qualitative change of individuals in their life span, starting from conception, infancy, childhood, adolescence, to adulthood.² Meanwhile, Santrock argues that development is a pattern of movement or change that begins at conception and continues throughout a person's life cycle.³ So development can be interpreted as a process of change experienced by individuals throughout their lives, both physical changes and changes mentally, qualitatively and quantitatively.

¹ Lucy Ardiati, "Perbandingan Teori Perkembangan Kognitif Anak Usia Dini Jean Piaget Dan Lev Vygotsky Serta Relevansinya Terhadap Pendidikan Islam," *Tesis*, Bengkulu: IAIN Bengkulu, 2021.

² Umi Latifah, 'Aspek Perkembangan Pada Anak Sekolah Dasar: Masalah Dan Perkembangannya', *Academica: Journal of Multidisciplinary Studies*, 1.2 (2017), 185–96.

³ Arfan Muchammad Agfirlana, "Analisis Implementasi Perkembangan Kognisi Piaget Dan Vygotsky Dalam Pencapaian Tujuan Pembelajaran Pendidikan Agama Islam Di Sdn Margaasih," *Jurnal Tambora* 7, No. 1 (2023): 226–34.

Cognitive itself is often interpreted as something related to empirical factual knowledge, cognitive is also interpreted as the ability to learn or think, and intelligence is related to the ability to learn new skills and concepts. Cognitive is also related to human skills in understanding everything that happens in the surrounding environment, as well as skills in using memory and also in solving simple problems.⁴ It can be concluded that cognitive is the entire mental activity that makes a person able to connect, assess, and consider an event so that the individual is able to gain knowledge afterwards.

Based on some of the notions described above, it can be concluded that cognitive development is a process of increasing human ability to process knowledge. It is related to the psychological process of how humans learn and understand the environment around them. This approach to cognitive development is based on the assumption or beliefs that cognitive abilities are fundamental in guiding children's behavior. Cognitive development in humans began to be studied in the Middle Ages where scientific progress began to rise.

Some researchers related to cognitive development have found that individual cognitive development is closely related to brain development and function. One of the figures concerned in the cognitive field is Jean Piaget. Jean Piaget was a psychologist who investigated the growth of structures that allow individuals to adjust to their environment and examined intellectual development or cognition on the basis that intellectual structures are formed within individuals as a result of their interaction with the environment.⁵ Jean Piaget believed that cognitive development in humans occurs through four stages. Each of these stages is related to age and is composed of different ways of thinking.⁶

Piaget also suggested that human behavior is always based on cognition, which is an act to recognize or think about the conditions in which a behavior occurs. So that indirectly the personal development of children can be formed through a series of learning processes that often involve very complex thinking processes and are mental events which will later encourage individual behavior or attitudes.⁷

Another psychologist who is also concerned in studying cognitive development is Vygotsky. He offered a theory that the picture of human development is an inseparable process of social and cultural activities. Vygotsky emphasized that processes of human mental

⁴ Yesi Novitasari, 'Analisis Permasalahan" Perkembangan Kognitif Anak Usia Dini"', *PAUD Lectura: Jurnal Pendidikan Anak Usia Dini*, 2.01 (2018), 82–90.

⁵ Lissya Whildan, 'Analisis Teori Perkembangan Kognisi Manusia Menurut Jean Piaget', *Permata: Jurnal Pendidikan Agama Islam*, 2.1 (2021), 11–22.

⁶ Agfirlana, "Analisis Implementasi Perkembangan Kognisi Piaget Dan Vygotsky Dalam Pencapaian Tujuan Pembelajaran Pendidikan Agama Islam Di Sdn Margaasih."

⁷ Whildan.

development such as memory, attention, and reasoning involve learning that uses findings that exist in society such as mathematical systems, as well as language. Vygotsky also suggests that children in their learning development need guidance from people who are already skilled in the fields studied, this is referred to as *Zone of Proximal Development* (ZPD). In summary, Vygotsky's theory emphasizes that learning precedes development. Individual learning involves the acquisition of signs through teaching and information gained through teaching and information from others.⁸

While in Islam, there has not been found a firm and adequate stage of development so that it becomes an inspiration and reference in dealing with students whose applications are used in the educational process in schools. For this reason, serious studies are needed to examine the stages of human development in general in the treasures of Islamic civilization, or in Islamic educational resources.⁹ Because the development of Islamic education theory has not been as good as conventional education theory, it is not surprising that learning theories today are colored by the opinions of Western scientists. Including theories that discuss the process of cognitive development experienced by humans. This happens one of them because of the systemization of Islamic education which has just been carried out long after the systemization of education by the Western world. Although its roots have existed since the time of the Prophet and developed until the Middle Ages.

