Digital Communication and Transnational Learning in the 21st Century: An Overview of Its Benefits and Challenges

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*Abstract***: More than ever before, NOW is the right time for digital communication and transnational learning to be embraced by all. This paper analytically reviewed the use of digital communication and transnational learning in the 21st Century for transformative, evolving and mutually beneficial digital relations among institutions of higher learning. The study is anchored on the media richness Theory of computer mediated communication (CMC). Major findings show that although the use of digital communication for transnational learning is challenging, its benefits are enormous which include among others being smarter, faster and cheaper means of organizing a "globalized classroom" for educational development. The intending institutions should do the needful by way of deliberate efforts in putting all the modalities in place for its success. They should also include flexibility, initiative, social skills, productivity and leadership skills. The qualities of leading a positive adventurous life, resilience, creative problem-solving possessing unbridled freedom, tenacity of purpose, following one's natural curiosity and proclivity should be the hallmarks of the 21st century teaching and digital media communication. It has been observed that many teachers in the 21st century education are quite slow in updating themselves with the latest technologies and techniques of communication and teaching while some others do not see the need to undergo training in the use of technology for 21st century communication, teaching and learning particularly for a trinational learning. Some universities, especially in Africa vis-à-vis Nigeria are doing little or nothing to key into this exciting and rewarding form of communication and learning in the globalized society. Every university that intends to embark on digital communication and transnational learning should have a differentiator, value-added proposition or flagship point and work assiduously to improve and sustain it.**

*Key Words***: Digital Communication, Transnational Learning, 21st Century, Globalized Classroom, COVID-19**

I. INTRODUCTION

Learning is a lifelong exercise and it is constantly evolving as a result of innovation in digital media technology. Transnational learning on the other hand is transformative in nature and it is greatly orchestrated by digital media communication technology. Communication across borders enabled by information and communication technology has made the world not only a globalized village – one community, but also a "globalized classroom". Therefore, the international mobility of students and teachers is one of the well-established features of digital communication (communication without borders) in the twenty first century, and the internationalization of institutions and courses are on a large scale. The global demand for international learning in the 21st century has been increasing dramatically in the last few decades, particularly as a result of the outbreak of COVID-19 pandemic; and this trend calls for reawakening, or what can be described as 'a clarion call for "digital communication and educational renaissance' by all ivory towers of learning. Since the outbreak of COVID-19 which demands some level of social and physical distancing to curb the spread of the deadly virus which has claimed millions of lives globally, the need to adopt digital media for communication cannot be overstressed. (WHO, 2020), (UNESCO, 2013, Faulkner and Latham, 2016), (Fullan, 1994).

This phenomenon has become more realistic and novel than ever before in the annal of communication and educational development globally. The reason for its growth is driven by the craving for increased numbers of workers with skills which are needed in the international economy. Research has shown that transnational learning is the most lucrative way to train such workers in the twenty first century. This is because it opens new prospects which expands university enrolment of students in Africa, America, Asia, Europe and other nations of the world. (Fullan, 1994).

This paper analytically discusses the growth, benefits and challenges of digital communication and transnational learning, and the new global markets that are emerging as a result of this new trend in communication and learning. The opportunities digital communication and transnational learning open to teachers, learners and universities all over the world which include enhanced digital visibility and academic reputation, partnerships, added income, and multicultural student body are also part of this discourse. The article also examines the issues universities must consider to be successful in digital communication and Transnational Leaning (TNL), as well as its benefits and challenges. It also

considers the qualities of teachers for the 21st Century communication in teaching and learning.

