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Okada, Edo State, Nigeria
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Convocation Lecture:

**Title: Navigating the Entrepreneurship -
Employability Waters: Building
Resilience in the Fourth Industrial
Revolution, (4IR)**

Guest Speaker

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Topic:

**Navigating the Entrepreneurship -
Employability Waters: Building Resilience in
the Fourth Industrial Revolution (4IR)**

by:
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28th November, 2020

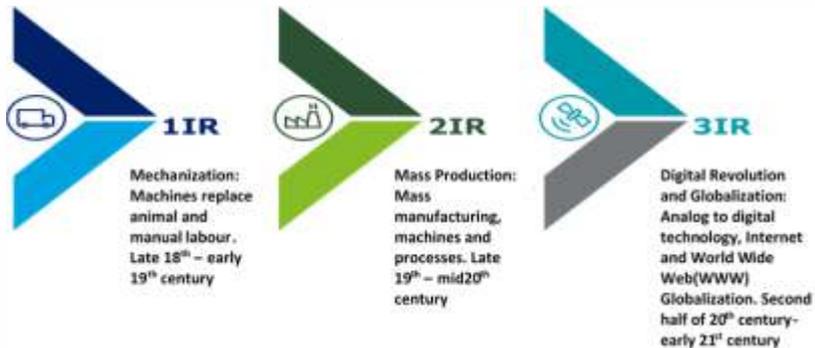
INTRODUCTION

In the 1980's, Walt Disney, a famous American Entrepreneur said “All dreams can come true if we have the courage to pursue them.”

To buttress this point, Mack Zuckerberg in his 2017 convocation speech to Harvard University graduates said “An entrepreneurial culture thrives when it is easy to try lots of new ideas”. Facebook wasn't the first thing I built. I also built games, chat systems, study tools and music players and am not alone in this approach. J.K Rowling got rejected 12 times before publishing Harry Potter. Even Beyoncé had to make hundreds of songs to get "Halo. What they all did was navigating the entrepreneurship climate and it is that resilience that made them successful.

The future of entrepreneurship and employability is uncertain; this is because everything changes during industrial revolutions. The emergence of each Industrial Revolution marked a period of development that transformed societies globally. Each revolution (First Revolution, Second Revolution, and Third Revolution) was accompanied by innovation(s) that is benefitting the world today.

The benefits of industrialization, however, have come at a cost. The Fourth Industrial Revolution (4IR) is set to fundamentally transform the way modern societies are organized, and technological advances – especially in artificial intelligence, robotics and automation – may lead to serious job displacement and skills shortages. However, it is estimated that by 2030, more than half of the world's working population may not have the necessary skills or qualifications to participate in the global workforce. Conversely, these changes present great opportunities for those who are prepared to reskill themselves. It is therefore important for societies to recognize this challenge and start preparing tomorrow's workforce through education and training systems which entails upskilling and reskilling.



THE INDUSTRIAL REVOLUTION (FIRST TO FOURTH)

We are focusing on Entrepreneurship and how it will drive employment but it is also critical to look at what is driving Entrepreneurship, in the fourth industrial revolution after we had three (1IR, 2IR, 3IR) industrial revolutions:

The first industrial revolution was between the end of the 18th century and the beginning of the 19th century. In this revolution, mechanization was the reason agriculture was replaced by industry as the back bone of the economy and at that time people witnessed massive extraction of coal along with the very important invention of the steam engine, that was the reason for the creation of a new type of energy that later on helped to speed up the manufacturing of railroads thus accelerating the economy.

The second industrial revolution had massive technological advancements in the fields of industries that helped the emergence of a new source of energy, electricity and gas, in addition, the second industrial revolution was also characterized by development for steel demand, chemical synthesis and methods of communication such as the telegraph and the telephone, however, the most critical part of this revolution was the invention of the automobile and aeroplane.

The third revolution brought forth the rise of electronics, telecommunications and computers. Through the new technologies, the third industrial revolution opened the doors to space expeditions, research, and biotechnology. In the world of the industries, two major inventions, Programmable Logic Controllers (PLCs) and Robots helped give rise to an era of a high-level automation.