But it is undeniable that history has recorded that in the Middle Ages, Islam experienced glory in various fields, including in the world of education. The rapid development of education at that time was also seen from the progress of Islamic education in Spain. In addition, learning in higher education is also based on developments in the fields of interpretation and theology, geography, astronomy, literature, history, Arabic grammar, and philosophy. In addition, because the expansion carried out by Muslims to Spain is the most brilliant territorial expansion in the records of military history and civilization owned by Muslims at that time.¹⁰

With regard to the development of cognition in humans, Ibn Thufail had formulated it long before Jean Piaget began his studies on the cognitive psychology of children. Ibn Thufail through his work, *Hayy ibn Yaqzhan* influenced several writers and stories in the West, such as *Robinson Crusoe*, *Gulliver* and of course Jean Jaques Rousseau with his *Emile or Concerning Education*.¹¹ *Hayy ibn Yaqzhan* discussed the development of the intellect from infancy to

⁸ Angga Saputra Angga Saputra and Lalu Suryandi Lalu Suryandi, 'Perkembangan Kognitif Anak Usia Dini Dalam Perspektif Vygotsky Dan Implikasinya Dalam Pembelajaran', *PELANGI: Jurnal Pemikiran Dan Penelitian Islam Anak Usia Dini*, 2.2 (2020), 198–206.

⁹ Nino Yudiari, 'Tahapan Perkembangan Manusia Perspektif Pendidikan Islam', *Al-Idrak: Jurnal Pendidikan Islam Dan Budaya*, 1.2 (2021), 138–57.

¹⁰ Philip K. Hitti. *The Arabs a short history*. Terj. Ushuluddin Hutagalung. (Bandung: Sumur Bandung, 1970), 493.

¹¹ Yudiari.

adulthood, eight hundred years before Piaget created his theory of intellectual development from the simple phase called the "sensory motor stage" to the "formal-operational stage" phase.¹²

One way to explore Islamic education better is to explore and examine the thoughts of Muslim figures who have ideas or ideas related to the world of education. One Muslim scientist who deserves to be immersed in his thoughts is Ibn Thufail. Through his work entitled *Hayy ibn Yaqzhan*, Ibn Thufail devoted his philosophical thoughts regarding the process of a human being acquiring knowledge. Although Ibn Thufail's philosophical thought does not explicitly mention the process of cognitive development, Hayy's story describes the process of human cognitive development in relation to acquiring knowledge.

Roman Al Hayy attempted to combine philosophical and scientific reasoning with Sufism through literature. Ibn Thufail was the initiator of developing the concept of epistemology in the novel. He shows the limits of the senses and reason, educating the soul to achieve the highest source of knowledge. Hayy Ibn Yaqdzan himself was inspired by Ibn Sina's thoughts and insinuations that the human spirit will always be alive and always animated by a dynamic spirit.¹³

The Muslim scientist commonly known as Abubacer by the western world is one of the most famous philosophers after Ibn Bajjah. The depth of knowledge of Ibn Thufail himself is inseparable from the services of Abu Ya'qub Yusuf who liked philosophy and gave extensive opportunities to Muslim scientists at that time to develop it. Even the Caliph himself once asked Ibn Thufail to elaborate on the books of Aristotle, although in the end it was Ibn Rushd who carried out the project of the Caliph.¹⁴

In relation to Ibn Thufail's philosophical thoughts contained in *Hayy bin Yaqzhan's* novel, many research studies have previously been carried out that are associated with various variables or different situations. Among several existing studies is a study conducted by Shofiyatul entitled *The Relevance of Epistemology of the Soul and Reason in the Perspective of Ibn Thufail*.¹⁵ Research conducted with this qualitative approach resulted in findings that Ibn Thufail in his epistemological thinking explained that human experience can be seen from sensory knowledge. Then the thought that the soul is something high in dignity.

Furthermore, there is a research entitled *The Concept of Islamic Education Ibn Thufail* conducted by Hanafi.¹⁶ In this study, Hanafi suggested that Ibn Thufail's concept of education was

¹² Hasan Langgulung, 'Pendidikan Dan Peradaban Islam: Suatu Analisa Sosio-Psikologi', (*No Title*), 1985.

