

## Islamic Finance Education in the Era of Industrial Revolution 4.0 (Ir 4.0)

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### Abstract

The idea of a new era, the Industrial Revolution (IR4.0), encourages the increased use of highly automated tools and the development of cutting-edge technology that limits human interaction and speeds up normal processes in the banking industry's existing environment. This paper attempts to explore the significance of IR4.0 in the Islamic finance education. Thus, this article presents three main purposes; 1) to identify the Fourth Industrial Revolution (4IR); 2) to identify the IR 4.0 and Higher Education In Malaysia and 3) to stress the roles of Islamic Finance Education Providers. This study employed a qualitative research methodology through data collection from several previous works. The findings of this study revealed that the universities as provider of higher education services in the area of Islamic finance must also strategize the Islamic finance education direction and revisit the program that they are currently offering by altering the contents to be in consonance with the IR 4.0.

**Keywords:** Higher Education, Transformation, IR 4.0, Islamic Finance, Education

### Introduction

Education and technological invention are interrelated in the sense that technology is inevitable to ensure effective delivery of education services to the clients. The fourth industrial revolution will revolutionize industries so substantially that much of the work that exists today will not exist in 50 years (Marwala et al., 2006). The Malaysian Higher Education

Ministry has themed the year 2018 by - Higher Education 4.0: Knowledge, Industry and Humanity. It calls for revamping the Malaysian higher education system and embracing the IR 4.0 (Sani, 2018). This is to make certain that all higher education institutions will be relevant, creating values, and remain competitive in the dawning of IR 4.0. Thus, this article is primarily intended to seek the following objectives:

- Exploring education-related opportunities for Islamic finance in the era of IR 4.0
- Highlighting pertinent challenges that may arise from IR 4.0 in relation to Islamic finance education
- Evaluating some pertinent areas of concern relating to Islamic finance education in the era of IR 4.0.

The areas of concerns that will be pointed out shall be further deliberated by experts towards making the most complete preparation for the upcoming IR 4.0 in the area of Islamic finance education. This is because education plays a significant role in determining the future of a society and nation (Muhammad Talhah Ajmain, Asma Nurul 'Aqilah Mahpuz, Siti Nur Hadis A Rahman & Ahmad Marzuki Mohamad, 2019). In the meantime, no one can dispute the fact that Islamic education including Islamic finance education is built upon the philosophical foundation of Islamic education laid down by the scholars. Thus, it is imperative to ensure that the revolutionized educational technology will not divert the Islamic finance education from the philosophical foundation of Islamic education. In fact, the IR 4.0 technological invention shall be utilized to actualize the very purpose of Islamic education that will be explicated in the next part of this article.

#### **The Fourth Industrial Revolution (4IR)**

It is imperative to understand in the first place what IR 4.0 is all about and how would it affect the job market in the future. The IR 4.0 is fundamentally reflective of the development where the value of technology is highly emphasized (Ahmad Zaidee Laidin). It is characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres. In the context of Islamic finance industry, the Fourth Industrial Revolution (IR 4.0) has become a driving force / factor for Islamic finance industry to adapt whichever possible to highly disruptive technologies such as Artificial Intelligence, block chain, big data and robotics, nanotechnology, quantum computing, biotechnology, the Internet of Things, the Industrial Internet of Things (IIoT), fifth-generation wireless technologies (5G), additive manufacturing/3D printing and fully autonomous vehicles (Quentin, 2018). IR 4.0 also known as the 'digital revolution' that combines technological and human capacities in an unprecedented way through self-learning algorithms, self-driving cars, human-machine interconnection and big-data analytics (Haron, 2018). The above disruptive technologies would significantly alter the way that consumers, industries, or businesses in different sectors operate. Education sector is not an exception in this case. In the education sector, a disruptive technology is expected to sweep away the traditional system of education as well as ordinary characteristics of the education it replaces because it has features that are recognizably superior to that of human. For example, this would definitely require the university as provider of Islamic finance education to establish a strong link with commercial sectors (Naudé, 2016) as they are significantly affected by the IR 4.0. As of now, education is being connected to mobile devices through applications in the cloud and is no longer limited to knowledge but extended to skills acquisition. With the expansion in networking services nationally and globally, physical boundaries are no longer barriers to education (AbuMezied, 2016). Based on the above, the Islamic education sector is going to experience changes in

diverse aspects including but not limited to curriculum development, staff enhancement programme, education infrastructures, strategic alliances with key industry players etc.

### **The Ir 4.0 and Higher Education in Malaysia**

In education sector, there is a need for teachers to consider adopting the latest technologies in their teaching methodology. The students that they have now have different preference than students that they had 10 years ago (Hussin, 2018). The IR 4.0 would entail different kinds of learning spaces and pedagogies to be adopted by the provider of higher education such as heutagogy (self-determined learning), paragogy (peer-oriented learning) and cybergogy (virtual-based learning) (Sani, 2018). The Malaysia Education Blueprint 2015-2025 Higher Education (MEB (HE) outlines 10 Shifts that will spur continued excellence in the higher education system of which one focuses on Globalised Online Learning (Ministry Of Education Malaysia, 2015). The MEB stated that Internet penetration in Malaysia currently stands at 67% which is the seventh highest penetration rate across Asia. This puts Malaysia in a good position to focus on online learning and lower the cost of delivery while enhancing the quality of higher education. In view of the above scenario, there are actually significant opportunities to achieve the desired outcomes first set forth in the National e-learning Policy (Dasar e-Pembelajaran Negara or DePAN) (Ministry Of Education Malaysia, 2015). Thus, it is obvious that technological innovations such as mobile computing, cloud, social network and big data would create an opportunity to build a learning ecosystem that allows personalised learning which is independent of time and place (Abdul Haseeb, 2018). In this regard, it is essentially important for the universities to grab these opportunities by incorporating the critical elements of IR 4.0 in all levels of academic programmes, education services and infrastructures.