Transnational learning is at the leading-edge of most fundamental changes taking place in education generally and in higher education in particular in the age of digital communication. Digital communication technology is smarter, faster and cheaper; hence its adoption is worth the while considering the health challenges posed by the different variance of COVID-19 pandemic. The extent and forms transnational learning activities take; the pedagogical and cultural controversies have overwhelmed transnational education. Digital communication and transnational learning present many benefits and challenges to both the governments, parents, teachers and the managers of higher education. Many nations are developing regulations to integrate cross-border programs and branch-campuses into their strategic planning for the sector. The new opportunities digital communication and transnational learning avail students and institutions are critical areas of consideration for institutions that have ventured into it already and the universities that are planning to venture into it. Transnational education presents a global perspective on the development of international education in the 21st century, partner-supported transnational programs and international campuses. (Jeff, 2015, UNESCO, 2013).

It is noteworthy that learning is central in knowledge-based societies and economies especially in the technologically advanced societies of today. In many countries there is a very strong push to reflect this to ensure that transformations of the education system focus more firmly on learning itself rather than simply changing structures of learning and educational organizations. But what does it mean to 'focus on learning'? Why is it important? And crucially, is the knowledge based on learning strong enough to help policy-makers shape their direction of educational changes in the 21st century? This paper further sheds light on these and more questions and provides directions to the use of digital communication for educational institutions and policy makers. This paper critically reviews the issues universities must consider to be successful in the use of digital communication for Transnational Learning (TNL) as well as the challenges.

II. LITERATURE REVIEW

Transnational Learning

For a clearer understanding and application of these terms, which is the main focus of this lecture, we shall examine the concepts of 'transnational' and 'learning'. Simply put, transnational means between or beyond national boundaries. It also means involving several nations or nationalities. Learning on the other hand means a change in knowledge, skills and behaviour resulting from experience. The change produced by learning usually happens by sensing your environment, adopting to the response and recording the experience. Sensing your environment means filling the gap between your past experiences and the current situation. Usually, such a gap must exist for learning to occur. Adapting the response means integrating the new information to past learning and the ability to give meaning to new information through association, an inference must exist for learning to occur. Recording the experience on the other hand, means repeating the new connection enough times so that you can use it in the future and the ability to use the new connection more than once must exist for learning to occur. Therefore, learning is all about creating and strengthening connections. Learning = adapting from previous experiences. Learning is envisioned as a development of progressive sophistication in understanding and skills within a domain. In other words, as learning occurs, progressively well-structured and qualitatively different administrations of information grow. Therefore, learning is not just an act of filling the minds of the learners with information, rather it requires the transformation of naïve understanding into more complete and accurate comprehension. Learning and learning to learn should be the strong emphasis of a 21st century curriculum because they stand at the centre of education. (Heritage, 2008, p. 8).

Benjamin Bloom divides learning into three domains; cognitive (what we know), psychomotor (what we do) and affective (what we feel). In other words, we can change what we know, what we do and what we feel through learning or for learning to take place. Experience is what differentiates the change generated by learning from any other types of changes such as biological development. So, for learning to occur, the change must come from interaction with your environment (Jeff, 2015, UNESCO, 2013).

With this background, we see what transnational learning means. According to Qurix (2019), transnational learning refers to learning which takes place in more than one cultural environment for a single certification. One of the most outstanding features of globalization is the convergence of cultural diversities and interdisciplinary learning. The essence of this is to extract the best practices from diverse experiences or education in order to build an all-encompassing expert of international standing. Qurix (2019) further states that transnational learning involves getting instruction from specialists who are from different socio-cultural upbringings and experiences in one setting. The idea of transnational learning is the exchange of faculty and students in strategic fields which builds an international learning culture. Many universities have effectively adopted the transnational learning culture both within and outside Nigeria. Examples include, but not limited to Bingham University, Karu, Nasarawa State, Nigeria, University of Oxford in United Kingdom, California Institute of Technology, Harvard University, Stanford University, Yale University in United States, etc. (Qurix, 2019).

Transnational learning includes faculty and students' exchanges (eg. Bingham University and Sumy State University, 2019/2020), research collaborations (eg Zankli Research Centre, Bingham University and Liverpool School

of Tropical Medicine), research learning and distance learning. Transnational learning is a mutually beneficial relationship among universities globally. It also comprises branch campuses, joint and dual degree programmes, fly-in faculty, or a mix of these, often referred to as blended learning.