¹³ Yazida Ichsan, Unik Hanifah Salsabila, and Supitri Okfia, 'Hayy Ibnu Yaqdzhan: The Concept of Knowledge Development from Ibn Tufail's Perspective and His Contribution to Islamic Education', *AL-WIJDÂN Journal of Islamic Education Studies*, 8.1 (2023), 41–53.

¹⁴ Yunasril Ali, *Perkembangan Pemikiran Falsafi Dalam Islam* (Jakarta: Bumi Aksara, 1991).

¹⁵ Nisa Shofiyatul, "Relevansi Epistemologi, Jiwa Dan Akal Dalam Perspektif Ibnu Thufail," *AL-IBRAH* 5, no. 1 (2020): 120–42.

¹⁶ Muhammad Hanafi, 'Konsep Pendidikan Islam Ibn Thufail', *As-Sabiqun*, 1.2 (2019), 41–52.

concerned with two things, namely the source of knowledge and the method of obtaining knowledge. Regarding the source of knowledge itself is divided into two, namely the Divine source (metaphysics) and the Human source (physics). As for the method of obtaining knowledge is a method based on ratios, senses, and also the soul or intuition.

Then there is a study conducted by Yazida Ichsana with the title Hayy Ibnu Yaqdhan: The Concept of Knowledge Development from Ibn Tufail's Perspective and His Contribution to Islamic Education. This research conducted in 2021 shows that Hayy Ibn Yaqdhan's novel contributes to the creation of an epistemology of knowledge in Islam where knowledge can be obtained through the use of senses, reason, and intuition. In addition, Hayy's new contribution to Islamic education includes three important components.

First, about cognitive growth. Hayy described the developmental process as sensory, imitative, exploratory, philosophical, contemplative, and mystical. Second is the concept of knowledge, which can be acquired through reason, reason, and intuition. Third, in terms of religiosity, all positive elements in the form of beliefs, rituals, religious knowledge, and religious experience always boil down to essence and wisdom.¹⁷

Meanwhile, different from the studies that have been conducted above, this study aims to be able to know and formulate human cognitive development according to the perspective of Ibn Tufail's philosophy contained in his work entitled Hayy bin Yaqdhan and its implications for the world of education in Indonesia today, and its implications for the world of education in Indonesia today, be it in the learning process in supporting the cognitive development of students or learning methods that can be done in an effort to stimulate the cognitive development of students.

Methods

The research method used in this study is a qualitative method with a literature study approach. Literature study research is carried out with the aim of being able to develop concepts in depth related to the problem being studied, and explain the reality of the relationship between existing phenomena and theoretical searches carried out to make it easier to understand. Data sources that are material in this study are books, journals, web articles, and scientific papers relevant to the theme taken in this article. The data that has been collected is then analyzed using descriptive analysis techniques by condensing data obtained from various sources by sorting out data that suits the needs and needs of this research to then be analyzed and conclusions drawn as a result of the research.

¹⁷ Ichsana, Salsabila, and Okfia.

Result

Ibn Thufail: Historical Perspectives

Ibn Thufail's full name is Abu Bakr Muhammad bin Abdul Malik bin Muhammad bin Thufail al-Qaisi al-Andalusi. He was born in 506H/1110 AD in the city of Guadix, Province of Granada, Spain. Ibn Thufail belonged to the prominent Arab tribal family, Qais. While in Latin he is known as Abu Bacer.¹⁸ Since childhood, Ibn Thufail loved to read and deepen knowledge so that he could excel in various fields. The status of descendants from the Qais tribe made Ibn Thufail get adequate learning facilities.¹⁹ After growing up, Ibn Thufail studied with Ibn Bajjah (1085-1138) who was a great scientist with many skills. It was under the guidance of Ibn Bajjah that Ibn Thufail later transformed into a great scientist.²⁰

Like most Muslim philosophers of his time, Ibn Thufail also mastered a wide variety of disciplines. In addition to being a philosopher, he was also popular during the Spanish Al-Muwahhid Dynasty as an expert in mathematics, medicine, poetry, and astronomy. Ibn Thufail began his career in Granada as a physician. After becoming famous as a doctor, he was appointed secretary to the governor of the province. Later, he was appointed secretary to the governors of Tagier and Gueta by the son of the ruler of the Al-Muwahhid dynasty, Al-Mu'min. He was also appointed a government physician.²¹

Ibn Thufail was then drawn to Marrakech in 558 AH/1163 CE to be used as a judge and court physician of Abu Yakub Yusuf, who at that time was still in power. Ibn Thufail resigned his position as a government physician in 578 AH/1182 CE due to his advanced age. The position was later replaced by Ibn Rushd on the recommendation of Ibn Thufail.²² During his lifetime, Ibn Thufail received awards from the caliph, and one form of respect from the caliph to Ibn Thufail was when he died in Marrakech (Morocco) in 580 AH/1184 AD, the caliph Al Mansur also attended his funeral.²³

Ibn Thufail's thoughts explain various concepts, including the concept of metaphysics, in this concept he explains the argument of motion, the argument of matter and form, the argument of al-ghaiyyat and al-ilahiyyat, then the next concept is regarding physics, in this concept there is Ibn Thufail's opinion regarding nature, the concept of epistemology explains that wisdom starts from the five senses. Next there is the concept of reconciliation between Philosophy and Religion.

