POSITIONING AFRICAN WOMEN FOR THE FOURTH INDUSTRIAL REVOLUTION (4IR) ERA: INSIGHTS FOR WOMEN STUDENTS

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Abstract

This conceptual research paper seeks to understand how African women can be empowered for relevance in the fourth industrial revolution (4IR) era. It is fastened on a scoping review which served as data and the empowerment theory that served as the lens – theoretical framework. The insights of the paper for women students infer that STEM skills are critical for anyone to be relevant in the 4IR era and women students are underrepresented in that field, however, they should be hopeful if they are studying courses relevant to decision making science and humanities which 4IR era benefits from. Further to this, it reveals that learnings about the 4IR instil the consciousness of hope and fear in women about the opportunities the era brings. In conclusion, the paper emphasis that the views of 4IR critics of it promoting or widening inequalities and unemployment in the 4IR should not be taken for granted and for that reason empowering women with education especially the type of education that addresses the future is a necessity.

1. Introduction

Women are the under-researched dimension of the Fourth Industrial Revolution (4IR) debate. This conceptual research paper awakens our thinking about the positioning of women particularly African women for the 4IR era and insights that can be gained for the good of women students especially those in higher education institutions. The rationale and assumptions that warranted this paper are three namely: (1) Every industrial revolution stage comes with its unique focus and goals (Schwab, 2016). (2) Skills required for the 4IR are not necessarily the same with the previous era (Reaves, 2019). (3) Women risk being left behind in the 4IR era (Adams, 2019; Mahlatsi, 2020).

For many researchers across the world, the 'new normal' ideology that is made popular by COVID-19 is an eye opener to expectations of the fourth industrial revolution era – an era that many are yet to know much about perhaps accept. The fourth industrial revolution is indeed the 'new normal' – without it, the new normal itself is impossible. The new normal which include on-line teaching through Zoom, MS Teams and other medium, increase in number of people working from home and emergence of different work careers to mention a few are important focus for

critical thinking for the sake of improved opportunities for women particularly for African women including those studying in higher education.

Critics of the fourth industrial revolution argue that the era is likely to worsen global unemployment and inequality (World Economic Forum, 2018). So, my consideration in this paper would be related to evidence or scholarship that points to positioning African women for the fourth industrial revolution era and then my question would be how can they be equipped for relevance for the 4IR era specifically to avoid them been left behind or deepen inequality?

2. Background

Industrial revolution is described as event(s) that transform human lives and history (Dean & Spoehr, 2018). Every emergence of a new stage of industrial revolution signals the arrival of a new future. Currently, we talk of the fourth industrial revolution. Meaning that the first, second, and third industrial revolutions have come and gone. But are they really gone? No, because they are still in one form or the other part of the fourth industrial revolution and our lives.

History have it that industrial revolution started in the late 18th century when science and technology advanced to improved people's standard of living. Advanced science and technology come with numerous benefits for mankind. With it, is the decrease in death rate following improved medical science and facilities. By extension, it paved way for rapid population growth. On the contrary, its demerits include hazardous changes it brought upon the environment. As Balliester and Elsheikhi (2018) proclaim, these are proponents of change, such as climate change and demographic change, which will affect the number of jobs available and opportunities in the future.

Some experts in their analysis argue that the first industrial revolution is just the first of four events that have taken the world by storm in a similar way. The transformation of the second industry (second industrial revolution) took place with the advent of conventional lines and the transition from steam to electricity about a century ago. The turning point of the third industry (third industrial revolution) was the advent of personal computers and the internet. Anderson (2018) makes clear that the 4IR is basically about the introduction of physical and digital systems, as well as advances in intelligence and machine learning.

