Transformation of Artificial intelligence in Islamic Edu with Ulul Albab Value (Global Challenge Perespective)

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ABSTRACT

The face of world industrialization is changing with the Industrial Revolution 4.0. Old-style large companies are increasingly being threatened by new, more innovative companies. Likewise, in the innovation of the Islamic Education system, the need for new skills such as artificial intelligence, data analytics, machine learning, and other digital technologies is increasingly evident. Likewise soft skills related to complex problem solving, critical thinking, collaboration and communication are also increasingly needed. The existence of the face of the world's industrialization has created an impact that has caused panic and anxiety among the people. In the context of Islamic Education, Artificial intelligence can explain the interpretation of verses as well as hadiths, can also recite verses from the Koran and be used in writing sermons at mosques. This is a dilemma in the world of Islamic education, for example when Artificial intelligence is used to revive or maintain the memories of people who have died. One of the best management elements of this phenomenon can be started from the reconstruction of artificial intelligence for Islamic education with the Ulul Albab value approach.

Keywords: Artificial intelligence, Ulul Albab, Islamic Education

INTRODUCTION

In recent times, Artificial intelligence has made great progress and expanded its applications in various fields, such as information technology, automotive, health care, to finance. According to expert, John McCarthy, Artificial intelligence is the ability of a machine to perform tasks that usually require human intellectual abilities, such as text comprehension, problem solving, and pattern recognition.

Reports from the International Data Corporation (IDC), global spending on Artificial intelligence technology is expected to reach $57.6 billion in 2021 and is expected to continue to increase to $102 billion in 2025. This shows that the Artificial intelligence industry will continue to grow at a very fast pace.

One of the future directions of the development of Artificial intelligence is its ability to become smarter and understand context. Artificial intelligence is already capable of performing tasks such as speech and image recognition, but is still limited in understanding context and meaning. In the future, Artificial intelligence can improve the ability to understand and make decisions based on situations and contexts. Artificial intelligence technology will also continue to develop in terms of interactions between humans and machines. Currently Artificial intelligence is still limited to voice or text commands, but in the future more natural and intuitive human-machine interactions will emerge, such as using gestures or facial expressions.

LITERATURE REVIEW

1. Ulul Albab

The concept of thinking from Islamic and Western perspectives does not differ much from an operational standpoint, but differs in the final objective of thinking (Abdullah et al. 2014). The objective of thinking from an Islamic perspective is to think about the signs of God's existence and power (Endut & Wan Abdullah 2010). Other creatures are not responsible for thinking about the wisdom behind natural events to know their God as humans. The ability of the brain to think for humans is something that distinguishes humans from other creatures. Scholars consider the Ulul Albab group as those who have aqidah integrity and spiritual depth, have a commitment to noble character, and have professional maturity (Imtihanah 2016); as well as the owner of a strong intellect who unites scientific and worldly knowledge with religious values, thoughts with remembrance of Allah, with worldly and hereafter goals, obedience based on Divine revelation, professionalism with piety, and not afflicted by spiritual heart diseases (Hassan 2010). This group is also termed as encyclopedic scholars, experts in fardu ain and fardu kifayah, as well as Muslim scientists who are able to see what is implied behind what is written, and can understand the essence behind the verses of the Al-Quran (Mohd Arshad 2015).

Based on the literature on Islamic thought above, it is found that the Ulul Albab group is synonymous with thinking activity. The mapping of these verses can certainly help in producing caliphs who are professional and pious as well as break the deadlock in the search for 'chosen people' as in surah Al-Quran (2:143). ; 3:110).

2. Artificial intelligence

The definition of Artificial intelligence is a technology that is capable of doing work that requires intelligence or human intelligence. It is important to ensure that Islamic education and the development of Artificial intelligence are carried out transparently and pay attention to applicable ethics and norms. Although Artificial intelligence can help solve various problems and make human life easier, it can also create new problems, such as crime.
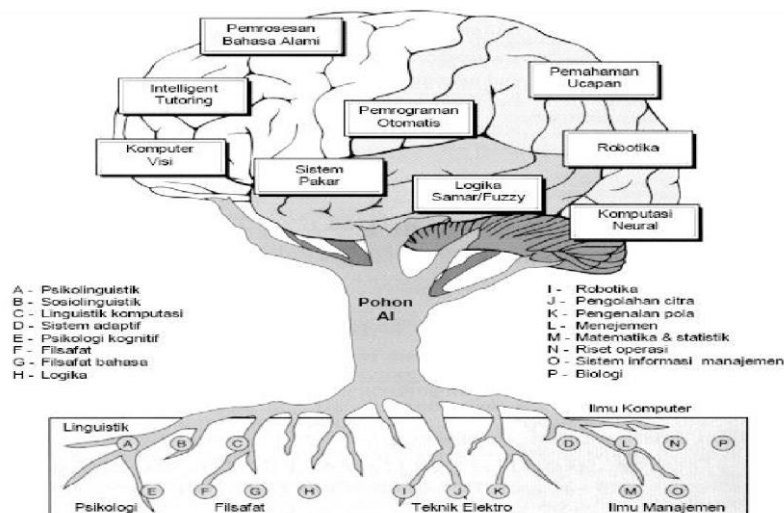
Fig 1. Artificial Intellegence Tree