The fourth industrial revolution started in the dawn of the third millennium with the one feature that everyone uses every day: The Internet. The internet set the stage for the technological revolution we are witnessing now.

Technologies such as mobile devices, Internet of Things (IoT) platforms and cloud computing are digitalizing the value chain across different industries. The connectivity and scale that these technologies provide is unparalleled. To illustrate, a smartphone user can use his mobile device to purchase goods on an e-commerce website and make payments. The E-commerce company and payments service provider will leverage a cloud platform therefore these technologies underpin one another.

The importance of leveraging technologies such as Big data analytics and smart sensors cannot be overemphasized. Data analytics can help with customer segmentation and can aid cross selling and upselling of products through segmentation and location based advertising which ultimately leads to increased sales and revenue.

Furthermore, technologies that provide customer centric value include advanced human-machine interfaces powered by Artificial Intelligence and Robotics and authentication and fraud detection digital identity platforms that help to redefine customer experience in an innovative way. For instance, at various airports in the world, self-check-in machines are available for customers to check in themselves without the need of a human agent therefore redefining customer experience. Ultimately, leads to increased sales detection, digital identity platforms.



HOW 4IR CAN OFFER OPPORTUNITIES FOR NAVIGATING THE EMPLOYABILITY WATERS / DEVELOPMENT

This age of automation and digitalization, coupled with a profound shift in what and how people consume, will bring in a variety of opportunities for alternative development pathways. There is significant scope for developing societies to take advantage of these changes, particularly because developing societies are less encumbered by legacy infrastructure or institutions. It therefore implies that there is great room in navigating the employability waters, as some of the benefits to be derived from the 4IR are outlined below:

- It can be a powerful force for economic inclusion. 4IR technologies will create new ways for citizens to connect to each other, to trade with each other and to access services that are currently not available. For example, India has a digital identity system called Aadhaar which has biometric data for 1.2 billion Indians. This digital identity data is leveraged to provide access to financial inclusion, health services and access to direct beneficiary transfer for Government payments schemes.

- The 4IR promotes greater automation and digitization of customers and other public administration processes, procedures, policies, projects and programs which leads to transparency and accountability, ultimately culminating to progressive development.
- The 4IR could also empower Small and Medium Enterprises (SMEs). The rise of digital marketplaces and online services can empower SMEs to trade in ways unimaginable even a few years ago, connecting them to giant regional markets rather than just to local customers.
- Technologies of the 4IR will create the opportunity for developing countries to leapfrog-bypassing traditional phases of industrial development. Online and digital banking for example, reduces the need to build brick and mortar branches.
- The 4IR also has the potential to transform agriculture. The 4IR could improve the traceability of products, reduce logistics costs and overcome constraints of agricultural finance by enabling suppliers to use new credit-scoring technologies. To bring home the idea, let me use as an example a system that I am privy to. A Financial institution in Nigeria is partnering with some Agricultural commodities exchange to offer secure digital loans to farmers disbursed via Unstructured Supplementary Service Data (USSD), these loans are backed by warehouse receipts and collateral. They are also offering wallet based transaction services such as payments on the platform. These offerings will help to provide finance for the Agricultural sector thereby solving the issues around access to capital in the Agricultural industry. Indeed, this is a great opportunity for job creation in the agricultural sector.

IMPACT OF 4IR ON ENTREPRENEURSHIP AND EMPLOYABILITY

Impact of 4IR on Entrepreneurship

Recent studies have birthed an underlying theme which is that the acceleration of innovation and the velocity of disruption are hard to comprehend. These two drivers constitute a source of constant surprise even for the developed economies. Indeed, across all industries, there is clear evidence that the technologies that underpin the fourth industrial revolution are having a major impact on businesses. Clearly, a good and more recent example is how Amazon leverages Robotics and Artificial intelligence to organize their warehouses to meet up with demand spikes occasioned by the Covid-19 pandemic

On the demand side, many industries are witnessing major shifts occurring, as growing transparency, consumer engagement, and new patterns of consumer behavior (increasingly built upon access to mobile networks and data), force companies to adapt the way they design, market, and deliver products and services.