The 4IR steers at us because global debates around it seems to be heating up like never. This is warranted by its noticeable impact and effects on different aspects of the human live. Its presence for instance is predicted to change job landscape and dimension for different sectors. Moreso, as Schwab (2016), Twinomurinzi and Ismail (2018) and Corfe (2018) put it, the 4IR will free more time for humans to spend with family and for leisure to address workloads and activities that does not afford majority of the workforce time for family. Karr, Loh and Andres (2020) policy brief suggests that 4IR will lead to job loss for many people due to automation. Already in the USA, jobs are quickly lost and automated, leaving many people without the opportunity to work in their chosen field (Frey & Osborne, 2017). In their work, Burns and Church (2019) identified the mining sector as one of the most vulnerable to 4IR. Precisely, they argued that coal mining is no longer a robust industry employing hundreds of thousands of people; instead, self-driving trucks are being programmed to autonomously extract the resource with greater efficiency.

3. Problem Statement and Research Question

It is well established that 4IR like other stages of industrial revolution can improve life, health, safety, and connection for everyone (see Ndung'u & Signé 2020). However, according to Madgavkar, Manyika, Krishnan, Ellingrud, Yee, Woetzel, Chui, Hunt and Balakrishnan (2019), women are more likely to perform unskilled tasks that are automated. Consequentially, they are likely to be the majority with job losses, that is, without jobs.

The worst scenario should be expected for women in Africa region or context where biased culture and religion towards them negatively impact on their work lives, job and educational opportunities. Equally so, is the situation of women residing in hi-tech places and countries because they are under-represented in Science, Technology, Engineering and Mathematics (STEM) – academic fields or studies that significantly power the 4IR. Munoz-Boudet and Revenga (2017) whose study was conducted in the USA underpin that there are only 35% of women undergraduates earning a degree in STEM. Statistical data from their study shows that only one in seven women with a STEM degree is working in the field of STEM. With these issues or challenges that women are faced with, it becomes imperative to think of how women particularly the African woman who is confronted with multiple challenges can be positioned perhaps equipped to be relevant in the 4IR era. To this end, this paper seeks to answer two questions: (1) How can African women students be empowered for relevance in the 4IR era? (2) What are the insights for women students from the positioning of women for the 4IR era?

4.   Methodology

My world view for this paper is the interpretive paradigm – "a philosophical stance that concentrates on investigating and exploring the social world to gain a better understanding of a phenomena" (Gray, 2014). With the paradigm, I was able to unravel the reality of the circumstances within a particular contextual environment (Babbie, 2017) and made sense of the 4IR particularly in understanding of how African women/ African women students can be positioned or empowered for relevance in the 4IR era.

This paper is inclined on/to conceptual research methodology. Consultores (2020) describes conceptual research as a process where research is conducted by reviewing and analysing current information on a given topic. Thus, the analysis of an idea does not involve conducting any experimental analysis, and therefore, it is associated with an idea. Further to this, it allowed me to explore a new and complex phenomenon – the 4IR with limited available information (see Blumberg, Cooper & Schindler, 2014). Conceptual research methodology relies mainly on secondary data. In other word, it is a non-empirical paper. For this reason, and with the use of scoping review, literature centered on the 4IR and skills for 4IR was focused on to generate required reviews that served as data. In short, the data collection approach used was a scoping review.

Colquhoun, Levac, O'Brien, Straus, Tricco, Perrier, Kastner and Moher, (2014) describe a scoping review as a type of knowledge synthesis that addresses an exploratory research question directed at mapping main ideas or concepts, research findings and gaps linked to a specified field or subject area through the systematic search, selection, and synthesis of current state of knowledge. Like in some recent studies (e.g., Wessels, 2020; Fan, Tscheng, Hamilton, Hyland, Reding & Trbovich, 2019), scoping review is used in this paper to gain a comprehensive understanding of the 4IR which agrees with the assertions of Arksey and O'Malley (2005) and Levac, Colquhoun, and O'Brien (2010). They argue that scoping review helps in providing an overview of an emerging phenomenon, defining concepts, and addressing broad research question(s).