Transnational learning is described in UK as Transnational Education (TNE) which is the provision of a higher education degree programme leading to a UK qualification for students based in a country other than the one in which the awarding institution is located. Transnational education (TNE) is the delivery of an educational award in a country other than that in which the awarding body is based. According to Faulkner and Latham (2016), the UK's TNE offer is growing in both scale and strategic importance, and TNE has become a core component of many universities' strategic approach to international growth. More than 84% of UK universities now deliver TNE to over 700,000 students worldwide and this number has been increasing yearly since 2007/08 academic session. What this means is that the UK higher education sector now provides learning and qualifications or certifications to more students overseas than to international students in the UK which approximated at 450,000.

Transnational learning can be distant or face to face classroom situation whereby the transnational learners enjoy both the teaching and the learning facilities of the other nations and institutions. The transnational learning enabled by high-tech brings learning to the door step of the learner without having to travel across borders. Transnational learning also gives the learners the opportunity to enjoy a face-to-face (f2f) classroom learning of the other nations or institutions through faculty and students exchange programmes.

Reasons for Transnational Learning

Transnational learning is necessary because there are new ways of learning, new technologies and techniques or methodologies as well as new skills. Just as not all the nations of the world are equally endowed with natural and human resources, not all countries are equally endowed with the same level of educational and technological know-how, hence the need for transnational learning. This cross-breeding of skills acquisition is crucial in the 21st century education. For instance, while some nations such as Canada, America, etc are faced with shortage of manpower to fill some vacant positions, there are other nations, eg Nigeria, is grappling with undaunting challenges of unemployment, even when Nigeria has huge skilled labour. Transnational learning help to prepare such human resources to fit into the global labour market.

A number of reasons have been accounted for transnational learning as a basis for education in the 21st century. Qurix (2019) states that entrepreneurship learning and skills have the capacity to address, if not all, most of the 21st century challenges bedeviling the world and eventually bring about global transformation. In other words, transnational learning is the driver of global entrepreneurship skills and technology. Some of the reasons or objectives of transnational learning are:

1) Capacity building in host countries for inclusive and equitable quality education.
2) Responding to specific sector and employer needs and country priorities.
3) Supporting students who might not otherwise access global higher education.
4) Increasing opportunities for two-way student mobility, including visits and exchanges, giving students invaluable international experience that benefits them and their local economies.
5) Opening up new routes to continuous professional development for academic staff in the host and home countries, including networking for international collaborative research projects.
6) Raising institutional reputation and improving market position in the global market.
7) Mutual strengthening of cultural understanding and respect for securing long-term and effective partnerships. (UNESCO, 2013, Faulkner and Latham, 2016), (Fullan, 1994).

Benefits of Transnational Learning

The benefits of digital communication and transnational learning are enormous. They include:

1) New technology, finances, competition for students, and enrolment opportunities that make now the right time for transnational distance learning using digital communication.
2) Businesses and nations need increased numbers of workers with skills needed in the international economy. Digital communication and transnational learning are profitable ways to train such workers in the 21st Century.
3) It opens new markets by expanding university enrolment to students in all parts of the world. This is majorly because of the emerging new global markets. Therefore, the opportunities include enhanced digital visibility, academic reputation, partnerships, added income and a multicultural student body.
4) Digital communication and transnational learning are increasing parts of a strategic approach to internationalization of higher education globally.
5) It opens doors to students who may not otherwise be able to study in universities other than their home countries.
6) It also enhances the opportunities for nationals of the same country to connect with each other in other parts of the world.

7) Digital communication and transnational learning deepen digital relations, international partnerships, increase institutional brands, reputation and an overseas landmark.

8) Digital communication and transnational learning create a pathway for students to study in other countries which further supports international recruitment and a source of revenue for the host institution.

9) It gives opportunity or potential for alumni to engage with their institutions and further internationalize their institutions. It facilitates a high proportion of transnational students on graduation from their first-degree programmes to progress to postgraduate studies.

