

## Digitalisation and Gendered Dimensions: Bayelsa Girls' Dilemmas

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### Abstract

**Purpose/Aim:** This paper explores the gender issues and dilemmas faced by young women in Bayelsa State, Nigeria, as they relate to technology and digitalisation. It is part of a much wider research investigation that examines gender issues and development in Bayelsa State, Nigeria.

**Design/Methodology:** A conceptual approach is the methodological technique used for this paper. The literature is the population.

**Findings:** Based on what research work done so far, the paper wraps up by noting that the Konyefa Foundation is moving in the right direction in opening up educational spaces for girls with a view to addressing technological and education inequalities.

**Conclusion:** There is need for further research to get to the heart of the gender issues that affect personal and local/state development in Bayelsa State, Nigeria.

**Limitations:** The conceptual approach taken in this paper is insufficient to provide a fuller understanding of the issues that are at play in such a topical and contentious issue. Qualitative and quantitative designs, which are employed in the broader research can provide more scope for critical analysis.

**Implications:** A study of this nature has implications for all those involved in local/state, national and sustainable development. In an age of rapid technological advancement, addressing gender issues can be beneficial to these situations.

**Originality:** This on-going research work is the first of its kind to attempt to make sense of the digitalisation and gendered-dimension issues that affect development in Bayelsa State, Nigeria.

**Keywords:** gender inequalities, gendered dimensions, digital age, Information Communication Technologies, girls' education

### Introduction

For approximately four decades now, there is no shortage of debates on gender issues as they relate to digitalisation (Larsson and Viitaoja, 2020; Organisation for Economic Co-operation and Development (OECD, 2018); Gray, Gainous, and Wagner, 2017; Herbert, 2017; Sorgner, Bode and Krieger-Boden, 2017). The involvement of educators, researchers and business-oriented individuals in these debates is not surprising since the world is now in a digital age. Besides, the advancement in technology is in-

creasing at a rapid rate and so do the tensions that arise from the non-engagement of women in digitalization activities. In countries that are economically strong, the problem of gender divide with respect to digitalization and Information Communication Technologies (ICTs) is not as acute as it is in some developing countries. Disturbing as this is, it is the gender dimension that is of a more serious concern. This paper employs data from the literature and selected case studies to explore the dilemmas faced by young women in Bayelsa State, Nigeria. The link between economic development and digitalisation is quite clear.

The relationship between entrepreneurship and economic growth, as shown by researchers' reports on their findings from a number of empirical studies, is well documented in the literature (Edobor, 2018; Fritsch, 2013; Acs et al, 2008; Agarwal et al, 2007; Ilmakunnas and Kanninen, 2001; Holcombe, 1998; Klepper, 1997). Given that Nigeria is a nation state with a healthy entrepreneurial spirit, and that there is a strong link between entrepreneurship and economic development, it follows then that there is an equally potent relationship between digitalization and entrepreneurship. Clearly, if the women of Bayelsa State are to make a contribution to the economic growth of their region via entrepreneurial activities, there is need for them to familiarize themselves with the ins and outs of ICTs and digitalization. It has been noted that many researchers examine the link between entrepreneurship and economic growth at firm and industry level, rather than country level. Savrul however has attempted to fill this gap when he investigated "the impact of entrepreneurial activities on economic growth at country level" Savrul (2017, p.320) Savrul (2017, p.320). This study is part of a bigger wider study on gender development in Bayelsa State, Nigeria. The wider study is taking the entrepreneurship and economic growth theme to another level by focusing on state level. This study therefore puts emphasis on how women entrepreneurs make meaningful contributions to Bayelsa's economy via ICT and digitalisation. It will examine the gendered dimensions that hinders rather than support women in their mission to contribute to state, and by extension, national development. It is a conceptual paper, so it will give attention to the theoretical notions that are associated with entrepreneurship, ICTs, digitalization and economic growth.

