Chapter 2

Society 5.0 and Education 5.0 with Reference to Higher Education

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Introduction

Perusing the documentation of the initiatives discussed in chapter 1, it is clear that HE (higher education) does not really feature in these programmes. It seems as if HE is not fulfilling the expectations of the corporate world in relation to the 4IR (Fourth Industrial Revolution) (cf. GJ 2015:6 of 18) and therefore in-service training seems to be the alternative medium of choice for the education of employees (cf. Schroeder 2016:5). The economisation of education[1] on a global level focuses on teaching skills in the workplace. Human capital education[2] focuses on two types of education, namely the cognitive skills and knowledge that are required to work effectively, and soft skills, which are the behavioural standards required from employees. However, this is only one side of a complex picture. SDG (Sustainable Development Goal) 4, aspiration 4.7 envisages that by 2030, all learners and students should acquire the knowledge and skills needed to promote sustainable development (UNESCO 2017). Further, UNESCO (2010) states that education is expected to contribute to both national and economic development by integrating key sustainable development issues into curricula. Moscardini, Strahan, and Vlasova (2020:828) conclude that a key role of universities is to generate and transfer knowledge and skills that should lead to the positive transformation of society in a proactive, innovative way. In short, IHEs (institutions of higher education) should also be innovation incubators and the breeding ground for sustainable and positive transformation and change.

1 In general, this can be described as an economic production factor, and specifically as a tool to maximise the outcomes of the people in the workplace (cf. Spring 2014:2).

2 Education forms part of human capital, which also concerns qualities like training, intelligence, skills, and health, focusing on the value that every employer can add to the workplace (cf. Spring 2014:2).

Continuing on what was said in chapter 1, two more initiatives are discussed in this chapter, namely S5.0 (Society 5.0, developed in 2015 in Japan) and E5.0 (Education 5.0, originating in Zimbabwe), to provide a larger scope on global developments, and to zoom in on the link between societal development and HE. Japan's S5.0 refers to a collaboration between the corporate sector, government, and HE (GJ 2016). With S5.0 in mind, Fujii, Guo, and Kamoshida (2018) point out how Japanese electronics manufacturers could collaborate more with HE and consumers to create new technologies and services, whereas Shibata, Ohtsuka, Okamoto, and Takahashi (2017) make proposals about the transformation of curricula to successfully educate students who will become managers of the technologies of S5.0. Ding (2018) analyses the relationship between government, industry, and academia within the context of S5.0 and Gladden proposes a 'transdisciplinary framework' consisting of a common vocabulary allowing, for example the 'neuroscientists, computer scientists, and ergonomists,' being the developers of a 'cyber-physical human-computer interface,' to communicate, debate, and strategise seamlessly (Gladden 2019:28 of 39).

In 2019, Zimbabwe instilled E5.0, creating high expectations about the prioritising of HE, both locally and internationally, as this sounded to be a continuation and further development of E4.0 (Education 4.0). However, this programme does not directly address the improvement of HE, nor does it have a global perspective, in contrast to E4.0 (cf. Hussin 2018:92-98; James 2019). The title of this initiative is misleading. The programme is an expansion of the three basic key focus areas of universities (teaching and learning, research, and community engagement) by adding innovation and industrialisation as the fourth and fifth key focus areas (Jonathan 2019) – which was then named E5.0. This is in fact a national directive aiming at problem solving through the use of the country's natural resources to attain upper-middle income status by 2030.

Japan and Zimbabwe are more or less on the two opposite sides of the list[3] that ranks socially advanced countries. Japan was listed at number 15 in 2015. Through the S5.0 initiative, Japan moved up to ninth position in 2021. Zimbabwe ranked at number 134 in the 2021 index (Szmigiera 2022).

3 Rather than focusing on the economic growth of countries, the social progress index (Szmigiera 2022) uses 53 indicators to evaluate how countries cater for the social and environmental needs of their citizens. The indicators are categorised under three main topics: Basic human needs, foundations of wellbeing, and opportunities.