10) Recent study has also shown that digital communication among students and institutions as well as transnational graduates feel better equipped than locally educated graduates in skills, in international outlook, language fluency, analytical thinking and adaptability to change and digital visibility.

11) Digital communication and international education enhance the students' wide range of skills, employability and improves the transnational graduates' career prospects, because some, if not most of the employers view overseas degree as having an edge over a local degree. (UNESCO, 2013, Faulkner and Latham, 2016),

III. CHALLENGES OF TRANSNATIONAL LEARNING

Despite the many benefits of digital communication and transnational learning, there are a number of challenges institutions that venture into transnational learning or education face. The challenges of transnational learning include but not limited to; facilities and equipment for digital communication, acceptance, accreditation, competition, culture, technology, funding, and the establishment of a business model.

Acceptance

Digital communication and transnational learning can only take place when both parties have some form of agreement which naturally starts from having what the other party in the agreement is willing to undertake. Therefore, it is not enough to desire or even to put forth what an institution has to offer for digital communication and transnational learning. Because it is one thing to venture into digital relations and transnational learning, it is yet another thing all together for the other party to accept what you have for transnational learning. Acceptance is actually the understanding and willingness which all the parties involved in faculty and students exchange program have to kickstart the exercise. Therefore, acceptance depends on the value-added proposition of the intending institution. What differentiates the university from all others that would attract learners and teachers from other nations? This is a challenge!

Accreditation

No serious-minded institution operates legally without a license from and regular or periodic accreditation of programs of the university. No well-meaning university would venture into digital communication and transnational learning without full accreditation of the programs for transnational learning. For instance, medical and paramedical programs in Bingham University are globally attractive to intending transnational learners and teachers because all the medical programs are fully accredited by both the National Universities Commission (NUC) and the professional medical body in Nigeria, that is, the Medical and Dental Council of Nigeria (MDCN).

Competition

Digital communication and transnational learning are highly competitive because of their globalized nature. Therefore, a lot of universities find it very difficult to meet the global best practices hence they cannot venture into digital communication and transnational learning.

Culture

Diversity of cultural differences is a huge challenge to digital communication transnational learning. Some countries have a legal backing to stop racial or cultural discriminations. Therefore, for digital communication and transnational learning to thrive, the environment should be conducive to accommodate the diverse cultures or people from different cultural backgrounds coming together to learn or interact in one learning environment or platform.

Technology

Technology is the cornerstone of 21st century communication for teaching and learning. No matter the form(s) of transnational learning, high standard ICT infrastructures and facilities are required to have a successful transnational education. These need huge funds to provide and not many institutions can afford to provide them.

Funding

Funding poses a challenge to digital communication, transnational learners and the institutions alike. For learners, high tuition does not allow some students who would have loved to take up transnational learning. While universities also face the challenge of low enrolment. This means that universities with transnational learning or faculty and students exchange programs should endeavour to strike a balance and where possible make provision of scholarship for indigent students.

Business Models

As earlier stated, digital communication and transnational learning are capital-intensive program. Therefore, it behooves on the operators of transnational learning to draw up a

business model which will serve as the blueprint for both the learners and operators of digital communication and transnational education. Business model innovations have reshaped entire industries and redistributed billions of dollars of value. In a nutshell, business model consists of four interlocking, interdependent elements that, taken together, create and deliver value. It starts with a value proposition – a product or service that helps customers do more effectively, conveniently and affordably a job that they have been trying to do.

Despite the growth that they can create, some established corporations rarely create innovative business models. The question is, why do they struggle to capture the new growth that business model innovation can bring? Part of the problem is that there is little or no organized understanding of the elements of business models or the process of building them. Most companies therefore don't fully understand the sources of the strengths and limitations of their existing business models; the premises behind their development; and the interdependencies amongst the elements of their models. This leaves them unable to know when they can leverage their core business, and when success requires a new business model. Indeed, the consequent clumsiness in creating new business models has led to the widespread belief that companies can only successfully innovate "close to the core."