The existence of Artificial Intelligence today has an impact on society. In addition, it also causes panic and worry in the community. In the context of Islamic Education, Artificial intelligence can explain the interpretation of verses as well as hadiths. Not only that, Artificial intelligence can also recite verses from the Koran and be used in writing sermons at mosques. This is a dilemma in the world of education. Plus there is research where Artificial intelligence is used to revive or maintain the memories of humans who have died. Following are some expert studies related to Artificial intelligence from various multidisciplinary aspects of Science:

Social Construction of Society 5.0 and Islamic Education System. Prof. Dr. Bart Barendregt from Leiden University researched that in the future there will be maps of the existence of AI, AI algorithms which will later become culture and will be able to create a culture in the form of fact contestation towards politically formed social construction. This results in the thought that Artificial intelligence can be a springboard for humans to carry out evolution together with the technology they create. Seeing from the rapid development of this technology it seems to be colonizing human life, humans do not have time to think about themselves because of the construction of a future that is full of digitalization or all-technology, such as cyborg technology and human body implant technology.

Creativity for all, but lost skills. University of Tennessee vice chancellor Lynne Parker explains the grand language model makes creativity and knowledge accessible to everyone. Everyone can use a tool like ChatGPT to express themselves and make sense of huge stores of information, for example by summarizing text. In just a few minutes, beginners can illustrate a business presentation, produce a marketing pitch, come up with ideas for overcoming writer's block, or create new computer code to perform a specific function. While there are significant benefits of opening up a world of creativity and knowledge to everyone, these new AI tools also have downsides. First, they can accelerate the loss of important human skills, especially writing. Second, these AI tools raise questions around intellectual property protection.

Potential for inaccuracies and plagiarism. Associate professor of Computer Science, University of Colorado Boulder, Daniel Acuña is a regular user of GitHub Copilot, a tool to help people write computer code. In his experience, the tools were great for exploring ideas he had never thought of before. However, he understood the weakness of those AI tools, such as their inaccuracies. Acuña says if users are not critical of what the tool produces, then the tool is potentially harmful. Another problem is bias. Language models can learn from data biases and replicate them. This bias is difficult to see in text generation, but is especially evident in image generation models. Another problem is plagiarism. Recent studies have shown that image-generating tools often plagiarize the work of others.

AI vs Humanizing Humans, custom and 'handcrafted' jobs are here to stay. University of Michigan Professor of Community Information Kentaro Toyama said humans believe in privilege, but science and technology have repeatedly proven this belief wrong. Technology has disproved it, cognitive tasks require the human brain. How can human intelligence and creativity be rewarded when machines become smarter and more creative than the smartest people? There will likely be a continuum. In some domains, people still value humans doing things, even though computers can do them better. If history is any guide, it is almost certain that advances in AI will cause more jobs to disappear. Those of the creative class with special human skills will be richer but fewer in number, and those with creative technology will become the new powerhouses.

Old jobs will disappear, new jobs will appear. Associate Computer Science professor, Florida International University, Mark Finlayson said large language models like ChatGPT that have been trained to break a record number of words (trillion) have surprised many people, including many AI researchers, with how realistic, extensive, flexible, and context sensitive they solve. . As a powerful new technology automates skills, it will impact those offering those skills in the marketplace. Certain jobs, such as typists, almost disappeared completely. On the plus side, however, anyone with a personal computer can create well-typed documents with ease, increasing productivity drastically. On the other hand, large language models will enable new ways of working, and lead to new jobs yet to be imagined.

