BLENDING LEARNING IN UNIVERSITY EDUCATION: AFFORDANCES AND DRAWBACKS FOR DIGITAL NATIVES AND DIGITAL IMMIGRANTS IN DEVELOPING NATIONS

Dr (Mrs.) Anekwe, J. U. & Dr. Samuel A. Mezieobi
Department of Curriculum Studies/Education Technology
Faculty of Education
University of Port Harcourt
Rivers State, **NIGERIA**

ABSTRACT

This paper stressed the importance of blending learning in the university education. It argued that blended learning will infuse the digital natives and the digital immigrants into a common front where both groups could share a common knowledge together. It also argued that the third world nations that are low in technology could combine ideas with the developed nations high technological inputs to strike a balance to close the gap in their digital divide. This will necessitate each group to learn from one another. The developing nations in the process would enhance economic development, reduce unemployment and improve the standard of living through blended learning integration. The fact is achieved through the theoretical framework of constructivism, Vygostsky social theory and Piaget's theories. The engagement theory outlined the process of making the students highly involved in the learning process. However, besides, the digital natives and digital immigrants' interaction in a classroom setting would create opportunity for affordance in the learning process. However, the drawbacks have equally been discussed. The paper conclude that while the developed nations are technologically advantaged and the developing nations are disadvantaged, that their interaction and interconnectivity through blended learning would enable the third world nations meet up with the technological advancement of the developed nation. Consequently, the developing nations would be pulled out of their dependency syndrome.

Keywords: Blended learning, affordances, drawbacks, digital natives, digital immigrants, develop ping nations and developed nations.

INTRODUCTION

Learning is defined as "acquired knowledge, wisdom or experience" (The American Heritage Dictionary, 1979: 744). In the same vein, Izuagba (2002) defined learning as a process of acquiring knowledge, ideas, skills, values and experiences which enable the individual to modify his/her world view, to realize his/her goal or perform a task which hitherto he/she could not do. Besides, Onwuka (1996) viewed learning as the permanent acquisition and habitual utilization of the newly acquired knowledge or experience. Contributing to the above ideas, Mangal and Mangal (2009) see learning as the process by which an activity originates or is changed through reacting to an encountered situation, provided that the characteristics of the changes in activity cannot be explained on the basis of native response, tendencies, maturation, or temporary state of organism (e.g. fatigue or drugs). However, some authors believe that learning should be technologically based while others are of the opinion that learning should be blended.

This paper is therefore an attempt to x-ray the concept of blended learning (BL) at university education level, the benefits accruable from employing the approach at that important level are many. The affordances and drawbacks should be explained fully with the view of proffering solutions for improvement. The theories that supported the blended learning will be discussed with their implications to teaching and learning with blended approach. The concept of the digital natives and digital immigrants will be discussed with comparison between the two.

The Concept of Blended Learning

This is an educational process that combines online digital medial with traditional classroom method. Blended learning is synonymous with the following terms: hybrid learning, technology-mediated instruction, web-enhanced instruction and mixed mode instruction (Martyn, 2003). This blended learning comprised also personalized learning, differentiated instruction, integrated instruction, flipped classroom and e-learning. It combines factors like online digital media with traditional classroom setting methods of teaching. In this classroom setting, the students and the teacher stay together in the class and interact with each other. During the process of interaction, the blended learning system is used by combining face-to-face instruction with computer mediated instruction, (Bonk and Graham, 2006). In other words, blended learning has no definite definition. It is a mixture of various learning strategies that make up multiple teaching models that take place in a learning environment.

A learning environment could be addressed as a place that includes communication media to interact with students (Gagne, 1970). The advent of technological explosion has given rise to prolification of technological inputs into the global system. As higher institutions seek a way for effective interaction with a larger number of students, the availability of the internet and web technologies provided the answer – through online and distributed systems (Carr-Chelman, 2006, Dempsey & Von Eck, 2007).

The blended learning is a very innovative learning process that combines both online and in-person learning experiences when a teacher teaches the students. The implication of this learning strategy is that a student might attend a class taught by a teacher in a traditional classroom setting and at the same time acquire online learning experience outside the classroom. In effect, the blended learning experience would offer the students the opportunity to be balanced in their learning experiences. The blended learning has forms which can come in various shapes and categories according to individual desires as would be seen below:

Forms of Blended Learning Strategies

Martyn, Margie (2003) outlined the distinctive learning forms as:
- **Online instruction**: This process involves the delivering of instruction to students via an online approach with an occasional face-to-face interaction of the teacher with the students. Here the students have the opportunity to interact with the teacher as if they are in constructivist class section.
- **Rotation**: In this setting strategy, the students move from self-set time period of independent online study to face-to-face (F2F) meeting and interaction with the teacher in the classroom environment. Here the time schedule is fixed but could be made flexible according to prevailing circumstances.