Research has shown that business models that did not exist prior to 1960 now account for over 90% of the total market capitalization of the retailing industry; for instance, business models that did not exist prior to 1980 now account for literally 100% of the computer industry. This applies to other disciplines too. Studies have further revealed that in recent times, 14 of the 19 entrants into the Fortune 500 owe their success to business model innovations that either transformed existing industries or created new ones.

Every business has a fundamental problem in customers' situation that needs a solution. In like manner, every job has functional, emotional, and social dimensions of the result that is needed. This is what defines the experiences in purchase and use that need to be provided to get the job done perfectly. Value proposition defines the resources the business must put in place in order to deliver the value proposition. In general, resources include people, technology, products, suppliers, distribution channels, equipment, facilities, brands and cash. Resources typically can be hired and fired, bought and sold, built or destroyed. This constitutes a gamut of challenge to all businesses including digital communication and transnational learning because of their scope and the competition involved. This is an area of transnational learning that every university intending to venture into should take very seriously!

Twenty-First (21st) Century Skills?

The 21st century skills are a set of abilities that students need to develop in order to succeed in the information age. The Partnership for 21st Century skills lists three types:

Learning Skills

These include critical thinking, creative thinking, collaborating and communicating.

Literacy Skills

Literacy skills include information literacy, media literacy and technology literacy.

Life Skills

Life skills are flexibility, initiative, social skills, productivity and leadership.

Transnational Teaching/Teachers

In as much as we have transnational learning and the skills needed in the 21st century education, it is important to talk about transnational teaching and teachers. What this implies is that teachers in the 21st century should update themselves not only in their respective fields or disciplines, but also in the skillful use of technology for teaching in the 21st century. Universities that have ventured into transnational learning and the ones that are planning to vie into cross border teaching and learning should look beyond just the structural edifice, though these are also very important, but they should also ensure that they equip their institutions with state-of-the-art ICT facilities that meet the global standards.

In view of the foregoing, the question is What should be the qualities of teachers for the 21st century learners? Put differently, what kind of teachers are needed for the 21st century education? Faulkner and Latham (2016) state that more recognition has always been given to the need to alter curriculum content, classroom practices and learning environment, while less attention is being given to the teachers' dispositions for negotiating the unknown. This assertion suggests that there is more to it than just updating curricula and other extra-curricular activities. However, in addressing the subject of transnational learning, it is equally important to focus on the teachers lives and mindsets to meet the current, emerging and future challenges. Faulkner and Latham (2016) identified three (3) essential qualities of the teachers for the 21st century learners. They are:

1) **Being adventurous** – leading a positive adventurous life.

2) **Resilience** – possessing unbridled freedom and tenaciously following one's natural curiosity and proclivity.

3) **Creative problem-solving** – fundamental to all learning, creativity, flexibility and ability to solve problems are essential for the 21st century learning and living (education).

The question of adventure, resilience and creative problem-solving resonates in the minds of

both beginning and experienced teachers because these characteristics naturally emerge when normative teaching practices and the need to explore the possibilities for more responsive ways to teach in the 21st century is raised. Studies have shown that most of the reforms of advances in global or transnational learning are imposed on teachers rather than developed with them. This is why Fullan (1994) argues that teachers' capacities to deal with change, learn from it and help students to learn from it is critical for the future development of societies. In other words, there is need for a new mindset to go deeper into such a mindset to enable educators become agents and not victims of the change in the twenty first century education.