Murphy et al (2006) research investigation acknowledges that the rise in the entrepreneurship field has much relevance in academic as well as practical settings. Their work offers "a lens for scholars as well as practitioners to interpret and explain their own entrepreneurial activity or research and formulate new questions". Like the other papers that come from the wider research investigation, this paper proposes a similar intention by examining the theoretical frameworks that aid understanding and shed conceptual light on various kinds of entrepreneurial activities.

Focusing on digitalisation and gender and development is very important, not simply because *Gender Equality* is the 5<sup>th</sup> Millennium Goal, but more so because it is vital to know how the speedy development of digitalization affect the development of women and girls in a State. Furthermore, it is worth exploring the realities and unreasonableness that prevail in today's societies with reference to gender inequality (Diprete and Buchanan, 2013; Diprete and Buchanan, 2013; Duvvury et al, 2012; Ridgeway, 2011). The consequences of gender inequality relate to a variety of needs not just for women and girls, but for the entire family unit. These needs are especially acute when natural and man-made crises arise. Equally so during times of crisis, is the need for entrepreneurial activities among women whose many roles, especially as primary caretakers, are crucial in the maintenance of a safe, healthy and meaningful life. The paper will therefore explore the following concepts, which have a direct connection to the topic under discussion: digitalisation, change, safety, leadership, gendered dimensions, gender inequality, entrepreneurship, social, economic and sustainable development and self-actualisation. As part of a bigger investigation, there is nothing conclusive about what has been explored so far. However, the paper contends that government officials in Bayelsa State, Nigeria, should support the Konyefa Founda-

tion in its quest to assist women and girls to become entrepreneurs with technological and digital skills that can help their social and economic development.

### **Data-collection**

The interpretative nature of this paper dictates that a conceptual approach is appropriate for gathering data. This method was specifically chosen because the purpose of this paper is to embark on an explanation of the notions and thoughts that underpin the discussion on the entrepreneurial experience on different levels and in different contexts. It is these very ideas that have assumed the boundaries that have framed the current status that entrepreneurship and entrepreneurship education have acquired. They lay the foundation for future conceptualisation, future research and hands-on entrepreneurial activities. It is the interrelationship of components of the topic under discussion (entrepreneurship) that helps to frame the discussion. This paper's position falls into Bhat's (2019) explanation of conceptual research: "a methodology wherein research is conducted by observing and analysing already present information on a given topic". Bhat takes care to point out that this kind of research does not include conducting practical experiments, but is absorbed in ideas and abstractions. Engagement with these constructs can help researchers to look at existing theories in a new light.

Conceptual research sits in the qualitative camp. For this reason, a common limitation of this method is the subjective nature of qualitative research, which is an interpretive approach that is concerned with multiple perspectives (Creswell, 2014; Denzin and Lincoln, 2011). Interestingly, it is this very interpretive feature that makes allowance for researchers to gain deeper and wider understandings of a range of issues, including human experience (Ritchie et al, 2013; Chalhoub-Deville and Deville, 2008). Digitalisation, ICTs, entrepreneurship and gender development are all closely linked to the human experience within any given society. Employing a conceptual method is therefore appropriate for this paper.

Similar to other traditions of inquiry, the conceptual approach has limitations. It produces information that is not as full as what results from more robust empirical methods (Boötes, 2002).

### **Explaining the Concepts**

Digitalisation, gendered dimensions, entrepreneurship, change, safety, leadership, gender inequality, social, economic and sustainable development and self-actualisation are the main concepts explored in this paper. These ideas are judged as relevant theoretical foundation stones that are pivotal to a fuller understanding of the discussion under consideration. The strands that come under this subheading will attempt to explain how these 'big ideas' are conceptualized.

#### ***Digitalisation***

Digitalisation is one of those concepts that is interpreted in broad and narrow contexts, thus making it a complicated conception. The United Nations Educational Scientific and Cultural Organisation (UNESCO) offer a broad view that look at the applicability of digitalization. It explains digitalization as: "the creation of digital objects from physical, analogue originals by means of a scanner, camera or other electronic device". It includes processes such as "selection; assessment including of needs; prioritization; preparation of originals for digitization; metadata collection and creation; digitization and creation of data collections; and submission of digital resources to delivery systems and repositories" (UNESCO, n.d.). Behind these useful notions, is a broader social framework that describes digitalization as "the way many domains of social life are restructured around digital communication and media infrastructures" (Brennen and Kreiss, 2016). In extending the reference to the social element,

Stolterman and Fors, describes digitalisation this way: “the changes associated with the application of digital technology in all aspects of human society” (2004, p.689).