As required of researchers who intend to use scoping reviews, I embarked on a comprehensive and structured review of literature to extract appropriate information, provide reproducible results, and minimize potential harm or bias through improper implementation (see Sucharew & Macaluso, 2019).

5. Theoretical framework

In framing my understanding of the phenomenon and to be able to make a concluding remark which, serve as response(s) to research question declared at the onset, I relied on the empowerment theory. The theory describes "the psychological concept of people feeling a sense of control and independence" (Kalso, 2019, p. 1). Empowerment is necessary to break many dichotomies affecting women: personally, in the family, and in the body; they can also be social, ideological, collective (Fetterman & Wandersman, 2007). Change and power are two concepts or terms that are fundamental to empowerment theory. In other word, amongst several issues that empowerment is concerned with and thus promote, are directing and redirecting change and power for the overall good of person(s), groups and institutions. Cattaneo and Chapman (2010) note that empowerment is a way of acquiring power. They were assertive that "an increase in power is an increase in one's influence in social relations at any level of human interaction, from dyadic interactions to the interaction between a person and a system" (Cattaneo & Chapman, 2010).

The main target of empowerment must be women, mostly low-income adult women, in a climate of justice and social change despair. (Segale, 1999). Empowered women should be able to stop unwanted activities, change ongoing activities, and create new perspectives and future (Stromquist, 1995) and at least they should provide solutions to their problems because only them can set their goals and agenda. (Nnaemeka, 2005). Given that, this paper concerns itself with women and the 4IR, Balkar's (2015)

underpinning of empowerment being an important response to the rapid developments and changes in technology and knowledge is worthy of note. This concurs with Moran's (2015) writing which points to empowerment as something that gives people and professionals ideas of responsibility and therefore help them to make a meaningful contribution to their organisations or at their place of work.

6. Literature Review

6.1. Women and the 4IR

Women make up over half of the population of the world. Approximately, two-thirds of the 175 million illiterate youth are women. Sub-Saharan Africa is one of the two regions in the world with the highest population density and many who are women participate in the labor force (Bonnet, Vanek, & Chen, 2019). Statistically, about 40% of women in Africa countries, for example Ethiopia, Malawi, Niger, Nigeria, Tanzania and Uganda are usually found in some sorts of agriculture work – unskilled positions in the lower rungs of the economy (Christiaense & Demery, 2018). The peculiarity and association of African women more to illiteracy and unskilled jobs over the years have been identified as gender injustice and social injustice (Chiweshe, 2019). Recognizing these facts as we enter the 4IR era are necessary and important for the right steps towards the positioning of women for relevance in the 4IR era. To achieve this, the issues that promote gender inequalities must be addressed.

Having understood education as a powerful tool required for women in the 4IR era, Walker, Pearce, Boe and Lawson (2019) suggest that we need to be proactive in tackling the root causes of gender inequity and to deal with the different barriers that keep females and women out of school. By so doing, the platform, terrain and atmosphere that can inspire them for the world of school and work is made better and for their good especially when one takes into consideration that some fields are traditionally male dominated. According to Mascherini, Bisello and Leston (2016) and Balliester and Elsheikhi (2018), if the educational barriers facing women are overcome and they make inroad or progress in their numbers in male dominated fields, then we can expect them to reap from the benefits of the future and the 4IR.

Despite the male dominance of certain fields such as sciences and digitisation – the cores of the 4IR, the support for the presence of women in the labour market in general observed throughout the 20th Century shows encouraging numbers and trends (Andrade & Carvalho-Neto, 2015). Increase in women involvement in the labour market is propelled by the mechanisms of self-esteem, self-efficacy, purpose, and sense of belongingness which further aid their competitiveness in work environment (Spinelli-De-Sa,

Lemos, & Cavazotte, 2017). Importantly, certain policies and situations in countries have led to their increase in workplace. A good example is the structural adjustment policy and programmers in Nigeria in the 1980s. The Affirmative policy in South Africa is also helpful in increasing the number of women in workplace. In spite, of these increases, women are still under-represented in almost every sector of the economy except for designated domestic fields that are traditionally regarded or set aside for women. With these scenarios, it is apparent that most women are yet to attain their potentials.