¹⁸ Zar Sirajuddin, "Filsafat Islam," *Jakarta: Pt. Grafindo Persada*, 2009.

¹⁹ Shofiyatul, "Relevansi Epistemologi, Jiwa Dan Akal Dalam Perspektif Ibnu Thufail."

²⁰ Mahbub Junaidi, "Ibnu Thufail," *Dar El-Ilmi: Jurnal Studi Keagamaan, Pendidikan Dan Humaniora* 7, No. 1 (2020): 52–65.

²¹ Melisa Mukaromah, 'Pemikiran Filosofis Ibn Thufail Dalam Kisah Hayy Bin Yaqdzon', 2022.

²² Shofiyatul.

²³ Sirajuddin.

Not many works were left by Ibn Thufail, this is not because he did not write much, but this is because many of Ibn Thufail's works were burned because the majority of scholars at that time considered philosophy heretical. The same thing happened to Ibn Rushd who was his student, but Ibn Rushd was more fortunate because many of his works were saved by Jewish scholars at that time which was later referred to as the Jewish Averroesism movement.²⁴

In writing this work entitled *Hayy Ibn Yaqzan* Ibn Thufail was much influenced by Plato's thought. In philosophical thought Ibn Thufail had reached the highest level. From this thought is then written into the form of allegorical novels interspersed with offering a philosophical correlation between religion and reason in the search for haqiqi truth.

The story of Hayy bin Yaqzhan

If we look carefully, the effort that Ibn Thufail wants to build with his monumental work on *Hayy ibn Yaqzhan*, we can see that in essence the effort of Ibn Thufail shows the style of his philosophical thought that has nuances of eastern principles, in this case Islamic philosophy.²⁵ *Hayy ibn Yaqzhan* is a unique work, the fruit of the mystical thought of Ibn Thufail. However, the idea of *Hayy ibn Yaqzhan*'s story is not new in its entirety.²⁶ With regard to the title *Hayy bin Yaqzhan* there are two works that have similar titles, namely *Hayy Ibn Yaqzhan* by Ibn Thufail and *Hayy Ibn Yaqzhan* by Ibn Sina.

In the treatise written by Ibn Sina, *Hayy ibn Yaqzhan* is illustrated as an old sheikh who had keys of knowledge in his hands. The keys of knowledge were received from his father. The old sheikh is described as a traveler who can explore all corners of the earth, and it is said that Ibn Sina and his friends met the old sheikh on a trip and then a conversation ensued. The old Shaykh named *Hayy ibn Yaqzhan* mentioned in Ibn Sina's writings was a symbolic figure for active reason, which in addition to communicating with the prophet, also communicated with philosophers.²⁷ *Hayy ibn Yaqzhan* in the story of Ibn Sina's work is a man who gives guidance through the path of logic and philosophy.

While in the treatise *Hayy ibn Yaqzhan* written by Ibn Thufail, *Hayy* is told as a human child who was nurtured and raised by a deer in the middle of the island called wak-wak island. In his growth, *Hayy* learned about many things ranging from empirical knowledge to metaphysical

²⁴ Hasyimsyah Nasution, *Filsafat Islam* (Gaya Media Pratama, 2005).

²⁵ Masudi Masudi, "Pemikiran Filsafat Ibnu Thufail (Khazanah Pemikiran Filsafat Dari Timur Asrar al-Hikmat al-Masyriyyah)," *Fikrah* 3, no. 2 (2015): 411–30.

²⁶ Muh Syamsuddin, 'FILSAFAT IBN THUFAYL DAN NOVEL HAYY BIN YAQZHAN', *Refleksi Jurnal Filsafat Dan Pemikiran Islam*, 19.1, 39–62.