The introduction of ‘social’ implies that there are benefits and the downside. Parviainen, Tihinen, Kääriäinen and Teppola (2017, p.64) points out that it has been confirmed that digitalisation can reduce reducing unemployment. It can also enhance the “quality of life”, and improve “citizen access to public services”. They further note that digitalisation makes allowance for governments to operate with greater transparency and efficiency. This seem a big plus for digitalization, but Acilar relates that while the developed countries do “enjoy the benefits of ICTs in almost all areas of life, developing countries do not benefit enough from these technologies (Acilar, 2011, p.231).

It is evident that digital divide is widening. Family units and corporations in developing countries experience the dive as OECD explains it: “the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard both to their opportunities to access ICTs and to their use of the Internet for a wide variety of activities” (OECD, 2005, p. 5, cited in Acilar, 2011, p.232). Differences in socio-economic levels prevent individuals and businesses from experiencing continuous progressive development. United Nations Conference on Trade and Development (UNCTAD) (2017) sees this as catch-up situation. UNCTAD pronounces: “widening digital divides threaten to leave developing countries, and especially least developed countries, even further behind”. It therefore seems fitting to question whether the gap can be closed and whether developing countries and their states can work together to benefit to a bigger degree from ICTs and digitalization.

### *Gendered Dimension*

The expression *gendered dimension* is understood within the boundaries of gender, so explaining what gender represents, is appropriate. Gender is the 5<sup>th</sup> of the 17 Sustainable Development Goals (SDGs), which demonstrates the relationship between gender and the attainment of the SDGs. Kastens and Okhoya (2007) relate how gender is defined: “as what a given society believes about the appropriate roles and activities of men and women, and the behaviours that result from these beliefs”. Gender is not only linked to development, but it also has a significant impact on how nation states develop. This is probably why the SDGs put such emphasis on improving the circumstances of women in developing countries.

The word *gendered* is usually used as an adjective that simply means relating to, or involving, a particular gender. In many instances, including this paper, the reference relates to women. For example, Staab and Razavi (2015) speak of “gendered dimensions of development” (p.1), “organizations as highly gendered arenas” (p.1), “gendered effects of recurrent economic crises” (p.3), “gendered ways” (p.3), “gendered connections” (p.4) and “gendered effects of development processes” (p.9). Lappegård, Neyer and Vignoli, (2015) make mention of “gendered societies” and “gendered attitudes”.

The varied uses of *gendered*, attest to the numerous and differing dimensions that spring from the expression *gendered dimensions*. Women are mothers, community leaders, business owners, teachers, politicians, spiritual leaders and the list goes on. In order to participate fully in state and national development, it is imperative for women to access opportunities to become proficient in ICT and digitalization processes.

### *Entrepreneurship*

Creativity, opportunity, entrepreneurs, innovation, risks, success, profit and loss, business and independence are some of the words that immediately come to mind when at the mention of the word entrepreneurship. Two samples, innovation and risk, are selected as examples to show how each is linked to entrepreneurship: (1) Researchers in the business and management field see *innovation* as a key attribute of entrepreneur-

ship (Mbhele, 2012, p.95) since it involves finding new and better ways of doing things (Rwigema and Venter, 2005, p.113); and (2) The element of *risk* is viewed as a core aspect of entrepreneurial projects (Filion, 2011, p.43). A popular expression that often accompanies these words in the context used is: *to have an entrepreneurial spirit*. But what really is an entrepreneurial spirit? How can one get it? Why should it be cultivated? The answers to these questions, however framed by whomever, are tied to what entrepreneurship entails.