Society 5.0[4]

In anticipation of the global trends and the dawning 4IR, 5BP (the Fifth Science and Technology Basic Plan, also called the Fifth Basic Plan) presented S5.0 (Society 5.0) in 2015 as a core concept for innovation and development in Japan,[5] which the Japanese cabinet accepted in January 2016 (Fukuyama 2018:47; Önday 2019:1 of 6). The plan was to discuss whether STI (science, technology, and innovation) would be able to contribute to a viable and comprehensive global development, ensuring a better future for the economy, as well as the specific needs of society and individuals (GJ 2015:1 of 18). The challenge was to create future industries, thereby transforming their environment into a 'super smart society' called S5.0 (GJ 2015:1 of 18). Their aim was to create a human-centred society, with a lively collaboration and interaction between humans and artificial entities. These entities would be able to perform their tasks as instructed by their human operators, with the capacity to 'learn, decide, and act for themselves' in self-directed ways (Gladden 2019:1 of 39). Wang, Yuan, Wang, and Qin (2018:6) calls it 'parallel intelligence' that extends the traditional theories on AI (artificial intelligence)

4 Harayama (2017:10; cf. Fukuyama 2018:47) looks back at where S5.0 originates: It all started with S1.0 (Society 1.0) where the hunter-gatherers coexisted harmoniously with nature. During S2.0 (Society 2.0) these people started to form groups in order to organise their agricultural cultivation and for the purposes of nation-building. S3.0 (Society 3.0) started the industrial revolution era, with industrialisation that made mass production possible. S4.0 (Society 4.0) focused on an information society, connecting immaterial assets into information networks. S5.0 is also an information society, building on S4.0, but it is more human-centred (cf. Önday 2019:2 of 6). Whereas the previous 'Societies' were universal with very little hegemonic features attached to them, S5.0 is a Japan initiative, aiming at working together with 'the world,' but not on an equal basis.

5 11 systems were identified for developing the 2015 Comprehensive Strategy, namely to enhance the 'energy value chain;' to build an information platform within a global environment; to maintain and better the country's infrastructure; to develop the skills of the nation to fend themselves against natural disasters; to develop better and more intelligent transportation; to innovate the manufacturing systems of the country; to develop its own materials; to promote a care system for the community; and to enhance its hospitality systems, its food chain systems, and smart production systems, with the industry, academia, and the government as main role players (GJ 2015:14 of 18). A common platform will gradually be created to coordinate the collaboration between systems to develop new services. The core systems that will be developed, are 'intelligent transportation systems, optimizing the energy value chain, and new manufacturing systems' (GJ 2015:14-15 of 18). These will be followed by the promotion of 'community care systems, smart food chain systems, and smart production systems' (GJ 2015:15 of 18). In this way, they aim to establish a 'super smart society service platform' that will utilise IoT to establish a super smart society (GJ 2015:15 of 18).

to the emerging CPSS (cyber-physical-social systems; cf. Gladden 2019:1 of 39).[6] In this society, the numerous needs of the people are addressed, with high quality products and services, without any differentiation between or discrimination against anyone (GJ 2015:13 of 18; cf. Harayama 2017:10).

The Growth Strategy Council was formed by government ministers, academics, and company CEOs (chief executive officers). The council set up committees linked to five key themes: 1) The development of next-generation smart/mobility cities, 2) the provision of smart public services, 3) developing next-generation infrastructure, 4) creating a FinTech or financial technology driven or cashless society, and 5) providing next-generation healthcare to all (UNESCO 2022).