To successfully engage in transnational learning, the intending university should have what others do not have or something that is unique and on demand. What the institution has for transnational learning should be transformative enough to attract the attention and interest of both the learners and teachers from other nations. Qurix (2019) succinctly captures the essence of the 21st century education in his pre-convocation lecture at the Federal University, Lokoja, titled, "Transformation and Entrepreneurship as Hallmarks of the Twenty First Century University Education in Nigeria". In the lecture, he outlined the leading issues in the 21st century which require urgent transformation or solution through education. They include climate change, sustainability, manufacturing, economic growth, security, world health, gender issues, education, multimedia, good governance, leadership and recruitment. Transformation is all encompassing hence transnational learning is and should be transformative in practice. For instance, Bingham University is noted globally for her adventure, resilience, creative problem-solving and excellence in the area of medical training and research; this has brought her not only into limelight, but has earned her collaboration with the Liverpool School of Tropical Medicine (LSTM) in TB/HIV diagnosis and treatment. Zankli Research Centre in Bingham University is being used by both staff and students from the LSTM as well as the host University. Bingham has also commenced faculty and student exchange with Sumy State University, University of Wolverhampton, to mention but only a few.

IV. THEORETICAL FRAMEWORK

Media Richness Theory (MRT)

The main assumption of the Media Richness Theory (MRT) is bridging the gap between face to face (f2f) communication and computer mediated communication (CMC). The emerging digital communication technology has made great impact in this regard as social media (Web 2.0) has the capacity to create a significant high level of social presence through the use of 'video chatting' and 'teleconferencing'. In other words, distance and cost are no longer barriers to enjoying a high level of social presence in a communication encounter made possible through social media technology (Computer Mediated Communication).

R. L. Draft and Macintosh Corporation developed Information Richness Theory (IRT) in 1981 which is also known Media Richness Theory (MRT). The theory shows the ability of Computer to enhance communication within an organization. Today, Computer Mediated Communication (CMC) does not only enhance communication within an organization, but computer has also enhanced communication outside an organization, that is, both internal and external communication. Established in 1984 by Richard L. Draft and Robert H. Lengel, Media Richness Theory evaluates the richness of certain communication media such as phone calls, video conferencing or teleconferencing and email. Draft and Lengel argued that the success of an organization depends on the ability of the organization to process information with adequate or appropriate richness, reduce uncertainty to the barest minimum and clarify all forms of ambiguity. Therefore, the main assumption of this theory is that clear, concise and understandable flow of information brings about the success of an organization.

As technology advanced, Draft and Lengel (1990) reviewed the Media Richness Theory to align with the digital world, hence, the theory is no longer restricted to business organizations but it also applies to individuals, groups, non-governmental organizations (NGOs), civil society organizations (CSOs), media organizations and educational institutions to communicate between and among friends, family members, teachers and students as well as the larger audience. The ultimate aim of this theory is the clarity of the message being transmitted which depends largely on the richness of the media used for transmission (Patton, 2008).

Barrow (2009) sums it up thus:

> Media Richness Theory proposed by Draft and Lengel in 1984 essentially states that task performance increases when the task needs are matched to the medium's richness. The theory suggests that individuals predictably favour the use of specific communication medium to perform certain tasks. Specifically, that rich media are more likely to be found appropriate for "equivocal" communication, which occurs more in complex tasks.

The view of Barrow (2009) here is that the summary of Media Richness Theory takes into cognizance, the speed of transmission of information or message, feedback, interactivity, completeness and clarity of message enabled the richness of the medium or media used.

Its major strength is that it is self-explanatory. Its weaknesses include lack of or little consideration for new digital or electronic media, and several social and cultural backgrounds and pressures that can influence the choice of media. Media Richness Theory is related to this study in many ways, such as the speed of feedback, interactivity and some level of social presence it creates, areas of applicability and because the theory also originates from the literature on computer mediated communication (CMC).

V. CONCLUSION

More than ever before, new technology, finances, competition for students, and enrollment opportunities make **NOW** the right time for digital communication and transnational learning which must be embraced by all. Doubtless, digital communication and transnational learning are transformative, evolving, mutually beneficial and challenging. However, the challenges are surmountable, if the intending institutions would do the needful by way of a deliberate efforts in putting all the modalities in place for its success. The modalities include digital communication infrastructures, a comprehensive business model, value-added propositions, technology, qualitative and conducive learning environment among others. The vision and mission of transnational learning should be transformative in nature taking into account the basic learning skills in the 21st century education such as critical and creative thinking, collaborating and communicating skills information literacy, media literacy and technology literacy. They should also include flexibility, initiative, social skills, productivity and leadership skills.