According to Ndlovu (2019), if women do not achieve their full economic potential, the global economy will worsen, and half of its population will contribute less than half of its productivity. To this end, Ndlovu stresses that as Africa navigates the shifts that 4IR convey, we will see equal opportunities following digital change, which will as well articulate how we can enhance access to ensure that women and girls are empowered to participate in the coming transformation which is here already. According to Hirschi (2018), we are already seeing the emergence of 4IR effects, most notably is job disappearing at workplaces due to automation. This is the case of the banking sector and garment/clothing making industry in South Africa. Thousands of people, women especially lost their jobs between 2019 and 2020. COVID -19 further exacerbated the situation. This should not be surprising as earlier study of International Labour Organization (2016) conducted in Asia predicted that more than 80% of garment, textile and apparel manufacturing jobs in the continent will be lost because 'sewbots' are replacing humans in factories. In short, digitization and automation will lead to significant changes in the world of work and the way we operate in the next few decades (Brynjolfsson & McAfee, 2014; De Stefano, 2016). To be abreast with the change, the need to develop skilled workers to enable them to stay in their jobs and add value to their organizations is recommended (Ndlovu, 2019).

Based on the understanding that women are more involved in low-value tasks that require unskilled labour, implies that they can be easily replaced with automation, thus, making them the vulnerable group to loss of jobs in the 4IR era. In Hirschi's (2018) analysis of Frey and Osborne (2013) popular report, he notes that many jobs in sales, service, office and administrative support, and production might be automated in the nearer future. So, the fear is not limited to unskilled jobs. Solace can be drawn from Autor's (2015) view which alienates jobs from total automation. Accordingly, jobs have many tasks, many of which may not be easy to automate. As a result, automation often affects some functions, but not others, and is unlikely to eliminate all functions and jobs (Hirschi, 2018).

The panic signal about job loss that comes with the 4IR must be put to halt because ever since the first industrial revolution, there has been worries that technological advancement will result to unemployment and underemployment (Mokyr, Vickers, & Ziebarth, 2015). Such fears have however failed to materialize because people often elect to underrate the emergence and prospect for new jobs following the creation of new occupations and industries (Mokyr et al. 2015). Dynamic reaction of labour markets to technological advancement and changing needs and providing workers with diverse expertise which of course determine the economic need for automated operation is important for note (Hirschi, 2018). In sum, the 4IR, creates structural changes in the world of work, which leads to increase job polarization (Autor & Dorn, 2013; Goos, Manning, & Salomons, 2009).

As Hirsch (2018) notes, "Job polarization describes the phenomenon where middle-skilled jobs are hollowed out, whereas lower-skilled service jobs and high-skilled jobs increase disproportionately". This, accordingly, is due to the fact that many middle-skilled jobs (e.g., office administration, machine operation) consist of cognitive or manual tasks that can easily be automated with recent technology because they follow precise and predictable procedures (Hirsch, 2018). In contrast, small-scale services (e.g., personal care, cleaning, security) involve many tasks that are easy for people to perform, but are difficult to automate with current technology. On the other hand, professional services (e.g., professional experts, educators, managers) frequently combine and solve creative and complex social interactions that are also difficult to manage. To avoid the consequences that come with this, increasing skills through lifelong learning and further education becomes inevitable (Frey & Osborne, 2013).

6.2. Skills and the 4IR

The previous section suggests that different kinds of skills are required for the 4IR era. Understandably so because the era itself is new and the future, therefore, the skills are most likely not to be totally the same as in the past – the 20th century. The question to be asked will then be what are the skills for the 4IR era? In other words, what are the 4IR skills?

The 4IR skills are those needed for future workplaces and businesses to be effective and efficiently successful. The works of Chaka (2020), Cotterill (2015), and Butler-Adam (2018) describe the 4IR skills as global, imperative, and most important future skills that equip workplaces and people.