S5.0 has incorporated Germany's I4.0 (Industry 4.0) vision to some extent (Arsovski 2019:775; Salimova, Guskova, Krakovskaya, & Sirota 2019:2 of 7). While I4.0 focuses on production, the aim of S5.0 is to put humans at the centre of innovation (Ferreira & Serpa 2018:26, 28). Enhancing the quality of life in establishing the super smart society, is fundamentally part of this, with IoT (the internet of things) at its core (Arsovski 2019:776-778). Equal opportunities and the potential of each individual should be realised and optimised within the workplace (Bryndin 2018:12). S5.0 is established while taking note of places in the world where ICT (information and communications technology) is fully utilised, especially in the manufacturing sector. Examples are I4.0 of Germany,[7] AMP (Advanced Manufacturing Partnership) of the USA, and MIC (Made in China) 2025 by China, being discussed in the previous chapter (cf. GJ 2015:13 of 18). All these industries aim to bring about change within the 4IR and are based on partnerships between corporate markets and local governments.

S5.0 proposes to enhance the human-technology relationship in order to create a better quality of life for the people in the imminent smart society (Ferreira & Serpa 2018; cf. Serpa & Ferreira 2018). Technology should therefore be able to support the interaction between human and 'machine' (Ferreira & Serpa 2018). According to Hayashi, Sasajima, Takayanagi, and Kanamaru (2017:264), the aim of S5.0 is the creation of new values through the cooperation of a variety of systems. Japan also plans to standardise data formats, as well as data models and system architectures. This country's competitiveness in the world as a super smart society is to be enhanced with

6 More specifically, parallel intelligence is particularly effective in dealing with 'human-in-the-loop'-type issues with 'both social complexity and engineering complexity, and aims at seeking agile, focused, and convergent solutions to these uncertain, diversified, and complex issues' (Gladden 2019:1 of 39).

7 S5.0 utilises the 'rapidly evolving technologies' of I4.0 to improve the lives of its people (Gladden 2019:2 of 39).

the development of intellectual properties, 'international standardization, IoT system construction technologies, big data analysis technologies, [and] artificial intelligence technologies' (Hayashi *et al.* 2017:264).

The impetus for this plan was the 'upheaval' in which the current world finds itself (GJ 2015:1 of 18), with a new way – a 'reality' – of communication and collaboration between people, information, and organisations on a global scale, creating new businesses and markets, and influencing each other (GJ 2015:3 of 18). Japan brought teams of people together who are diversely specialised, to mutually create the desired new knowledge and values, and to create networks of specialisation, especially with regards to IoT, AI, and other relevant sciences. Four policy pillars were identified for this initiative, called the 5BP:[8] The 'fundamentals' or foundation referred to under pillar 3 specifically concerns HE with reference to researchers and their research and knowledge needed for innovation. Under pillar 4, the aim is to exchange people, knowledge, and funds by bringing companies, IHEs, and public research institutions together on a global scale (GJ 2015:9 of 18). Through this, Japan hopes to establish global research networks *under their leadership*. This concept was regarded to be an alternative solution for Japan to reach more effectiveness and mobility 'in an integrated, complex and privacy-protecting' way (Mashur, Gunawan, Fitriany, Ashoer, Hidayat, & Aditya 2019). To promote these pillars, the 5BP has in mind to create a deeper relationship with society – to win trust, understanding, and support through dialogue and collaboration (GJ 2015:9 of 18). The main proponents of society are *inter alia*, IHEs, public research institutions, and corporative institutions.

Fukuyama (2018:48) also refers to the fusion of cyberspace and physical space in order to generate quality data. This will lead to the creation of new values and solutions to settle challenges. These goals are in line with the SDGs (sustainable development goals) of the UNDP (United Nations Development Program).[9] In this way S5.0 will become a 'cyber-physical system,' connected by ICT – distinguishing itself from the four previous phases of human society (Gladden 2019:4 of 39).

8 These are: 1) The search for a new value to develop the industry and social transformation of Japan; 2) a way to address all the economic and social challenges; 3) a way to reinforce the so-called fundamentals for STI; and 4) a search for human resources and knowledge, as well as funding for the plan (GJ 2015:8-9 of 18).