The qualities of leading a positive adventurous life, resilience, creative problem-solving possessing unbridled freedom, tenacity of purpose, following one's natural curiosity and proclivity should be the hallmarks of the 21st century teaching and digital media communication. However, it has been observed that many teachers in the 21st century education are quite slow in updating themselves with the latest technologies and techniques of communication and teaching while some others do not see the need to undergo training in the use of technology for 21st century communication, teaching and learning particularly for a trinational learning. Some universities, especially in Africa vis-à-vis Nigeria are doing little or nothing to key into this exciting and rewarding form of communication and learning in the globalized society.

Igyuve, et al (2021) carried out assessment of online lecture by Bingham University during the COVID-19 Lockdown in Nigeria. The study used survey and structured indepth interview to elicit data from the respondents. The result of the research shows that the exercise was effective as it enabled the University to complete its 2019/2020 academic session despite the COVID-19 Lockdown. The study is similar to the present one because they both assessed the use of digital technology for interactive communication that cuts across all the borders.

VI. RECOMMENDATIONS

In view of the foregoing, the study recommends as follows:

i) Every university that intends to embark on digital communication and transnational learning should have a differentiator, value-added proposition or flagship point and work assiduously to improve and sustain it.

ii) The intending universities should have a blueprint or business models for digital communication and transnational learning and ensure compliance with the roadmap.

iii) 21st century teachers should as a matter of priority and urgency upgrade themselves and be high-tech compliant and imbibe the qualities of adventure, resilience and be highly creative in problem-solving.

iv) Learners in 21st century education should have critical and creative thinking, collaborating and communicating skills, information literacy, media literacy and technology literacy.

v) Flexibility, initiative, social skills, productivity and leadership skills are also essential for the 21st century learners.

REFERENCES

[1] Barrow, T. (2009). Media Richness Theory. Available at: http://blog.timebarrow.com/2009/09/media-richness-theory/. Assessed December 31, 2019

[2] Daft, R.L. & Lengel, R.H. (1986). Organizational information requirements, media richness and structural design. Management Science 32(5), 554-571.

[3] Faulkner, J. and Latham, G. (2016). Adventurous Lives: Teacher Qualities for 21st Century Learning. Australian Journal of Teacher Education. Vol. 41, Issue 4.

[4] Fullan, M. (1994). Change Forces: Probing the Depths of Educational Reform. School Development and the Management of Change Series: 10 Britol, PA: Falmer Press.

[5] Heritage, M. (2008). Learning Progressions: Supporting Instruction and Formative Assessment. Washington DC: Council of Chief State School Officers.

[6] Igyuve, A., Odeba, B. & Misal, D. B. (2021). Assessment of the Effectiveness of Online Lectures by Bingham University during the COVID-19 Lockdown in Nigeria. International Journal of Research and Innovation in Social Science, 5(7), 158-165

[7] National Commission on Excellence in Education, A Nation at Risk: The Moral Imperative of Educational Reform. Available online: https//www2ed.gov/pubs.NatAtRisk/index.html (accessed on 10 February 2020).

[8] Patton, M. Q. (2008). Utilization-focused evaluation (4th ed.). Thousand Oaks, CA: Sage Publications.

[9] Qurix, W. B. (2019). Transformation and Entrepreneurship as Hallmarks of the 21st Century University Education in Nigeria. Being a Pre-Convocation Lecture of the Federal University, Lokoja, Kogi State during their Convocation Ceremony delivered on December 12, 2019.

[10] UNESCO (2013). UNESCO Principles on Education for Development Beyond 2015. Paris: https//en.unesco.org/post2015/files/UNESCOPrincipleslonEducatio nforDevelopmentBeyond2015.pdf