²⁷ Sardani Siregar, "Filsafat Hayy Ibn Yaqzan: Dialektika Akal Dan Wahyu Menurut Ibn Thufail," *Tesis*, (Medan: UIN Sumatera Utara, 2017)

knowledge. Hayy then met Isal, a Sufi who came from the opposite island who later taught Hayy bin Yaqzhan to speak. The two then exchanged knowledge. After that Isal introduced Hayy to Salaman who was a king with qualified religious knowledge.

The treatise entitled Hayy ibn Yaqzhan written by Ibn Sina and Ibn Thufail has the same name of the figure. Both use the names Hayy, Isal, and Salaman as characters in the story of Hayy bin Yaqzhan by each of them. In the story of Hayy ibn Yaqzhan written by Ibn Thufail, Hayy's environment is described as an island alien and almost untouched by humans. This seems to reinforce the process of seeking knowledge by Hayy who does not go through other human intermediaries and purely only uses his cognitive potential.

The birth of Hayy ibn Yaqzhan in Ibn Thufail's treatise became a polemic in itself. There are two opinions that tell the process of Hayy's birth until finally he was taken care of by deer on Wakwak island. The first opinion says that Hayy was born correctly. He was born dzati just like an ordinary man is born. His mother was the younger brother of a king in a kingdom on an island in the Indies that crossed the equator. His father's name was Yaqzhan, he married the king's younger brother secretly because he did not get the blessing of the king. When Hayy was born, he was immediately placed in a coffin and washed into the ocean for fear of being persecuted by the king. The waves carried the crate to the shores of Wakwak island. Then gone was the female Deer who had just lost her cub. Hearing Hayy's cry, the deer tried to open the chest. When she saw that there was a human baby child in it, a feeling of love arose in the mother deer and she breastfed the baby so that her hunger and thirst were gone. The mother deer also took care of Hayy lovingly in exchange for her lost son.

The second opinion says that Hayy was born naturally, it was formed directly from the ground. Hayy is formed from a lump of clay that has been deposited in the core of the earth for a very long time on the island of Wak-wak. The clod of earth then has a spirit and is divided into two parts. Both parts are bounded by a thin membrane, the membrane is very soft and in the form of air bubbles associated with the spirit, from which the spirit is due to the power of Allah Almighty. Then out of the lump of earth came out a human baby crying out of hunger and thirst. It was when Hayy cried that a doe that had just lost her cub happened to pass by the place. When she saw Hayy crying, there was compassion and love in the heart of the mother deer. Soon the mother deer nursed Hayy and took care of her.

The dispute between sources regarding the story of Hayy bin Yaqzhan is only about the origin of Hayy bin Yaqzhan's birth. Furthermore, almost all the interviewees agreed when explaining the phases of Hayy bin Yaqzhan's life journey. Hayy's life story is divided into seven, starting from the period in the care of the mother deer to the last phase, namely the encounter

between Hayy bin Yaqzhan and Isal who came from the country on the opposite island.²⁸

Hayy's childhood was spent learning about things like jealousy, shame, imitation, and envy. When he reached adolescence, Hayy had reached the age of practical reasoning, starting from making clothes to protect his body and also making weapons that he used to hunt and protect himself from wild animals. Then when her adoptive mother became ill due to her old age, Hayy learned to take care of her mother. Then when her adoptive mother no longer moves because she is dead, Hayy tries to revive her mother but her efforts are in vain. Hayy also realized that her mother was left with a body and would decompose, her mother did not have the ability to move and move back to before.

Then the story continues when Hayy believes that behind the diversity he encounters in the forest, there must be uniformity and power that is strange, hidden, invisible, and sacred. Hayy referred to it as the "first cause" or "creator of the world". Hayy then also reflected on himself and the tools he used to gain knowledge. When the direction of his contemplation turned to self-contemplation, Hayy finally discovered the first elements or substance, then the arrangement, and finally the soul and also eternity. By observing the flow of water in the river, hayy followed it and came to a source of water that gushed and overflowed into a river. Hayy also believes that humans and all creatures must also have one common source. The urgency of experimentation to understand ourselves and the universe is always emphasized in Hayy's novels. Doubt and skepticism become the driving force behind rational development aimed at achieving proven truth, leading ultimately to the truth of God.²⁹

The process of developing knowledge that existed in Hayy bin Yaqzhan began to metamorphose again when he found someone else on the island where he lived. Hayy first met and became acquainted with Isal who happened to be anchored on the island of Wakwak. Isal himself was a philosophical man who fled or secluded himself from an inhabited island that had long been governed by laws based on revealed religion. It was Isal who then taught Hayy to speak. After that, the two exchanged knowledge and understanding. Hayy also realized that the knowledge he had gained so far was very much in accordance with the religious teachings adopted by Isal. Hayy felt attracted to Isal's religion. Finally, Isal invited Hayy to come to his country to meet Isal's friend named Salaman. This friend of Isal was a king who understood religion and sharia.