- **Personalized blend structure**: At times, the teacher designs a face-to-face encounter with the students anywhere, anytime as learning options might crop up. This is as a result of time and space constraints – because learning is constant but time changes.
- **Flex**: Most of the lesson content is delivered online. In the process, the teacher would be there to give the needed guidance and support to the students as they work in small-group settings solving problems.
- **Online laboratory**: In this laboratory format, the instruction is delivered online to students who are present in the specified laboratory. The online teacher delivers the lecture and the paraprofessional staff supervises online.
- **Self-bend approach**: Students generally exert efforts to maximize their understanding of lesson contents by supplementary their online learning with the traditional course work. It makes the students have added advantage in their studies.
- **Face-to-face (F2F):** The teacher comes face-to-face with the students and delivers his lessons and support the teaching with technological support like the computer or other devices to enhance effective learning.

Theoretical Support to Blended Learning

The BL concept which is a mixture of technological method and traditional method of teaching has been well instituted into the modern learning theory. This theoretical framework has implications on interactivity and technology as its root. These include: Vygosky's and Piaget's views of constructivism and Greg and Ben's theory of engagement as discussed below:

Constructivist Theory

Constructivism theory simply based on observation and scientific study about how people learn. Teachers cannot give the students all they need to survive. Students are required to construct knowledge in their own mind based on the knowledge of the world and environment, through experiencing things and reflecting on those things. For example, when we encounter a new thing, we have to reconcile it with our previous ideas and experiences. The teacher only facilitates the process by giving the students opportunities to discover and apply ideas by themselves. This is the underlying assumption of constructivist theory.

Devries and Zan (2003) opined that constructivism is a type of learning theory that explains how human learns, that human learning is an active attempt to construct meaning in the world which must be more active and self directed. Again, Dele (2008) posits that, constructivism assumes that learning is socially and individually constructed. Learning is seen as the acquisition of meaning in a realistic context which is advanced through interactive and authentic experience that involves interest of the learners through active participation.

Taking into cognizance the above scholars' view, constructivism holds that learners are not blank slate but are filled with experiences which will be brought to the learning context. That is why it is assumed that it is the acquisition of knowledge in which every new capacity acquired is used to build a foundation established by prior capacity.

Besides, constructivists believe that individuals should construct their knowledge. In other words, they are active creators of their own knowledge. To this, individuals should ask questions, explore and assess what they know. It is a theory that requires an individual to prove how he knows what he knows. The constructivists actually believe that learning is

divided into two types. These are (1)Accommodation and (2) Assimilation which focus on the individual's ability to learn and that the teacher is there to help and guide them in their self-directed learning. Every learner individually and socially constructs meaning as he/she learns.

Vygotsky Social Cultural Theory

Vygotsky (1896 – 1934), a Russian, dealt with the role of social interaction in the development of cognition. He termed learning "as social process" and looked at other factors such as the peers, parents, cultures as prime causes of knowledge development in the child. Vygostky holds that social interaction plays a major role in the development of knowledge in a child, (Vygotsky, 1978).

Dele (2008) and Robert (2009) came up with the fact that this theory pressed that the interaction of interpersonal, cultural and individual factors are the key factors to human development. This social cultural theory has its root on the following assumptions:
1. Social learning
2. Zone of proximal development (ZPD)
3. Mediated learning

Applying Vygotsky's theory to teaching

Vikoo (2015) outlined the areas where the theory could be applied in teaching as follows:

a. **Use the child's ZPD in teaching**
   Teaching should be done where the zone of proximal development of a child could be reached and the child is guided to perform the skills with the necessary supervision until he masters the skills.
b. **Use of scaffolding**
   Students should be helped to reach their desired goal through encouragements and other desired helps when the child forgets what to do (Santrock, 2001).
c. **Monitor and encourage children's use of private speech**
   Children should be monitored to regulate their speech to themselves and others.
d. **Encouraging peers to help in teaching other mates**
   Intelligent students should be engaged in helping the weaker ones by pairing them up in class activities.
e. **Assess the child's ZPD and not IQ**
   Assessment of a child's ZPD is the main factor in measuring the learning potential of a child. ZPD is an interpersonal factor in measuring the performance of a child.

Implications of the Theory of Teaching

Blended learning theory is sequel to constructive teaching where teachers are not seen as dispensers of knowledge but facilitators. It is assumed that they own knowledge themselves. But by the use of blog in blended learning environment, the teacher is only the facilitator of knowledge while the students learn by themselves through peer tutoring, peer-to-peer interaction as they practice with tutorial guidance.