Entrepreneurship is not an easy concept to explain, since it is characterised by a complex set of activities “with technical, human, managerial and entrepreneurial characteristics, the performance of which requires a diverse set of skills” (Filion, 2011, p.41). Yet, it can be understood by examining these very activities in details, in the environments and circumstances within which they are outplayed. This is evident in the explanation that Insights Success (2019) gives for what is the entrepreneurial spirit: “characterized by innovation and risk taking and is an essential part of a nation’s ability to succeed in constantly changing and increasingly competitive global market place”. Another explanation views entrepreneurship as an activity that is connected to the discovery, appraisal and abuse of opportunities. This is with a view to proposing “new goods and services, ways of organising, markets, processes and raw materials through organising efforts” (Mbhele, 2012, p.94). It should be noted that whatever is proposed is new and had not existed until that time (Mbhele, 2012; Shane & Venkataraman, 2000).

It is within the foregoing rationalizations that the need for women’s involvement in entrepreneurial activities is obvious since it takes the participative contribution of all citizens to effect nation-building. The women in Bayelsa State, who utilize their entrepreneurial spirit to boost the Bayelsa economy, are ultimately helping the entire country, Nigeria, to compete in the global market, hence the need to acquire ICT and digital skills. So Bayelsan women, as entrepreneurs, can identify and develop particular niches with a view to generating “surpluses and profits which can then be reinvested to achieve further development” (Filion, 2011, p.45). In so doing, it is possible for them to realise their dreams and aspirations, which can bring about positive changes in their lives.

### **Change**

The Greek philosopher Heraclitus’ famous quote *change is the only constant in life*, is a stark reminder that change is inevitable. Another famous quote from Nelson Mandela - *Education is the most powerful weapon which you can use to change the world* – signals that for change to take place on a global level, both male and female should benefit from a sound education. For this to be fully realised, curriculum change is necessary. It is this kind of change that can bring about improvement in the quality of teacher professionalism, education and its outcomes (MCCulloch, 2005; Hopmann, 2003). In fact, it is generally accepted notion among educators that curriculum reform is “a key instrument of educational change” (Qoyyimah, 2018, p.571). But curriculum changes bring with them policy changes as well; and with the attention that governments around the world are giving to entrepreneurship, policy formulation and implementation are inevitable requirements. Little wonder that Hung et al (2017) emphasis that we are living in an era of connectivity and “societal and global *transformations* that are unfolding at an unprecedented pace”.

Universities too are carrying out reforms to accommodate these rapid changes. As the number of entrepreneurs increases and universities offer courses in entrepreneurship at undergraduate and post graduate levels, Narayan (2018) opines the notion of problem identification has become “pivotal in any entrepreneurial journey”. But this belief goes beyond problem identification. It is extended to view entrepreneurs as persistent “solution finders” and “solution providers”. Another view that Narayan (2018) offers is that entrepreneurs are proactive rather than routine job seekers. They actively

seek to make changes and therefore have become central to traders and business personnel because of the constant demand to supply goods and services. The rapid advancement in ICTs and digitalization inspires entrepreneur's proactivity and passion for change. Narayan contends that the world owes "an unpayable debt to such innovators and thinkers".

Among this group of innovators and thinkers, is a respectable number of women entrepreneurs, who also engage in business and system-changing activities (Brush and Cooper, 2012; Estrin and Mickiewicz, 2011). Therefore, changes to reflect a gender balance in entrepreneurship education are not only needed in Higher Education Institutions (HEIs), but also at all levels of education. This suggests that education systems too must change how they operate (Watanabe-Crockett, 2018); and this situation further highlights that the link between entrepreneurship and change is quite clear.

### **Safety**

Safety is a big and important concept because it is everyone's concern. In the spirit of this paper, safety includes protection from online dangers such as cyber-bullying, phishing and scams (Rough Guides, 2011). But from a workplace perspective, safety means "protection from physical hazards" (Guidotti, 2014). For entrepreneurs, who are at the forefront of change in the business world, being safety conscious is very desirable. Entrepreneurs' businesses thrive efficiently, minimize loss of best workers and are around for a reasonable length of time when owners create a safe and healthy environment for their workers. When safety is compromised, more people other than those in the work environment suffer. Guidotti (2014) explains it this way:

When an accident happens, production slows down and the worker usually cannot work, at least for a while. After a serious accident or death, the worker's family can be in danger because of loss of income and support. When an accident happens, production slows down and the worker usually cannot work, at least for a while. After a serious accident or death, the worker's family can be in danger because of loss of income and support.

