

Language and Education in the Midst of the 4IR Challenges

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ABSTRACT – The Fourth Industrial Revolution (4IR) era brings with it exciting new possibilities and at the same time new challenges for the language and education sector. Due to the exponential changes brought about by the 4IR, researchers predicted that pretty soon, we will witness changes in most sectors in the world including the employment sector. Over the years, the delivery of Malaysian Higher Education Programmes (MyHE) has transformed significantly. The challenges and the way forward towards addressing the issues pertaining to 4IR in the realm of language and education are presented and discussed in this editorial.

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INTRODUCTION

The Fourth Industrial Revolution (4IR) is a period where human experiences are transformed at a scale and complexity unlike before due to technological advancements. Attempts to define and describe industrial revolutions and particularly the 4IR have been extensively discussed (e.g. Schwab, 2016), but in the simplest sense, 4IR refers to an environment that is greatly influenced by the advances of technology, and it immensely affects all aspects of life (Lamprini & Bröchler, 2018). Rapid integration of technologies such as the use of robots, 3-D printings and simulations can have adverse effects, and these types of technology are sometimes called disruptive technologies as it ultimately changes the industries, our way of life and the way we complete our work. In line with the rapid transformation that echoes 4IR, employment and other areas are affected too. To keep up with the 4IR, Malaysian Higher Education Programmes (MyHE) has begun to transform the approaches and scope of educational delivery to its stakeholders.

In the first phase of Malaysian Higher Education Programmes or MyHE 1.0, chalk-and-talk was the main teaching approach with emphasis on the instructors rather than the students (Zulita Mustafa, 2018a). Then, MyHE 2.0 introduced the use of basic technological tools and practices into the classroom. In the third phase (MyHE 3.0), more student-oriented approaches were practiced where students were given the opportunities to explore and collaborate on social learning platforms. Now with the MyHE 4.0, the role of the students diversified as they become the content producers and knowledge creators guided by the global web network and the instructors. These changes are in line with the changes in the industrial revolutions, where now 4IR is the new challenge that lies ahead of all industries. In language and education sector, together with its promising and engaging possibilities, 4IR unfolds new challenges as well.

CHALLENGES AND WAY FORWARD: 4IR IN LANGUAGE AND EDUCATION REALM

In the near future, jobs that are relevant now, will be deemed as obsolete as many human resources will be replaced by automated technologies (e.g. AI and robots) especially those involved in manual or physical labour (Oke, 2020), but these do not necessarily contribute to the decrease of employment opportunities. This is because, at the same time, new jobs will be created but requiring skills that the current educational industry are unable to produce which ultimately leaves a vacuum in the employment world. One of the major challenges in a developing country when embracing 4IR is in producing workers that possess skills in “managing digital jobs” including skills to analyse big data in order to identify customers’ need (Lee, Kao & Yang, 2014; Petrillo, De Felice, Cioffi, & Zomparelli, 2018). Despite these positive outlooks for future job demands, the reality remains that by as early as 2020, an estimated 5.1 million job loss is predicted depending on the rate of worldwide technological advancements (World Economic Forum, 2016). Some sceptics believe that such disruptive technologies bring more harm than good, but many were more optimistic of the future with 4IR:

“Technology is neither good nor bad — it’s what you do with it that makes the difference” (Philbeck et al., 2018, p.1).

The demands for workers with these skills has left many educationists grappling to answer the question: Are universities future ready? Despite these dire needs, knowledge about the effects of 4IR to the education sector in terms of readiness and consequences remains questionable and arguably limited (Oke, 2020). As such, research in the field of language and education need to see the proliferation, development, improvement, change and enlightenment of basic and existing theories, curriculum and issues. In addition, the research in education also need to open the arena of exploration and adoption of technology-based strategies and approaches along with a combination of concepts that lead to innovation (Lamprini & Bröchler, 2018). To make sure that the language and education industry remain relevant and a vital component to the 4IR-oriented-world, the education industry needs to be on a par with the demands of the 4IR. Universities have to change their curriculum and delivery to ensure that their graduates have jobs. “One of the measures

being taken is to produce holistic, balanced and entrepreneurial graduates who can adapt and fill in jobs that are yet to exist” (Zulita Mustafa, 2018b, p.1).

The challenges of the 4IR and the advent of disruptive technology that change the way we work and learn bring about the term Education 4.0 which briefly means it is a response to the needs of 4IR where human and technology are aligned to enable new possibilities. Embracing the need of fresh ideas to catch up with the exponential technological advances, educators today face many challenges in educating their students. Among the main challenges is innovation (Lamprini & Bröchler, 2018), where teachers and educational institutions need to provide more innovative teaching and learning (T&L) aids as T&L need to be in line with the current needs. In order to equip students with the necessary digital skills, instructors themselves need to learn and acquire new digital skills for their class such as recording and editing audio and video clips, using social networking sites and creating non-traditional quizzes by using digital applications (Anealka, 2018) – many of these were not taught to them during their teacher trainings. “Un-learning and re-learning”, appropriate skills are pertinent and need to be addressed.

Paired “unlearning and relearning” opportunities are powerful and can assist in the acceleration of overall growth in unexpected ways (World Academic Forum, 2019). This is very true in the context of language and education as there are digital immigrants and digital natives which open-up more diverse training and professional development activities. Those who are well-versed in the old system may have to unlearn those strategies and re-learn new strategies, methods and concepts that are adept to the need of the moment. On the other hand, the digital natives may not have to re-learn aspects which are related to the technical aspect. Thus, trainings offered should be tailored to the needs of these diversities in the technological and other relevant knowledge.