In Chaka Chaka's work title skills, competencies and literacies attributed to 4IR/Industry 4.0: Scoping review, the competencies

and skills ascribed to 4IR are generic soft skills such as creativity and problem solving, communication, and hard skills which include programming skills. Aside these identified skills, Chaka mentions information literacy as a skill of the 4IR but under-represented and under-cited (Chaka, 2020). 4IR skills can be categorized into four namely: intellectual, social, and coping abilities, and adequate academic and discipline knowledge (Cotterill, 2015). Accordingly, intellectual skills or abilities include problem solving skills like critical and creative thinking to cope with undefined issues.

Deloitte's (2018) study which determined the skills necessary for students to participate and succeed in a 4IR workplace notes that youths must familiarize themselves with the 4IR world. Further to this, Deloitte discloses that 54% of youth had not heard of 4IR, and 39% testified that their schools did not equip them with 4IR skills. Grand-Clément's (2017) study of youth aged between 10 and 18 years, categorized the 4IR skills into "digital navigation skills" and "digital skills". In a different study, the 4IR skills are categorized into four categories namely "ways of thinking, ways of working, tools for working and skills for living in the world" (Schleicher, 2012). Naidoo (2021) beautifully used what she called a web or multiple interactions – word cloud to illustrate 4IR skills as below:

Figure 1. Word cloud illustrating 4IR skills
Source: (Naidoo, 2021, p. 11)

Even with the few writings about the 4IR, the future remains uncertain and for that reason skills which display versatility will be profitable and relevant. Therefore, the future workforce needs to create self-monitoring abilities, such as time administration, self-discipline, setting goals, efficient life and work balance, and constant learning abilities (Cotterill, 2015). Given the fact that 4IR is largely technology inclined, it is thus, logical to think of innovation and creativity as aspects that skills must be linked to.

To this end, we must acknowledge that as the world economy progresses towards the extensive implementation of artificial intelligence alternatives, rivalry and demand will increase for a workforce with the scarce abilities necessary to execute, handle, and operate alongside the latest technological enhancements (Butler-Adam, 2018). In addition to the already mentioned skills, Hariharasudan and Kot (2018) cited in Wessel (2020) postulate that intercultural knowledge, advanced technological literacy, and real-life skills will become more and more important in the future workplace.

As Eberhard, Podio, Alonso, Radovica, Avotina, Peiseniece, and Solé-Pla (2017) note, knowing about new technological developments is not sufficient: using them correctly and meaningfully is crucial. Same can be said of the 4IR skills. In view of this, Reaves (2019) advocates for skills and methodologies as an integrated program that are still rare to be taught by specialists. In his provided examples, it is more common and proper for design thinking to be taught in a design department; for systems thinking to be taught in biology; for entrepreneurship to reside in the business course list instead of a generic approach where some irrelevant courses are taught in some departments. Nonetheless, he encouraged cross-disciplinary learning where some essential skills are taught regardless the specialization. These essential skills according to Reaves (2019) are needed by nearly everyone in a society because they are profoundly affected by change, including people employed in any field, as well as those who are un-, under-, or pre-employed (e.g., students).

7. Discussion

As a reminder, reviewed literature served as data for this paper. Evidently, data for this paper indicates that women comprise over half of the total population of the world. It is, therefore, logical to stress that the future which does not take into account the empowerment of women and their optimal participation in terms of what the future require – the 4IR will be catastrophic. In the light of this, everything ranging from policy to practice must be done to empower African women for the new future (4IR) because the highest share of women in the workforce globally is found in Africa. Previous studies, for example, Labour and Economic Development Research Institute of Zimbabwe. (2017) and Dahir (2017) establish that 52.8% of African women make up the labour force. These women accordingly are found more in the informal sector and employment. Examples of women in informal employment was given as those in Nigeria who are involved in parcel and money transfer businesses in some rural Nigerian communities (World bank, 2007; UN, 2020). More Zimbabwe women according to Labour and Economic Development Research Institute of Zimbabwe. (2017) and Matsai