The use of web application or computer mediated approach do act as effective scaffolding strategies to make the learner come out of the zonal proximal development to where he can

perform assigned tasks with ease. Also, social software such as blog and other social networking sites are all interactive and allow students to effectively participate and learn by themselves. Fomsi (2015) concluded that such interactive process leads to the social construction of meaning.

Blended learning in a technological form are congruent with constructivism. They are in conformity that learners do not passively consume what is taught but they interact with the content from where they construct meaning from the knowledge created and at the same time integrate the new knowledge with the existing one which is the advocate of blended learning.

Piaget's Theory of Development

With regard to the development of children's cognitive functions, Piaget's theoretical views centered on founding principles of constructivism. In his theory, he observed that learning takes place in a child through adaptation to his interactions with the environment. He said that two processes are involved in the way children get adopted to an environment: assimilation and accommodation. Mental conflict in the child's mind that seeks for solution gives rise to assimilation of new experience. This new experience is added to the existing stored knowledge of the learner if the experience makes meaning. Accommodation is the modification of the existing schemes to fit new situations.

If the children assimilate and accommodate experiences in such a way that an organized pattern is experienced, Piaget calls the process a schema. He further posted that it is this existing pattern in a child that determines how information is perceived and processed. If this new information makes sense in relation to the existing one in the mental structure of the learner, the new information is recorded into the structure. This is known as Assimilation. Assimilation is the process of incorporating a new object or experience into the existing scheme.

Accommodation is a process whereby information items are passed to the existing mental structure to assimilate, but if the data is difficult for assimilation, they are either rejected or transformed into another pattern. The learner then can change the new pattern to the environment by incorporating the new knowledge into the existing pattern. That is, knowledge is invented and re-invented as the child grows and interacts with his environment (Driscoll, 2004). As the children grow, they assimilate new information into their existing mental structures, the ideas gained are more complex and their understanding of the world around them grows greatly. Piaget (2001) observed that the ideas are core concepts of the constructivist view of learning process.

Identifying Piaget's and Vygotsky's Theories

Vikoo (2015:151) identified some ideas of the theories thus:
Table 1

Topic	Piaget	Vygotsky
Constructivism	**Cognitive constructivist**	**Social constructivist**
Stages	Strong emphasis on stages (sensory motor, preoperational, concrete operational and formal type)	No specific stages of development issued
Key process	Schema, assimilation, accommodation, operations, conservation, classification,	Zone of proximal development, language, dialogue, tools of the

	hypothetical – deductive reasoning	culture
Role of language	Minimal; cognition primarily directs language	Major; language plays a powerful role in shaping thoughts
View on education	Education merely modifies the child's cognitive skills that have already emerged	Education, plays a central role, helping children learn the tools of the culture
Teaching implications	Teachers are seen as facilitators and guide, not directors; give support for children to explore their world and discover knowledge	Teachers are facilitators and guide, not directors, they establish opportunities for students to learn with their teacher and more technical instructors
Teaching implications	Teachers are seen as facilitators and guide, not directors; give support for children to explore their world and discover knowledge	Teachers are facilitators and guide, not directors, they establish opportunities for students to learn with the teacher and more technical instructors

Source: Vikoo (2015:151). Learning Theories and Instructional Processes.

Engagement theory

The basic concept of the theory is that in engagement, students should be meaningfully engaged or involved in their own learning through collaboration and learning through collaboration and interaction in a worthwhile task. The underlying principle is that when learners are meaningfully engaged, they are gladly motivated to participate in the learning process. In effect, they are able to retain more of what they are taught and are able to apply the learnt concepts in solving life challenges that could be faced at any given time.

Engagement theory is a technological based theory which O'Brien and Toms (2008) stated that it is enhanced with hands-on activities using technological inputs. This theory has three basic principles that are necessary for effective engagement processes. These principles are as follows:
1. **Relate:** Team learning process. Here team members have to collaborate and communicate with one another to share ideas, thoughts, knowledge and skills which will enable them to learn more effectively.
2. **Create:** Learning involves creativity and innovation directed towards purposeful work on projects. It stimulates project learning activities among students on their projects. In the process, there exists the sense of belonging which stir in them the ability to learn through practical experience.
3. **Donate:** The attention of learners should be geared towards genuine tasks and activities that have outside usage. The tasks and activities should be problem solving in nature for effective engagement of students in the process. This stimulates learning.