After meeting and discussing with Salaman, Hayy asked permission to be able to spread his knowledge throughout the country. But in the process of spreading this, it turns out that the

²⁸ Ibn Thufail. *Hayy bin Yaqdhan; Manusia Dalam Asuhan Rusa*. Terj. (Yogyakarta: Navila, 2010)

²⁹ Ichsan, Salsabila, and Okfia.

response given by the community is opposed. Finally, Hayy understands that every human being has a different level of reason and understanding. Hayy and Isal decided to return to Wakwak island and contemplate until they found the highest faith of a servant of God.

The purpose of writing Hayy ibn Yaqzhan's own story is to show that the human intellect without outside help, is able to discover the knowledge that has been instilled by God, and has the ability to accept ideas and the tendency to actively investigate. This is like the claim made by Imam Al Ghazali or Aristotle in the words of the opening of his monumental work *Metaphysics*, "Everyone according to his nature has a desire to know". In addition, the story of Hayy ibn Yaqzhan written by Ibn Thufail actually also wants to elaborate the truths in the religious reality of every Muslim.³⁰

The story of Hayy ibn Yaqzhan is seen by many as a reflection of the development of human knowledge (*tathawwuru al-ma'rifah al-insâniyyah*), and it appears in the character of Hayy who lives alone on an isolated island, even alienated from family, society, culture, religion, and other social dynamics, able to grow and develop as a philosopher who is not only an expert in empirical knowledge, but also as a theosophist (*al-muta'allih*) who arrives at the truth of God, which he calls true knowledge (*al-haqâ'iq*).³¹

Hayy ibn Yaqzhan has led to a scientific revolution. This work of Ibn Thufail was the first Arabic and philosophical novel to influence Persian literature and Arabic literature. In fact, this novel has also had an influence on the European continent, especially after Hayy bin Yaqzhan's work was translated into a number of languages in Europe and also into Latin in 1671 M.³² As an Islamic philosopher who combined reason and intuition (*al-failasuf al-israqi*), through Hayy bin Yaqzhan, Ibn Thufail sought to combine the power of reason, which emphasized the ability to understand things independently. logically, empirically and through scientific research with the power of intuitive understanding

Discussion

Cognitive Development in Hayy bin Yaqzhan's Novel

Ibn Thufail was not actually a philosopher concerned in the world of education. But if we read and examine his thoughts contained in his work entitled Hayy bin Yaqzhan. If analyzed

³⁰ Masudi Masudi, "Pemikiran Filsafat Ibnu Thufail (Khazanah Pemikiran Filsafat Dari Timur Asrar Al-Hikmat Al-Masyriqiyah)," *Fikrah* 3, no. 2 (2015): 411–30.

³¹ Abu Muhammad Iqbal, *Pemikiran Pendidikan Islam: Gagasan-Gagasan Besar Para Ilmuwan Muslim* (Pustaka Pelajar, 2015).

³² Fathi Hidayah and Muhammad Endy Fadlullah, 'Novel Hayy Ibn Yaqzhan Karya Ibn Thufail Dan Novel Tarzan Of The Apes Karya Edgar Rice Burrough (Analisis Komparatif Struktur Naratif)', *INCARE, International Journal of Educational Resources*, 2.1 (2021), 101–14.

further, in the story of Hayy ibn Yaqzhan we can find the thoughts of Ibn Thufail in the world of education, both implicitly and expressly. In Hayy's life story, there are five phases of the development of reason (*cognitive development*) delivered by Ibn Thufail. The five phases are (1) Children / toddlers, (2) Mumayyiz, (3) Akil Balig, (4) Adults, (5) Old.³³

First, the phase or childhood, in this childhood humans live like animals that rely only on the mercy of their mothers. In this childhood, the human intellect has not functioned perfectly. In this phase humans have only basic instincts, such as the need for security, affection as well as physiological needs such as eating and drinking. In Hayy bin Yaqzhan's novel, this phase is shown in Hayy's life journey from being discovered by a mother deer until Hayy was two years old.