Thus, the digitally native customers are expected to be the main stakeholders to the Islamic financial institutions (IFIs) in the era of IR 4.0. This indicates that the digital financial services would enable the IFIs to channel their services in different geographical areas to different segments of customers including the underserved populations. This is an opportunity for the Islamic finance industry to innovate digitally. Based on the above, the IR 4.0 is expected to post challenges to Islamic finance industry as well as the providers of Islamic finance education particularly the institutions of higher learning. The reason being is that the role of universities is not only confined to supply of talents for the industry but is also inclusive of solving ethical and spiritual problems for Islamic finance industry and the general community. The issue at hand is to what extent the artificial intelligence in the like of robo-advisers may help solve the above problems. In the field of Shariah related finance, would the above technologies eliminate the traditional approach of knowledge enquiry and spiritual uplift propounded by the Islamic scholars?

Another challenge is in respect of the philosophy of Islamic education including Islamic finance education that always require achievement of balanced growth of the total personality of man that shall include spiritual, physical, intellectual and ethical spectrums of human life. The question is whether the above philosophical aspiration of Islamic finance education can be served via the IR 4.0 technological advancement. In this regard, the universities shall offer academic programmes that encapsulate the actual roles of technological invention in realizing the aims of Islamic finance education and equip the students with better understanding of technological functions in different areas of studies.

Expert in Islamic finance education shall address the question of how the disruptive technology can be utilized as a means (*wasa'il*) to develop the ethical, spiritual and intellectual dimensions of human life towards ensuring prosperity in both worldly life and hereafter.

In relation to the above points, it is crucial to realize that the disruptive technology is a neutral kind of things which may be used for good or vice versa. In reality, the subject of Islamic finance is also correlated with divine sources of knowledge such as the Quran and Prophetic tradition. The area of Islamic finance is also closely related to spiritual relationship between the students and the teachers that lies in the notion of *barakah* and traditional heritage of learning such as the direct study of classical texts with the sheikh. The question at hand is how can this be integrated in the technological invention of learning methodology particularly if the students specialize in *fiqh muamalat* that requires an indepth exploration of the classical literatures on Islamic jurisprudence. Thus, the talents in the area of Shariah are also crucial to be examined as the Shariah is the main constituent of Islamic finance. In specific, the graduates who will be able to play the role of Shariah advisers to the Islamic financial institutions must be well equipped with technological and operational knowledge in addition to the Shariah knowledge itself. It is worth noting that the graduates who intend to serve as Shariah advisers shall admit the fact that they have to be much better, more professional and efficient than the machines particularly in respect of Shariah deliberation. The issue arising is can the Shariah advisory positions in the industry be replaced with Shariah robo-advisers with the same quality of *ijtihad* that is imbued with God-fearing? What shall be the most appropriate juristic characterization (*takyif fiqhi*) for the position of Shariah robo-advisers? These are the areas of concern that shall be further deliberated to prepare the universities for the upcoming IR 4.0 challenges.

### **Roles of Islamic Finance Education Providers**

Based on the above premise, Islamic Finance Education providers are required to be able to face the Industrial revolution 4.0. It is including able to adjust the curriculum and the method of teaching to cope with the rapidly changing information and technologies. Lecturers, teachers and other educators should mastering; (i) Skills (in leadership and teamwork), (ii) Ability to adapt to the new technologies and global challenges (Cultural Agility), and (iii) have the ability in entrepreneurship, including the mastering of social entrepreneurship (Kailani & Wahyudin, 2018). Therefore, the Islamic Finance Education providers are facing a big challenge to play a vital role in providing modern teaching facilities and producing graduates with sufficient intellectual, spiritual, and technical capacities to deal with new development in Islamic finance industry and competent in their fields. The curriculum should be aligned with the fast development of the industry and should be developed based on the digital era, where all the technologies and information are applied. Therefore, the Islamic Finance Education providers should increase their competitiveness by providing curriculum innovations and adjusting existing facilities and infrastructure with the latest technology to produce innovative, skilled and competent human resources which can ultimately increase productivity towards an industry during the Industrial Revolution 4.0. The skills and competencies should be improved continuously to be matched with the growing needs in the labour market.

### **Conclusion**

In conclusion, the universities as provider of higher education services in the area of Islamic finance must also strategize the Islamic finance education direction and revisit the program

that they are currently offering by altering the contents to be in consonance with the IR 4.0. This would definitely depend on the university's collaborative partnership and strategic alliance with the Islamic finance industry entities and players in the like of banking institutions, takaful operators and the companies involving in Islamic capital markets sector such as Islamic fund management companies. The curriculum should be innovative and meets the demands of the industrial revolution 4.0. The teaching and learning activities must also be contextual with the development of the era of Revolution 4.0 and other changes.

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