9 With its objectives in line with the SDGs of the UNDP, S5.0 is, according to Önday (2019:1, 2 of 6), not just restricted to Japan, but constitutes a way to comply to some of these SDGs. According to Salimova *et al.* (2019:4 of 7), Russia made use of S5.0, creating their own 'Data Economy Russia 2024.' Mashur *et al.* (2019) refer to Indonesia, partaking in a part of S5.0, with the accent on online transportation (cf. also Suharsono & Uluwiyah 2020). Savaneviciene, Statnicke, and Vaitkevicius (2019) report about Lithuania who also utilises S5.0.

Keidanren (2016:10 of 25), the Japan Business Federation who is in collaboration with the government of Japan towards S5.0, presents the following aims: First, all people should be safe. Second, the productivity of the country must be improved through digitisation with the reformation of business models. Innovation and globalisation must take priority. Third, issues that must be addressed, are the decline in the population, the aging society, and the control over the impact of natural disasters. Lastly, businesses and services must expand to solve worldwide issues.

The people who are expected to take the lead in this initiative are the researchers at IHEs together with the developers and innovators in the private sector (GJ 2015:1 of 18). IHEs are therefore paramount in this process but need to be 'reformed' to form a viable partnership between academia, industry, government, and the broad public (GJ 2015:1 of 18). The aim is the growth of the national economy, job creation, better internet security, to make people more prosperous, and to take care of and contribute to global development (GJ 2015:2 of 18). However, the 5BP also notes the 'gap between company needs and the knowledge and technology produced by universities' (GJ 2015:6 of 18) – the IHEs, which are one of the main proponents in the STI activity, are not up to standard, with respect to their management, their human resource systems, as well as their organisational reform.

The Centre for Research and Development Strategy: Japan Science and Technology Agency cautions that, although the progression of IT (information technology) will afford everybody with prospects of innovation and prosperity because of the collaboration between humans and technology, there is also a possibility of 'unprecedented ethical, legal, social, security, privacy and safety challenges' that should be taken care of (CRDS 2017:1).

Despite the challenges faced by S5.0, this initiative could indeed be an example for other countries to up their programmes for production and innovation.

Education 5.0

The main aim of this programme is to make Zimbabwe a 'competitive, industrialised and modernised nation by 2030' (MHTESTD 2019:ii; cf. GZ 2018; Scherer 2019). The knowledge that this country wants to produce through E5.0 (Education 5.0) should result in the rendering of goods and services to its people by using the country's own resources and promoting heritage-based education. The programme anchored itself in THE (tertiary and higher education) and heritage-based STD (science and technology development), while ESTD (education, science, and technology development) should create and develop industry, and not *vice versa*. To reach this aim, the Ministry of Higher Tertiary Education, Science and Technology Development presented a

'doctrine' to provide a philosophy for E5.0 and its concomitant industrialisation (MHTESTD 2019:1), also supplying the principles that would guide the HTESTS (higher and tertiary education, science and technology system) in Zimbabwe. The science initiative to produce innovation and industrialisation will be driven by the NSTI (National Science Technology Innovation System). E5.0, which is the umbrella for all of these, should therefore be all about teaching, research, community service, innovation, and industrialisation.

According to MHTESTD (2019:2.1), the heritage-based education of Zimbabwe will be delivered with a consciousness of the environment, focusing on fauna and flora, as well as water and minerals. The process of teaching and learning will therefore focus on the local environment and locally available materials. The government has added innovation and industrialisation (MHTESTD 2019:3.1) to the three core activities of universities:

- *Teaching* (*and learning*): Technology should be presented in familiar, understandable terms to the students.
- *Research* (*and development*): This will act as the impetus for innovation and other new ideas (MHTESTD 2019:3.1.2).
- *Community service*: The educational community should be developed to become globally competitive.
- *Innovation*: This acts as the bridge between the knowledge obtained in the classroom, and laboratories and industrial production (MHTESTD 2019:3.1.4).
- *Industrialisation*: The so-called 'industrial park' will act as the final stage for producing goods and services (MHTESTD 2019:3.1.5).