(2019) are involved in "low hanging fruit" opportunities, which come with quick returns. Accordingly, this has seen more women venturing into buying and selling, and less into manufacturing activities which at times require significant start-up capital; resulting in concentration of women in activities that require less capital investment in the informal sector or economy. In Ghana, women constitute about 90% of the labour force in the informal economy (Ghana Statistical Service [GSS], 2013). Most African women in the informal sector are sole proprietors who started their businesses or trade following their hobbies for example cooking, cleaning, care giving etc (Peprah, Buor, & Forkuor, 2019). Women tend to be more focused on informal employment, so supporting them is a keyway to reduce women's poverty and gender inequality. With empowerment, they can do their business and work more effectively and efficiently (Cornwall, 2016), which obviously will be in line with 4IR trend(s).

The fourth industrial revolution promotes globalisation which invariably reduce rurality and increase urbanisation. So, sticking to the informal setting with the view of doing business with only the locals and few people may not be the ideal thing for women to do otherwise they may be irrelevant to the fourth industrial revolution era. It is clear from the data – reviewed literature and the lens (theoretical framework) used in this paper that empowering women is both profiting to them and the society. With empowerment, African women will be made to believe more in themselves because it makes them see possibilities in different options other than the ones that they are used to. With empowerment, they would be able to do same thing or different things differently and in line with current practices and ways.

Different ways are spelt out or indicated for women relevancy in the fourth industrial revolution era. These ways mainly include education and recalibrating policies. The kind of education for women that defile traditional disciplines for them should be encouraged for them to be relevant in the era of 4IR. Failure to purse and promote this agenda will most likely deepen inequality between men and women because more men in comparison to women are found in formal business and in occupations that are more inclined and aligned to the fourth industrial revolution era. Through the right kind of education, upskilling and reskilling which data in this paper underline and identify relevant for 4IR is possible.

Recalibrating policies (policy change) for the good of women in the 4IR era must address barriers that influence women access to finance or capital because it determines the number of women who can start their own business and as well grow the business (see, Labour and Economic Development Research Institute of Zimbabwe, 2017). Accordingly, most women remain in informal

businesses with no possibility of growth of the businesses because of inadequate capital. In addition, recalibrated policies must also touch on employment of women because there are cases of women with the relevant qualifications and experience, yet they are not employed. Munoz-Boudet and Revenga (2017) beautifully captured this when they noted that despite some women having degree in STEM, they are still not employed in that field.

8. Insights for Women Students

The insights for women student as this section reflects, help to answer the question: how can women students be empowered for relevance in the 4IR era?

In this paper, empowerment of women is exposed as the main vehicle for positioning women for relevance in the 4IR era. One major insight of this paper for women students is the revelation of their underrepresentation in engineering and technology and the importance of STEM for the 4IR. This implies that women students must encourage themselves and be encouraged by others including government and institutions to purse courses and career in STEM because it is clear in this paper that STEM skills are required to be relevant in the 4IR era. However, I wish to stress that STEM courses and skills must not be seen as the only discipline or field of study women students must consider and concentrate on to be relevant.

No matter how we try to encourage or motivate women students to enrol and purse career in STEM, some will still not enrol due to different reasons. The reasons may include lack of interest in STEM, incapacitation or lack of ability following their education background, and the kind of institutions and facilities available in their schools etc. For such category of students, they should be hopeful not fearful of missing out in the 4IR because it is apparent in this paper that emotional intelligence and related/soft skills are as well useful and for that reason women students who purse courses and skills in emotional intelligence, leadership, management, and education to mention a few will also be relevant for the 4IR era because of their relevancy to decision making science and humanities which 4IR era benefits from.