Developments in technology lead to new skills. Professor of Biomedical Informatics, University of Colorado Anschutz Medical Campus, Casey Greene said technology is changing the nature of work. Just as the skills for finding information on the internet changed with the rise of Google, the skills required to extract the best results from language models will center on creating commands and command templates that produce the desired output. Users can make more specific requests by pasting sections of the job description, resume, and specific instructions. As with many technological advances, the way people interact with the world will change in the era of widely accessible AI models.

3 Results and Discussion

The face of world industrialization is increasingly changing with the Industrial Revolution 4.0. Large, old-style companies are increasingly being threatened by new, more innovative companies. The need for new skills such as artificial intelligence, data analytics, machine learning, and other digital technologies is increasingly evident. Likewise soft skills related to complex problem solving, critical thinking, collaboration

and communication are also increasingly needed. As a result of the Industrial Revolution 4.0, by 2025 there will be 97 million new jobs which will replace 85 million old jobs (WEF, 2020). When the business world and industrial world are increasingly running fast with new technology that requires new competencies and skills, it is necessary to prepare Islamic education with the priority of Ulul Albab values to keep up with the pace of industrialization. This is the vital urgency to reposition Islamic education and artificial intelligence with the primacy of ulul albab values in the midst of a new landscape of change.

Microcredentials of Artificial intelligence in Islamic edu: Need for New Skills. Microcredentials are a form of competency certification that students obtain after carrying out a practical learning process regarding a series of skills, knowledge and attitudes in a relatively short time. Now many companies in the world that organize these microcredentials and require professional certificates in recruiting. Google Career Certifications is an example of a certification program for up to 6 months for new skills, and promises support in job searches for Data Analyst, IT Support, and UX Designer positions.

Coursera survey results (2023) in 11 countries show that 88% of graduate users believe that professional certificates will be an important document in job applications. In the United States, 95% of educational institution leaders agree that microcredentials will be part of the future of higher education to make it more relevant to the world of work, even though currently only 56% in the world have an evaluation process for this level of relevance. From the survey it was concluded that degree education complemented by non-degree is what the industrial world wants.

However, the types of skills that will be obtained through microcredentials also need to be continuously supplemented. Indeed, currently the skills that grow and develop in each country are different. The Future of Skills report (2019) shows that the skill that is growing in South Korea, Japan and Taiwan is artificial intelligence. While blockchain is growing in Singapore and Hong Kong, robotics is growing in India. Meanwhile, what is growing in Indonesia and the Philippines is social media marketing. The skill map for each country can be a reflection of the depth of mastery of technology 4.0.

The Valley of Death and the Growth of Islamic Education Innovators

In addition to the link between graduates of Islamic education and world challenges, it is also necessary to look at the link between innovation in Islamic education. In this world, the term the valley of death is found. This term describes the gap in the intensity of Islamic education in basic and applied research and intensity. Of course, the agenda for overcoming the "valley of death" is to strengthen communication bridges and collaboration between various related parties and encourage the growth of many innovators. Superior innovation is highly dependent on research quality, and research quality depends on research resources, namely researchers and budgets. According to the World Bank (2020), the number of researchers per million population in Indonesia is only 216, compared with China (1307), Thailand (1350), Malaysia (2397), Japan (5331), Singapore (6803), and South Korea (7980). Meanwhile, the comparison in terms of the percentage of research budget per GDP is as follows: Indonesia (0.3), Thailand (1.0), Malaysia (1.4), Singapore (1.9), China (3.1), Japan (3.2), and South

Korea (4.2). If we examine it again, it turns out that in other countries there has begun to be a shift in research funding sources from the government to private. The percentage of private research funds for several countries is as follows: Indonesia (12), Malaysia (38), Singapore (52), China (77), and South Korea (77), and Thailand (81). Budget politics for research needs to be strengthened so that more productive researchers and innovators can downstream their innovations.

New Technopreneur-Ulul Albab Needs. Another role of Islamic Education is to produce entrepreneurial graduates, bearing in mind that according to the government, Indonesia's entrepreneurship ratio is still relatively low, namely 3.74 percent. Compare this with Thailand (4.2), Malaysia (4.7), and Singapore (8.7). But more than that, the new type of entrepreneur who graduated from Islamic education should better reflect the figure of a technopreneur-ulul albab, namely one who is able to utilize Islamic educational innovations. So the presence of this technopreneur-ulul albab will have two benefits: to be a user of Islamic education innovations as well as a source of new entrepreneurs. In a macro framework, the growth of new technopreneurs can reduce the economic inequality that currently exists.