A variety of hazards such as fire, equipment and electricity, noise, heat, walking spaces and confined spaces, among others, can be found in workplaces. In the interest of space, the paper focuses on heat since Nigeria has a tropical climate with an average temperature of approximately 27.6 °C. It employs the International Commission on Occupational Health (ICOH) useful recommendations for workers to help them protect themselves from life-threatening heat:

- Allow and even encourage workers to slow down and to take rest periods more often. In the end, they will get as much work done as before.
- Provide clean water (just plain water is best) where workers can drink whenever they want and how much they need. Encourage them to drink a lot of water.
- Do not give workers salt tablets. It is unnecessary and can make people sick to their stomach.
- Provide shade in a safe place so that workers can cool down, especially during rest periods and if they feel sick, dizzy, or weak, or get a headache. This is called heat exhaustion. Workers who feel dizzy also sometimes faint but they should come around right away when they lie down. If the person does not wake up or if he vomits or acts confused, the condition is more serious, as in the next point.

- Educate supervisors that heat stress can kill people. A worker who vomits, acts confused, says he is not feeling hot or thirsty, gets a headache, has a convulsion, or loses consciousness and does not recover when they lie down is probably on his way to death from what is called heat stroke and needs emergency treatment and cooling down right away (Guidotti, 2014).

Guidotti describes heat as one of the most common and dangerous safety hazards. Overheating can even be fatal. It is therefore imperative for entrepreneurs to familiarize themselves with the instructions given by ICOH if they are to become and remain effective entrepreneurs.

### *Leadership*

There are different types of leadership styles. This paper is specifically concerned with one style – *entrepreneurial leadership*. Leadership approaches are placed under three categories – (1) Great Man Theory; (2) Traditional Leadership Theories; and (3) New Leadership Theories (Aksel, 2008, p. 34). Entrepreneurial leadership dwells under the third category. Let me hasten to add that entrepreneurial leadership is not equivalent to entrepreneurship. Entrepreneurs busy themselves with being creative and innovative with a view to pioneering new initiatives. By contrast, entrepreneurial leaders are looking for opportunities outside of their new ventures. They are seen as:

... individuals who, through an understanding of themselves and the contexts in which they work, act on and shape opportunities that create value for their organizations, their stakeholders, and the wider society. Entrepreneurial leaders are driven by their desire to consider how to simultaneously create social, environmental, and economic opportunities (Greenberg et al, 2011, p.2).

In today's globalized world, if women leaders are to create value and economic opportunities for their organisations, the participation in ICTS and digitalization becomes an imperative.

Greenberg et al's conceptualisation is supported and extended by Esmer and Dayi (2018) who note that self-knowledge and knowledge of their environment, allow entrepreneurial leaders to discover new opportunities and create "value for businesses, stakeholders and society". Esmer and Dayi further note that the main motivation of these leaders is their desire to create social, environmental and economic opportunities. In today's world, business ventures are on the rise; and so is the need for both men and women to be entrepreneurial leaders if countries are to benefit from global market activities.

### *Gender Inequality*

The Tavistock Institute (2014) explains gender equality as all women and men having equal opportunities. This implies that gender inequality means that all women and men do not have equal opportunities. Natsvlshvili (2017) contends that such gender disparities have a negative impact on women, put constraints on their entrepreneurial activities and stifle economic growth. Among the gender disparities, is women's lack of advancement in ICTs and digitalisation.