This paper underpins policy change as a vital instrument that can be used to involve and motivate women to participate in the 4IR era. Before the advent of the 4IR era, women and men are known for gender stereotype jobs. This thus suggest that the first, second and the third industrial revolution eras promoted perhaps did not deal with gender stereotype which invariably created or widen gender inequality. On account of that, policy change would be necessary in the new industrial revolution era – 4IR. By policy change, I mean formulation and implementation of new kinds of

policy that support women relevance and participation in the 4IR era. With this, women should be included in such policy formulation and implementation. A good example is the integration of women into politics and the ICT revolution by Rwanda (Nsengimana, 2020). With policy change, courageous culture and spaces would be provided. Policy change formulation and implementation must involve women. For women to participate in policy change, they must question policy for it is only through that medium that policy change which this paper portrays as one vehicle for the display of their relevance for the 4IR can be fertile. Questioning policy in my view is a good means by which the change of mentality needed by women to be relevant for the 4IR as Naidoo and Potokri (2021) advocated can be achieved. Change of mentality require women to be mentally brave to believe in themselves of capable of doing what men can do at workplaces and in any other kind of enterprise including setting up their own businesses. On the part of men, when women question policy especially the ones that concerns their empowerment and for the eradication of gender and social injustices, they must not be seen or regarded as arrogant.

This paper points to adaptive attitude/innovative attitude, upskilling and reskilling, and lifelong learning as important concerns and insights for women students. If women including the ones studying are to be relevant for the 4IR era, they must be prepared to adapt to the changes created by 4IR. Adapting to change for humans can be very difficult and problematic for many. However, it is important for unlocking the challenges associated with the 4IR. Adaptive attitude can be enhanced through upskilling and reskilling which the right type/kind of education can provide. The right kind of education would be cross-disciplinary learning where some essential skills are taught regardless the specialisation because they are needed by nearly everyone in a society (see Reaves, 2019).

In instances where women students are studying courses that may not be 4IR aligned, they should consider enrolling for elective courses that are 4IR aligned. Before the advent of the 4IR, employment opportunities have been dwindling and favour men in comparison with women. In other words, the rate of unemployment shows a continuous increase in Africa. This paper shows that acquisition of 4IR skills can make women relevant and as such pave ways for them to do their own businesses because many of them are found in the informal sector. Therefore, women students must be hopeful that with the 4IR skills, they can become job creators not job seekers. In sum, when women students are empowered, the narrative is most likely to change to what women can do for the 4IR rather than what 4IR can do for women which places women at the mercy of the 4IR era.

9. Conclusions

Hopefully, this paper proves useful to readers to accept the 4IR as an era that has so much to offer to women. However, the views of critics of it promoting or widening inequalities and unemployment in an era of unprecedented global wealth should not be taken for granted and for that reason empowering women with education especially the type of education that addresses the future is a necessity. The kind of education for women that will make them relevant is that which fits well in terms of skills development and acquisition for the new era and aligns well with emerging jobs or careers not the traditional ones such as secretaries, retail salespersons, waitresses, receptionists, and subsistent farmers that women are identified with or known for. If this is achieved, inequalities gap and women world crashing can be revived and put on the right trajectories.

Learnings about the 4IR instil the consciousness of hope and fear in women about the opportunities the era brings. Hope from 4IR connotes the opportunities that come with the era. This hope will free more time for humans to spend with family and for leisure to address workloads pressures. Fear from 4IR presents change in job landscape and dimension for different sectors which will lead to some new kind of jobs created and some kinds of jobs disappearance, thereby, leading to job losses. Evidently, in this paper, widen inequalities and unemployment rate increase for women in the 4IR era would mean that they are left behind.

Based on my interpretive paradigm, data in the form of literature as used in this paper suggest that women must begin to urgently think more about their future within the frame of hope not fear because only then will they be able to accelerate their preparedness and relevance for the era otherwise inequalities which the first, second, and third industrial revolution was unable to satisfactorily address will be further widened.

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