The way of thinking and knowledge that needs to be mastered by a Muslim technopreneur-ulul albab must be based on the demands of the Koran. Figure 1 below is a model of Ulul Albab's thought which has been adapted from Adnan (2021) and mapped with 16 verses of Ulul Albab as a principle for the development of the ulul albab generation based on Islamic thought and related sciences. All 16 Ulul Albab verses have been adjusted to take into account the context in which they were revealed and their relationship to the verses before and after them.
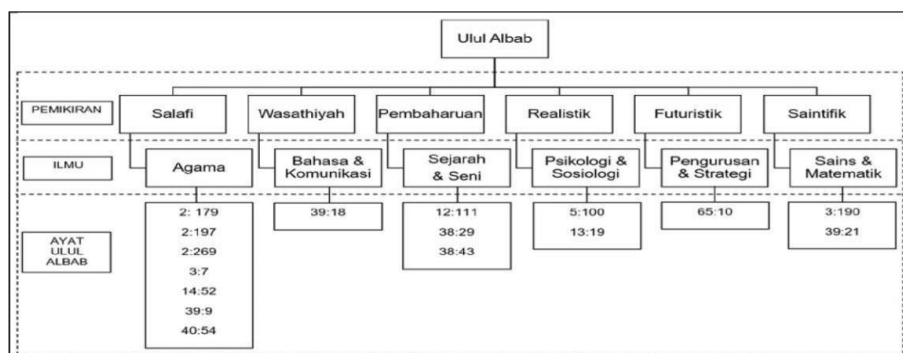

Fig 2. Mapping of Ulul Albab Verses and Ulul Albab Thought Models on Islamic edu from Adnan et al. (2021)

Based on Figure 1 above, the majority of verses are placed under religious knowledge and the Salafiyyah or Salafi way of thinking because religious knowledge and Salafi thought are the cornerstones of the entire model. The Islamic worldview does not separate religion from human life, because it is a holistic way of life. All six types of knowledge and six types of thinking in the model combine aspects of Islamic teachings contained in the Al-Qurän.

Wasathiah or simplicity thinking is connected with linguistics and communication. The 18th verse of surah Az-Zumar which emphasizes the rules of listening carefully and processing information fairly, indirectly guides believers to stay away from things that lead them to 'tughyan' matters. The published word 'tughayanan' is translated as going beyond limits, tyranny and extreme disbelief. So, through the

science of language and communication, humans can also become people of wasathiah (not excessive and unjust).

History can explain why humans behave in certain ways. Observations of human behavior throughout history are then translated into ideas, concepts and theories. In other words, humans evolved based on past historical experiences and teachings. The Ulul Albab group is those who take teachings and warnings from the history of the Prophets. Renewal thinking focuses on improving (innovation) rather than what already exists by questioning something that behaves critically. Islam forbids humans to blindly accept the beliefs inherited from previous parties without thinking about them critically (Endut & Wan Abdullah 2010). The three verses of Ulul Albab under the thought of renewal make the stories of the Prophets as a method to instigate the human mind so that it thinks and contemplates the implications of an action.

Realistic thinking and human sciences are combined under the same cluster because both are legislated about making decisions based on human values. The two Ulul Albab verses placed with this cluster explain the principles in making decisions by placing fear of Allah SWT as a principle. Humans should not think too idealistically so that they ignore the reality in society and the reality of what they will face in the afterlife.

The focus of this thinking is to maximize cognitive abilities (skills for creative and innovative thinking), using technology to master religion and scientific knowledge to solve problems (Rahim et al. 2014; Rohaizan et al. 2014; Manaf & Rahman 2017).

CONCLUSION

To produce Amazing Islamic education that produces productive Muslim innovators, and reliable technopreneurs-ulul albab, a transformation of the entire Islamic education ecosystem is needed, both curriculum, research agenda, and governance. First, for curriculum transformation, the target is to produce graduates with new skills who are able to respond to changes and are compatible with industry needs. Its characteristics lie in the strength of new skills, growth mindset, creativity, future practice orientation, leadership spirit, and a strong foundation of integrity. The world really needs graduates with these characteristics, both as workers and technopreneurs. Basic features This r should also be attached to the figure of an innovator who is productive in downstreaming his innovation. All of this requires a conducive educational ecosystem that involves Ulul Albab values, both in curriculum development, certified apprenticeship programs, microcredentials, teaching industry, and the development of new start-ups.Second, to transform research and innovation at the upstream level, it is necessary to prepare a research umbrella. Therefore, various breakthroughs in the new Islamic education governance ecosystem that guarantee mutually beneficial collaboration must be carried out.

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