Other reasons given why women are disadvantaged with regard to have equal opportunities for gaining employment and starting their own businesses is *culture orientation*. This holds true in Bayelsa State, Nigeria, where cultural traditions are greatly valued and expectations of women's roles as mothers and care-takers of the family are clearly understood (Idang, 2015, pp.108 & 109). This is undoubtedly beneficial. However, Idang asserts that negative dimensions, including gender inequality should be "dropped in order to promote a more progressive and dynamic society" (p.98), which encourages social, economic and sustainable development.

### *Social, Economic and Sustainable Development*

The space that this paper allows is totally inadequate to fully delve into concepts as huge and complex as social, economic and sustainable development. However, these concepts are directly related to entrepreneurial activities. This subsection will therefore briefly highlight their explicit involvement in entrepreneurial activities and how each is interconnected. Zahra and Wright (2015) explain how entrepreneurship influences how communities operate, how societies develop and how humanity survives and progresses. They contend that entrepreneurs' work deal with issues related to food, water shortages, environmental pollution, decay and sustainability via innovative and affordable technologies. These activities have the potential to engender economic growth and development. Kanu and Atimi-Yousuo (2018, p.56) identify as a country Nigeria where entrepreneurial activities are "extremely huge", as an example of how this sector can inspire economic growth. This inspiration for economic growth should be a mix of ICTs digitalization and appropriate use of natural resources effectively. This blend can enable sustainable development.

### *Self-actualisation*

Maslow's theory of self-actualisation is linked to a hierarchy of other needs. Self-actualisation is the need to pursue and fulfill one's unique potentials. It is positioned at the top of physiological, safety, love and belongingness and esteem needs (Vinney, 2018). D'Souza (2018) offers this explanation for self-actualisation: "... it simply means the realization of one's full potential, which is an open and ongoing exercise that should incorporate engagement in ICTs and digitalization procedures.

Self-actualization is synonymous with the terms self-realization, self-reflection, or self-exploration". This explanation suggests a degree of creativity. Runco's (2014) position on creativity bears this out for he sees a link between creativity, invention, innovation, imagination, and adaptability, although they are not the same. Galib (2018, p.28) sees a direct relationship between these features and entrepreneurship. Galib also notes that entrepreneurs demonstrate these traits in designing and directing sustainable change. A benefit of self-actualization is gaining the ability to understand internal values and characteristics. This understanding helps entrepreneurs to empower themselves to link their personal values to real-life situations and being able to deal with the problems that arise.

### **Conclusion**

The literature demonstrates that young women in Bayelsa State, Nigeria, are not making the same progress in accessing secondary and tertiary education. This means that they are lagging behind in many areas, including engagement in ICTs and digitalisation workshop and courses. The opportunities that boys received to participate in Information Communication Technologies (ICTs) and digitalisation courses, were not open to girls. This conceptual paper highlights their dilemmas by exploring the 'big ideas' that should be operationalised if girls and women in Bayela State are to contribute to state, and by extension, national development.

Gender and development and gendered dimension are themes for a larger study that the authors are working on. This paper is but part of that broader investigation that focuses on how women entrepreneurs can make meaningful contribution to economic growth and development in Bayelsa State, Nigeria. The theoretical notions that are considered are digitalization, gendered dimensions, entrepreneurship, change, safety, leadership, gender inequality, social, economic and sustainable development and self-actualisation.

The negative effects that gender inequality has on women's entrepreneurial activities are well documented in the literature. These very constraints, including the lack of opportunities to engage in ICTs and digitalization processes, do impede eco-



nomic growth; hence the contention that women's full involvement in entrepreneurial activities will prevent the stagnation and/or retardation of economic progress. Based on what research work done so far, the paper wraps up by noting that the Konyefa Foundation is moving in the right direction in opening up educational spaces for girls with a view to addressing education inequalities. Based on what research work done so far, the paper takes the view that the Konyefa Foundation of Bayelsa Nigeria, is moving in the right direction in opening up educational spaces for girls with a view to addressing education inequalities. The appropriate authorities should collaborate with the Konyefa Foundation. Keeping in step with technology and digitalization processes has the propensity to assist efforts geared towards social, economic and sustainable development. All levels of partnership are therefore vital in this regard.

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