To achieve the set outcomes, the process will use the following infrastructures:

- *Programme infrastructure*: Specific training programmes will be implemented, prioritising education and training, so that the government can achieve its industrialisation and modernisation agenda (MHTESTD 2019:3.2.1).
- *Promotion infrastructure*: Promotion will take place at the IHEs, as well as on tertiary education level.
- *Physical infrastructure*: With the focus on the erection of structures for education, investors will be engaged with PPS (public private partnerships), BOT (build, operate, and transfer), and BOOT (build, own, operate, and transfer) arrangements. The following will be erected: University towns and cities, colleges, modern accommodation, shopping malls inside the universities, wi-fi, and more innovation hubs (MHTESTD 2019:3.2.3).
- *Financing infrastructure*: This facility will act to assist students who cannot pay their education loans.

The focus of strategic science and technology developments will be on the following:

- *Geospatial, aeronautical, and space science*: ZINGSA (Zimbabwe national geospatial and space agency) will establish and streamline the use of aerospace and outer space, in collaboration with other nations (MHTESTD 2019:4.1). The following initiatives are planned: Geospatial science and Earth observation, aeronautical and astronautical engineering, satellite communication systems, global navigation satellite systems, land positioning systems, unmanned aerial vehicles, and satellites (MHTESTD 2019:4.1).
- *Information communication and technology*: By means of an HPC (high performance computing) programme for research and development, problems will be solved in, and benefits derived from, *inter alia*, agriculture, weather and climate research, engineering, life sciences, space sciences, and mining (MHTESTD 2019:4.2). The development of a virtual and augmented reality centre is also planned.
- *Energy and minerals research*: This programme consists of three sub-programmes, namely petrochemical, fertiliser, and steel products. With this, the government wants to provide the nation with 'alternative forms of sustainable energy [by doing more research on] alternative sources of liquid fuels, [with their available] abundant local coal and coal bed methane gas resources' in mind (MHTESTD 2019:4.3). At least two plants are planned: A coal-to-liquid fuel plant and a coal-to-fertiliser plant (MHTESTD 2019:4.3). The initial target is the production of eight million litres of liquid fuel and other petroleum products per day, while the local iron ore resources will be used to produce steel.

In the biotechnology sector, the genomic technologies programme will address human challenges (treatment of HIV; screening of new-borns for inherited diseases; 'forensic DNA for crime investigation'), flora challenges, and cattle reproductive technologies for beef production (MHTESTD 2019:4.4).

Zimbabwe's government wants to create an economy driven by science and technology. The economy will be industrialised to create jobs and provide solutions for industry problems (Jonathan 2019). Innovation hubs and industrial parks will be erected where the consumers can become active contributors to the chain of production (MHTESTD 2019:5.1). This will contribute to the creation of jobs and will uplift the standard of life of the people in Zimbabwe. In the innovation hubs, an active knowledge transfer will take place between 'researchers and business experts' (MHTESTD 2019:5.1.1), creating fertile ground for the development of technology. This knowledge will then be used by industrial parks which will act as production centres, where business will be transformed into commercial goods and services (MHTESTD 2019:5.1.2).

This will ease the rise of both SMEs (small and medium enterprises) and large enterprises, facilitating cross-learning between the participants. In 2021, the first fruits of the innovation hubs were displayed (Bope 2021): The policy that focuses on the needs of people and assuring that no-one will be left behind, was made practical by the demonstration of mobile phone applications for the blind and visually impaired individuals.

The NSTI is the implementation strategy for STD, outlining the channel of knowledge on the management of the production of goods and services to industrialise and modernise Zimbabwe (MHTESTD 2019:6). The strategy is focused on products, ensuring that all the initiatives are aimed at a specific goal and clear outcomes (programmatic approach).