Major shifts on the supply side are also the introduction of new technologies that create entirely new ways of serving existing needs and significantly disrupt existing industry value chains. Disruption is also flowing from agile, innovative competitors who, due to access to global digital platforms for research, development, marketing, sales, and distribution, can oust well-established incumbents faster than ever by improving the quality, speed, or price at which value is delivered. An example we can resonate with is Paystack, a payment technology company that is focused on supporting African businesses, they were able to generate acquisition sales value of 200 Million USD in just five years of existence. This proves that value is not in how long a company exists but how well a company exists.

On the whole, there are four main effects that the 4IR has on business

namely: customer expectations, product enhancement, collaborative innovation, and organizational forms.

Overall, the inevitable shift from simple digitization to innovation based on combinations of technologies is forcing companies to re-examine the way they do business. The bottom line, however, is the same: entrepreneurs need to understand their changing environment, challenge the assumptions of their operating teams, and relentlessly and continuously innovate. You also as upcoming entrepreneurs need to engage in this system.

Impact of 4IR on Employability

Recent discussions about the employment impact of disruptive change of 4IR have often been polarized between those who foresee limitless opportunities in newly emerging job categories and prospects that improve workers' productivity and liberate them from routine work, and those that foresee massive labour substitution and displacement of jobs.

Demographic, socio-economic and increasingly technological trends and disruptions to the business and operating models of global companies have the potential to rapidly change the dynamics of the global employment landscape. In the current era of global value chains, many companies are locating different job functions and categories in different geographic locations to take advantage of the specific strengths of particular local labour markets. Developments in previously disjointed fields such as artificial intelligence and machine learning, robotics, nanotechnology, 3D printing and genetics and biotechnology are all building on and amplifying one another. Smart systems, homes, factories, farms, grids or entire cities will help tackle problems ranging from supply chain management to climate change. All of these technologies are creating jobs and further gives credence to a study carried out by Dell Technology which states that “85% of jobs that will exist in 2030 do not exist today”.

The expected global decline in total manufacturing and production roles is driven by labour-substituting technologies such as additive manufacturing and 3D printing. Some cautious optimism is warranted due to increased manufacturing demand for advanced materials and comparatively favorable expectations around robotics, pointing to the latter's potential for labour-complementing productivity enhancement rather than pure job replacement. For example, General Electric made big investments in 3D printing in their quest to produce more than 85,000 fuel nozzles for the new Leap jet engines, the company wants to expand its 3D printing staff because they have realized that additive manufacturing also requires skilled personnel for it to become an effective process.

New and emerging job categories and functions that are expected to become critically important to industries in the current 4IR are specialized data analysts, human resources and organizational development specialists, engineering specialties such as materials, biochemical, nanotech and robotics, regulatory and government relations specialists, geospatial information systems experts and commercial and industrial designers.

The global workforce needs to adequately prepare to adapt to the 4IR through training and retraining as the consequences will be dire not only for them as individuals but also for their families, communities, companies and the wider society. This cannot be overemphasized.

HOW TO BE A SUCCESSFUL BUSINESS/ENTREPRENEUR AND EMPLOYEE IN THE 4IR For Business/Entrepreneur

Reinvesting: In one way or another, business leaders continue to utilize and adopt technology to save time and money. This is where many businesses stop. However, businesses need to re-invest the efficiency (time, cost etc.) gains. Investing in upskilling the employees who hold the organization's institutional knowledge can fuel future growth.

There's no endgame in digital transformation, which means the learning must remain constant.

Refreshing: Businesses need to view technology as an opportunity to refresh their underlying processes and the ways in which businesses operate. This means looking at every segment of their organizations -- not just to add technology for technology's sake, but in incorporating it into their entire business model and all its processes seamlessly in order to remain agile and adapt to the evolving business environment.