The next challenge is in terms of teaching methods: instructors are not expected to just use technology to assist teaching with a didactic approach, but rather to use technology to enhance learners experience and transforming it into a learner-centred method of learning (Oke, 2020). This is in line with the needs to empower native digital generations so that they are able to become individual with skills needed to be workers in 4IR environment including being independent in controlling and monitoring their own works (Petrillo et al., 2018).

Educationists will continue to debate whether universities and other higher education institutions should focus on technical skills or contents i.e. to service the industry or to service higher learning or the society (Luff, 2017). Despite these ongoing debates, soft skills including mastery of language remains important in the 4IR-centred-industries since digital data needs to be analysed, interpreted and ultimately presented skilfully using efficient verbal and visual resources. As stated in the World Economic Forum (2016, p.3), “social skills— such as persuasion, emotional intelligence and teaching others—will be in higher demand across industries”, pointing that the humanities and social science courses are vital in tertiary education amidst 4IR. Furthermore, the teaching of language for specific purposes, for example Business English needs to catch up with the new terms created by the 4IR and the discourses shared by global communities (Luff, 2017). Skills are required to implement, manage, and work with new technology, and with one another (Butler-Adam, 2018, p.1).

The stakeholders should really consider the required set of skills to ensure good outcomes. Researchers predicted that about 35% of the present workforce skills which are the attraction to the employers now will eventually change. Thus, the painful truth is the current curriculum might not be able to prepare the learners to meet the shift in the required future-proof skills if immediate steps are not taken in forecasting the demand of the future job markets and aligning the teaching and learning accordingly. Placing learners in an atmosphere where they get the opportunities to produce innovations, that connect to the real world, is very essential to prepare to the future challenges of the real world.

The education industry also faces challenges in term of creating relevant curriculum (Oke, 2020). Making things worse are the fact that some of the current curriculums and degrees offered by universities may become irrelevant by the time their students actually graduate (Reaves, 2019), thus pushing for the review and creation of new contents and degrees based on best predicted scenario about the future job demand. Efforts and strategies towards changes in curriculum faces further complications by the fact that the future of 4IR innovation trend is unknown (Oke, 2020), and we argue it will remain elusive especially with the presence of life- threatening-pandemic like COVID- 19 that changes social norms. Despite these dire needs, knowledge about the effects of 4IR to the education sector in terms of readiness and consequences remains questionable and arguably limited (Oke, 2020). As such, research in the field of language and education need to see the proliferation, development, improvement, change and enlightenment of basic and existing theories, issues, curriculum and issues.

In addition, the research in education also need to open the arena of exploration and adoption of technology-based strategies and approaches along with a combination of concepts that lead to innovation (Lamprini & Bröchler, 2018). To make sure that the language and education industry remain relevant and vital component to the 4IR-oriented-world, the education industry needs to catch up the demand of the 4th industrial revolution. Universities have to change their curriculum and delivery to ensure that their graduates have jobs. “One of the measures being taken is to produce holistic, balanced and entrepreneurial graduates who can adapt and fill in jobs that are yet to exist” (Zulita Mustafa, 2018b, p.1).

CONCLUSION

Despite the fact that 4IR technology eases the future generation in terms of producing smart economy, future workers should be moulded in terms of moral and ethical decisions to ensure the knowledge and expertise possessed are managed and used wisely. There is a dispute that new technological advancements such as the AI revolution could lead to a more radical outcome; it could displace workers on a scale that has not been seen before (Hooker and Kim, 2019). On the other

hand, there are insights that 4IR will bring about increased job creations as many new realms of technological exploration will take place. In this context, whether or not the job opportunities are shrinking, or broadening is not the issue but rather the ability to exercise good moral values and make the right ethical decisions are crucial. Hence, trainings on moral and ethics are deemed necessary for both instructors and learners.

Some researchers even argue that we are already in the midst of Education 5.0 era (Airil Haimi, Muhammad Khairul, Ahmad Ariffuddin, Muhammad Anwar, & Nurul Nadiyah, 2019). In other words, most of the challenges addressed earlier are creating pathways to move towards value-driven education which is the core of education 5.0. While embracing 4IR, education 5.0 emphasizes (Academic Affairs Division UiTM, 2019, p.29):

- 1) Coherent and Relevant Curriculum
- 2) Innovative Delivery and Assessment
- 3) Meaningful Learning Experience
- 4) Transformative Learning Environment
- 5) Inspiring Educators

In the context of language and education, it is crucial for practitioners and educators to bridge the gap with the socially and technologically adept millennials (the learners) of the current generation to maintain effective teaching and learning in the classroom (Muhammad Khairul et al., 2019). It is not only the technological tools that needs to be enriched but also the values and the soft skills of both the learners, academic and non-academic staff. In reference to the emphasis in education 5.0, it is notable that ‘learning’ is the crux of it. This also means learners are learning how to learn and the teachers and staff are learning how to manage and make teaching and learning effective. Having said that, the readiness and the consequences of all the initiatives leading towards education 5.0 is still in its infancy. The efforts from all stakeholders are integral to the success of education 5.0 as it takes a whole range of education eco-system to be connected and empowered to achieve the aim.

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