The Initiatives Revisited

Although E5.0 gives the impression that it is an improvement of E4.0 and therefore highly advanced, this is not the case. According to Hussin (2018:92-93), E4.0 consists of nine tendencies or trends, referring to the way in which learning takes place (anytime and anywhere; personalised; where students decide in which way they want to learn and do field work), the characteristics of learning (project-based; hands-on; and diverse assessment methods), and the role of the educator (being only a mentor, guide, or facilitator, with the students as partners – cf. also Doucet 2018:58). It would be expected that E5.0 would progressively innovate and elaborate on these trends, showing the world a better, more innovative, and more viable way to do education, even on a global scale. However, E5.0 is in a way an expansion of the Western colonial-based E3.0 (Education 3.0) with the intention to break away from it (Bope 2021).

Zimbabwe's E5.0 has little global vision. References to 'global' are made in collaboration programmes, like ZINGSA, where Zimbabwe has in mind to work hand-in-hand with other countries to enter space. To incorporate both the educational revamp and the global initiatives, this programme should rather be called 'Made in Zimbabwe 2030.'

Unfortunately, other similar educational reform policies implemented in Zimbabwe in recent years (such as STEM [science, technology, engineering, and mathematics] and the review for primary and secondary education) dismally failed (Keche 2021). Issues like the Covid-19 pandemic, a lack of funding, the high cost of technology-enabled devices, network and electricity outages, political and economic instability, and the lack of ownership by HE educators who feel that these additional focus areas and the implementation of technology intensify their administrative workload, already indicate that E5.0 will probably also fail. Educators in IHEs claim that the 'new' focus areas of innovation and industrialisation already formed part of their work in a top-

down approach by government, before this was implemented and therefore this exposed the lack of cooperation between HE and the governing bodies (Keche 2021).

On the positive side, the innovation hubs already produced workable products that are driving positive social change as indicated above. Within HE itself, the MBKS (Minimum Bodies of Knowledge and Skills) programme is managed to harmonise the core content of similar degrees across universities into an agreed course synopsis of 80% (Mpofu-Hamadziripi, Rauch, & Dulle 2022:3 of 7). This confirms that Zimbabwe does already show evidence that the transformation trajectory is showing positive results. Zimbabwe succeeded to infuse the local African heritage-based philosophy (which is based on people's resources, history, traditions, religion, language, and the physical and metaphysical environment) into their curricula to industrialise the economy through using the country's natural resources, knowledge, and culture. This is in line with the Africa Agenda 2030 (Mpofu-Hamadziripi *et al.* 2022:3 of 7).

In Japan, education is referred to as one of the collaborators or partners of the initiative that aims to solve the current problems of the country as well as working towards inclusiveness and sustainability, based on a cyber-physical system. Education (IHEs) also acts as one of the main proponents of society, together with public research institutions and corporative institutions. HE must recognise its social responsibility and ensure that the development of competencies for work, 'the consumption of culture, adaptation to continuously changing environments, ownership of basic concepts,' and interaction with the environment and others, along with social and personal development are incorporated in all programmes and modules at IHEs (Narvaes Rojas, Alomia Peñafiel, & Loaiza Buitrago 2021:11 of 16). This will ensure that partnerships and collaboration between academia, government, and industry increases while promoting the mobility of researchers between them (Narvaes Rojas *et al.* 2021:11 of 16).

In comparison to I4.0 which is focused on creating a 'smart factory,' S5.0 is focused on supporting a 'super smart society' (cf. Gladden 2019:2 of 39), with the aim to produce and fashion a 'sustainable, vibrant, liveable people-centric world' (Medina-Borja 2017:235). Both I4.0 and S5.0 are aiming to create more sophisticated 'cyber-physical systems,' relying on 'embedded, decentralized, real-time computation' that forms part of an overarching network of 'heterogeneous physical objects' (Gladden 2019:3 of 39). However, Japan with a more human-centred focus, has come up with a better consumer experience than, for example Germany, as well as products that are more 'feature-oriented' (Schneider 2018).