Reflecting: A keen understanding of key stakeholders (customers, employees) expectations is required to stay ahead in 4IR. Companies need to experience their business through the eyes of their key stakeholders in order to identify and create opportunities for innovation.

Employee Skills Mismatch: As high rates of youth unemployment persist, employers'/business owners will struggle to find and retain talents that align with their human capital needs, creating resource shortages within increasingly complex and competitive landscapes. This potential skills mismatch could result in an overall environment where high-skill workers fulfill high-paying roles, and low skill workers fulfill lower-paying, task-based roles that could be replaced through automation. This could lead to an increasing shortage of skilled labour, and loss of jobs. As graduating students, your pre-knowledge of this information is instructive to you tomorrow.

In order to remain a competitive, a report published in 2018 by Deloitte in collaboration with the global business coalition for education outlined concrete ways that businesses can help the upcoming workforce prepare for the future of work. It highlighted four categories of skills necessary to compete in the 4IR:

- **Workforce readiness:** Foundational to individuals' entry and success in the workplace, ranging from initial job search to maintaining continuous employment. Examples of skills include

literacy, numeracy, digital literacy, etc.

- **Soft skills:** Personal attributes, social skills, and communication abilities that support interpersonal relationships and interactions. Examples of skills include critical thinking, creative thinking, collaboration, adaptability, etc.
 - **Technical Skills:** Knowledge and capabilities to perform specialized tasks. Required technical skills include computer programming, scientific tasks, technology-based skills, and other job-specific skills etc.
 - **Entrepreneurship:** Knowledge and abilities that help create and build a workplace opportunity or idea. Examples of required skills include innovation, resilience, risk-taking, courage, business acumen, business execution, etc.
- ### WHY ENTREPRENEURSHIP IS IMPORTANT FOR EMPLOYEES

In such a rapidly evolving working environment, the ability to anticipate future employment trends and needs in terms of the knowledge and skills required to adapt becomes even more critical for all stakeholders. These trends vary by industry and geography, and so it is important to understand the industry and country-specific outcomes of the Fourth industrial revolution. Complex problem solving, social and systems skills will be far more in demand when compared to physical abilities or content skills. Beyond hard skills and formal qualifications, employers are often equally concerned about the work-related practical skills or competencies that current employees (or prospective new hires) are able to use in order to perform various job tasks successfully.

It is helping to solve problems

The pace of technological change is exponential. Looking at how quickly things have changed in the last decade with wireless internet,

social media sites and smartphones, these things support Ray Kurzweil's prediction that “we will not experience 100 years of progress in the 21st century but more like 20,000 years of progress at today's rate”. Looking at the impact of technologies such as nanotechnology, robotics and AI, today's unsolvable problems may very well be easily overcome through technology.

To stay ahead of the curve, one needs to commit to lifelong learning so as to acquire and sustain relevant skills-sets required to succeed in the ever-changing workplace of the future.

CONCLUSION

What is critical to know and comprehend is that the fourth industrial revolution (4IR) will inevitably affect industries across economies. Trade, transportation, and other market segments could benefit, and new rewarding jobs could also be created. There are however possible challenges of workers being displaced due to automation and widened income inequality, If they remain untrained and unskilled. Businesses and the working population must realistically anticipate, be positioned to harness the opportunities embedded in 4IR and adopt policies to counter the negative effects of these technologies, toward maximizing the net gain from the 4IR.

Warren Buffett said, “Someone is sitting in a shade today because someone planted a tree a long time ago”. You are responsible in like manner to do this as referred to by Warren Buffet, the world's seventh richest man.

I therefore implore you as “Tomorrow's Future” in like manner as Chief Igbinedion, Warren Buffet, Elon Musk, Jeff Bezos, Mark Zuckerberg you have to start something or join in building the system.

Take a cue from where we are now:

- You were able to attend Igbinedion University because someone started the university.
- You have that job today because someone started that company
- The only things that don't exist are the things that you don't start.
- Start that course, start that project, start that business, learn that skill, reskill, and go for it; see you at the TOP.

We can do it, God helping us.

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