Second, the *mumayyiz* phase, in Hayy bin Yaqzhan's novel this phase is characterized by human characteristics starting to be able to make the environment as a source for learning and as a fulcrum of reason. This is due to the growth of reason over time and the increase in learning experience. This phase lasts from the time humans are two years old to six years old. In Hayy bin Yaqzhan's novel, in this period Hayy saw that he was not like other animals that had fur, therefore Hayy began to cover his body with leaves that he got from plants in the forest. Hayy also saw that he did not have weapons such as claws, fangs, or horns on other animals, so Hayy made weapons as a tool to protect himself.

Hayy saw a fawn that grew up accompanied by the growth of antlers, even though as a child deer did not have horns. Then Hayy pondered and thought about it all because she didn't have it, but she didn't find the reason. As he pondered, he also saw animals wagging their tails, so Hayy thought that the hardest part of the body was the tail, and the soft one was fur. He was sad and gloomy when he saw himself who had nothing. After a long time Hayy pondered, until the age of 7 years. Until he felt hopelessly completing his body. Until he came up with an idea to make a kind of body covering from date palm leaves and fronds, which was then tied to his body.

Third, puberty period. Ibn Thufail views that at this time the human intellect began to develop in a more complex direction. The human intellect to the *mumayyiz* stage can only think of real / empirical things. But at the *mumayyiz* stage, the human mind is able to think metaphysical things. When entering this phase of puberty reason, Hayy saw his mother deer die, from that event Hayy began to be able to think about the nature of life and death. From experiments and observations conducted by Hayy, he concluded that death was not caused by the cessation of the function of organs, but because of the separation of the spirit as a rider of the body.

³³ Nurlaela Nurlaela and others, 'Pemikiran Pendidikan Ibn Thufail: Studi Atas Kitab Hay Ibn Yaqzan', *Matan: Journal of Islam and Muslim Society*, 1.1 (2019), 1–10.

Fourth, the adult and self-aware phase. At this time man has reached the level of maturity of reason. When in this phase humans are able to think fully and comprehensively, seek truth and wisdom. In this phase man likes to show the knowledge he has gained. His opinion and truth are firmly believed so that it will not waver easily. In the story of Hayy ibn Yaqzhan this is described when Hayy began to be able to classify the objects he saw, but it is also shown through the story of his discussion with Isal regarding wisdom and revelation.

Fifth, old age. At this time there is an increase in awareness of reason and also the impulse to charity. In this old age, humans have begun to feel enough thinking about themselves and are enough in adventure. In this phase man begins to desire tranquility and begins to contemplate wisdom frequently. In the story of Hayy bin Yaqzhan, this is shown to happen when Hayy and Isal returned to Wakwak Island to do contemplation to find the highest faith of a servant of God.

According to Yazida Ichsan, through story of Hayy bin Yaqzhan Ibn Thufail tried to emphasize that there is no conflict between philosophy and religion. The synergy of experimentation, observation, contemplation and musyahadah will reach the stage of metaphysics. He also criticized that religious teachings from texts must be explored and understood meaningfully and not just as outward symbols.

Implications of Cognitive Development according to Ibn Thufail on the World of Education

Through the three figures present in Hayy ibn Yaqzan, namely Hayy, Asal, and Salman, it can be seen that humans consist of three groups. *First*, the group of ordinary people. This human group is represented by a group of people living on a neighboring island. Lay knowledge is knowledge that is based on customs. Ordinary groups cannot accept the way of thinking of higher human groups.

Second, the group of humans with rational knowledge represented by Hayy bin Yaqzan. Humans are endowed with common sense which is manifested in the form of science. By optimizing the use of common sense, humans can know the nature and truth of everything, including knowing God. Perhaps in al-Jabiri's terms this group is the same as a group that uses Burhani epistemology. *Third*, humans with kasyaf knowledge are represented by the character Asal. Kasyaf knowledge is obtained as a result of spiritual contemplation which is always trained to reach the ultimate truth.³⁴

By considering the process of development of reason based on the story in Hayy bin Yaqzhan's novel, there are at least two things that can be implemented into the world of education,

³⁴ Nurlaela, et.all.,.

this is obtained from reading Hayy's life story on the island of Wakwak and the process he went through in gaining knowledge. Two things that can be formulated based on the philosophical thoughts of Ibn Thufail contained in the story of Hayy ibn Yaqzhan are:

First, source of knowledge. Based on Ibn Thufail's thoughts as stated in the novel Hayy bin Yaqzhan, there are at least three processes of transmitting knowledge to humans. First, knowledge is acquired through sensation by optimizing the five senses of sight, hearing, taste, smell and touch, through experimentation, repetition and comparison. Second, the imparting of knowledge through reason, in which feeling and experience lead to contemplation leads to the perfection of the Creator and the weakness of man. The third is the transmission of knowledge through kasyaf, muhadadah and illumination (spiritual light).