S5.0 has the potential to connect all people and their needs – without discrimination – that will overcome social disparities. Information overload can be regulated by technology, while education will be affordable and freely available to all (Van der Merwe 2021). Grade progression will be made flexible and the barriers between disciplines and subjects will be removed. The division between STEM and Humanities, and social sciences students will be dissolved to develop a HE system where subjects like mathematic, data science and programming, as well as languages, philosophy, and ethics will be basic requirements for every student (FP 2022). The overall focus is on enhancing human strengths through the development of skills like communication, leadership, endurance, as well as the promotion of curiosity, reading skills, and comprehension (FP 2022).

On the negative side, care must be taken to ensure that these developments do not create new or larger problems and issues (Van der Merwe 2021).

Lastly, the question that should be posed to both these 'fives,' concerns the globality or global availability of these initiatives. The previous 'Societies' and 'Educations' were global initiatives that influenced 'everybody' and were utilised by 'everyone.' In Japan, the fourth pillar of the 5BP (Fifth Basic Plan) states that S5.0 wants to collaborate with other countries by exchanging people and knowledge, and by bringing IHEs and public research institutions together on a global scale (GJ 2015:9 of 18). However, the impression is clear that Japan will be the leader and the global village will have to follow and collaborate. There is therefore a personal hegemony encrypted into this initiative, something like copyright – one may use it, but it will stay Japan's property. Contrasted to S4.0, which was a global initiative, S5.0 is a local initiative available for the world to use under the 'auspices' and control of Japan.

It seems as if most countries (as discussed in chapters 1 and 2) are not prepared to collaborate on an equal basis with each other. Therefore there should be more pressure and maybe also incentives from global bodies to promote collaboration on a more global and broader scale. One way of achieving this is through the internationalisation of HE. Here, the French-German Institute for 'Industry of the future,' Erasmus+, and ASEAN (see the introduction chapter) are good examples of what could be done. Internationalisation and globalisation should become the two legs on which global education functions. However, globalisation should not allow for the hegemony or dominance of one country over the other, but should aim for heterogenisation, creating a multicultural society where cultures and traditions are accepted and respected. It is on this point that S5.0 has other priorities. Although Japan has collaboration as a top priority, the equal basis of participation is missing, as Japan aims to become one of the top countries in

the world. However, it is true that Japan is facing some serious problems such as an ageing population and slow demographic growth which the country will first have to successfully address for its own people before it can share its experience and recommendations with the world (UNESCO 2022).

The other side of the coin is equally true. Internationalisation, together with globalisation and heterogenisation, is already a given and needs to be implemented by governments and IHEs on a global basis. Isolation and national(ist) perspectives cannot effectively be linked to the 4IR. In this respect, E5.0 will stay a national venture.

Conclusion

Already in 2015, the UN (United Nations; UN 2015) challenge *all nations to work together* to create a sustainable world on both economic and societal levels (Fukuyama 2018:47). Japan understood this as a call to become a leader that collaborate with other countries. Zimbabwe responded to the challenge by creating E5.0. However, both these initiatives centre around the interests of the two respective countries, in contrast to the 'Societies' and 'Educations' as mentioned above. On the positive side, both initiatives discussed in this chapter do acknowledge (to some extent) the importance of HE to succeed.

Nobody can foretell the future. Nobody can therefore predict what the 4IR will look like in a decade's time. We are also unable to predict how far the other revolutions, like the communication revolution, the education revolution, and the human self-understanding revolution (referred to in the introduction chapter), as well as societal developments will advance. We are likewise unable to prevent global disasters or pandemics such as Covid-19. We can only constructively and 'disruptively' take on the road to the future, step by step, with all its complexities and transformations. We can read the signs of the times, such as acknowledging that the 4IR is blurring lines and borders to such an extent that we cannot ignore the consequences thereof, also in other spheres of life such as education, social interaction, and even religion. The prerequisite is that we must stay on par or attempt to leap to the front, all within the international rules and guidelines such as those provided by UNESCO and the SDGs. It is imperative that all countries of the world should work in harmony and support of each other to create a sustainable society that ensures safety and comfort for each individual while also ensuring that all possible opportunities and needs are catered for in the best possible way. This will only be possible when society, industry, education, and governments (globally) collaborate without exclusion or discrimination.

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