Second, the learning method. Ibn Thufail described that man acquires knowledge through his active activities in building or constructing knowledge. Hayy bin Yaqzhan gained knowledge through active activities in observing, digesting knowledge materials (in Hayy's story depicted by Hayy's observation of nature) critically, and actively raises questions. This can be implemented in the world of education through learning methods that encourage students to be active in teaching and learning activities in the classroom. Educators give freedom to students to actively ask questions, or often ask questions to provoke students to think. In addition, the activeness of students in the classroom can also be grown by discussing with group friends or conducting simple experiments.

Learning strategies that can be taken from Hayy ibn Yaqzan include (1) non-directive learning that aims to form and develop self-awareness, understanding, and self-concept, (2) awareness exercises both intra-personal and interpersonal, and (3) synthetic that aim to develop personal creativity in solving problems.³⁵ Hayy always gained new knowledge after experiencing anxiety thinking. Hayy's attitude shows that Ibn Tufail carried the discovery learning method in learning. This method is commonly used in teaching with a scientific approach. In addition, the inquiry method was also used by Ibn Tufail. In this method students are directed to realize all that has been obtained from the learning results. Thus, students learn because they are based on high curiosity. In line with the discovery method, this method emphasizes continuous discovery and problem solving.

With a learning method that requires students to be active in the learning process, it will be able to stimulate the cognitive development of students. In addition, these learning methods can also foster critical thinking skills in students, where critical thinking skills are one of the four types of skills that are important for students to have in the 21st century.

³⁵ Nurlaela and others.

Third, the role of educators. Based on the story of Hayy bin Yaqzhan, the role of teachers in education is more inclined to the role of facilitator rather than as a transfer of knowledge. If the teacher acts as a transfer of knowledge who only presents ready-made knowledge to students and then asks students to memorize it, then students will tend to be passive. So that's not a good presentation of the material. Meanwhile, if the teacher acts as a facilitator, the teacher only needs to provoke students to discuss and argue on the problems or problems given by the teacher.

Then the next thing that educators need to learn is the development of each learner. In order for teachers to help students be active in learning, it is very important for educators or teachers to learn and know the stage of development and cognitive abilities of students who are being guided. By knowing the stage of development and cognitive abilities of students, teachers can provide stimulation of teaching materials that are in accordance with the cognitive level of students. Teaching materials that are too difficult can make students confused, while teaching materials that are too easy tend not to make students' cognitive development.

For Ibn Thufail himself, knowledge is not mere understanding.³⁶ In the context of knowledge explains that between reason and senses are inseparable. According to Ibn Thufail, reason is the force of thought (*al-quwwat al-nathiqoh*) that pays attention to the character related to the senses, and that force can relate to Allah (*al-ittishal bi-Allah*).³⁷ From the concept of reason, it can be described in Hayy, namely in thinking and *dhikr*.

After examining the end of Hayy's story, it seems that Ibn Tufail wanted a portion of material and a way that was in accordance with the conditions of the students faced. The learning model mentioned cannot be applied to all human groups even though it is an ideal model in Ibn Tufail's view. The condition of the student must be considered, the lay people cannot be taught in the same way as the rational knowledge group and the *kasyaf* knowledge group. Instead of the material being delivered, it will not be well received, even will not be acceptable at all.³⁸

Conclusion

Ibn Thufail through the story of Hayy bin Yaqzhan explained that the phase of cognitive development in humans occurs through five stages, namely (1) Childhood, (2) *Mumayyiz*, (3) *Akil Balig*, (4) Adulthood, and (5) Old Age. In each of these periods, human cognition continues to develop both in terms of structure and how it works. Through the story of Hayy ibn Yaqzhan, Ibn Thufail explains that knowledge is formed by man himself when he is faced with nature, the

³⁶ Sami S Hawi, *Islamic Naturalism and Mysticism: A Philosophic Study of Ibn Tufayl's Hayy Bin Yaqṣān* (Brill Archive, 1974). 157

³⁷ Shofiyatul.

³⁸ Nurlaela and others.

environment, or objects that are the material of his learning. Therefore, it is important to emphasize that in learning students should be more active, not teachers or educators who are always active. The teacher simply acts as a facilitator who facilitates the cognitive development of students. In addition, educators need to understand and learn the stage of cognitive development of students who are guided in order to provide appropriate learning materials so that they can help students to be able to think and form new knowledge according to the stage of cognitive development they are going through.

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