Various Ways to Enhance Students Engagement

Learning communities stand out to be the relevant method of enhancing students' learning environment. According to Zhao and Kuh (2004), as in Bassani (2014), learning communities are effective ways for students' engagement. The communities are formed by group of learners basically to increase learning through experiences. They are social groups that are mutually related on their learning needs. As pointed out in Bassani (2014), on social network, social softwares' development and use in academic activities promote learning. Social

network sites, Wikis and blogs promote the creation and sharing of contents and the interaction with others which will sustain attention, motivate users and create sense of belonging in them. Consequently, students' engagement theory can foster collaboration, promote activities, interaction among the group and increase in authentic activities.

Application of the Theory to Teaching and Learning

Engagement learning theory could be applied in various forms as follows:
- Emphasizes on the use of technology to facilitate the engagement of students in learning.
- Difficult tasks are made easy by engagement learning.
- Collaborative learning and interactivity among learners are the main goals of web 2.0 applications in learning.

Blended learning promotes the above characteristics in the students.

This theory has a great influence in blending learning. In this learning process, the digital natives and digital immigrants work together as a team irrespective of their technological environments. As a team, they combine skills, together and communicate in planning and project execution. In the process, both groups learn from each other as they execute the projects in their learning process.

Why Blending Learning in University Education
University Education

University education is course of study which a university offers to train manpower for effective implementation of personal and national goals.

A University: This is an institution of higher education and research which offers degrees in different academic disciplines. University education in developing countries provides under/graduates and post graduates with high technical education. It could equally be termed as the totality of overall knowledge and functional skills that give the university graduates power to solve problems that they encounter in the industry or as they perform scientific research or pedagogical work within the area of operation (Encyclopedia, 1979).

University education also refers to the training provided by the university in order to prepare people to work in various fields of endeavor. The beneficiaries of university education may be employed in research sectors and design institutions, in general education schools, secondary and highly specialized institutions. University education provides students with training in most essential areas of humanity and natural sciences (Encyclopedi, 1979).

In another angle, the drawbacks could be organized into three broad headings with their overcoming strategies:

Technicality Issues

The issues are not that of applying technology to networks per se but the assurance that the applied technology could perform the expectant function.
1.   Make sure that the participants are conversant with the use of technology.

Solution: The technologies available should be introduced to the participants in small bits in a very simple way. In the presentation process, there is need to have a trained support and facilitator who could handle the problems as they came up.

2.   Do not use the technology in a hurry because of their availability.

Solution: Make sure you introduce the technology in a simple format where the students should base to inculcate their learnt lesson into useful use.

Problem of Organization

Management generally assumes that blended learning is the best way of training participants but in actual fact, it is a complicated system approach that needs careful approach to actualize learning.

3.   It should be wholly accepted that blended learning is not effective enough to overshadow the traditional classroom training method.

Solution: The use of orientation is the main factor to the solution in that the participants should be exposed to the whole experience such as the way to install and use technology, effective participation and adequate attendance and completion of the course requirements. On the other hand, managers should have their own orientation on the outcome of the participants' experiences and the appropriate way to help them overcome their problems. Facilitators should introduce early programmes in the minds of the students to get them prepared their minds for effective learning process.

4.   Explaining the role of facilitator:

Solution: The facilitators should be parts and parcels of the blended learning programme in order to understand the experiences of the participants. For this idea to remain alive, a team teaching method could be adopted using another facilitator according to experience to help energize and sustain interest of the learners as the crucial details are being addressed. Facilitators should be able to understand that each part of the blended learning concept is very vital.

5.   Controlling and evaluating the participant progress

Solution: It is the duty of management to assess and evaluate all segments of the blended learning to ensure completion. Assessment of the result can be monitored and stressed to make sure that all necessary requirements are accomplished. The facilitator should maintain close contact with the participants to make sure that the expectations are met.

Instructional Design Problems

As the instructional designs in learning technology is adopted, people pay more attention to technological implementation without caring for the necessary designs that will be used to accomplish the necessary programme including time and budgeting process constraints therein.

6.   Find out how to teach what to teach.

Solution: Before you teach, go through the design process and select the content that would be beneficial to the participant such as face-to-face encounter on collaborative learning process. The good efforts put in the process is never a waste in the long run.

7.   Equating the most appropriate delivery medium to the performance outcome of the objective.

Solution: Instructional designers should be in the position to evaluate the learning content in order to validate the learning objectives which will be used to assess the methodology to be employed in the process of delivering lesson content. If the

assessment warrants self-paced format, it could be done that way but if it requires traditional classroom setting or virtual classroom, it could be done that way. The major fact is that the teaching assessment determines the format to be employed.

8. Maintaining interactive online contacts active

    Solution: Maximize time is all operational activities in a class setting 12 to 20 minutes could be selected for a topic. Even for virtual classroom setting, try to engage the participants effectively in activities that stimulate learning such as clicking a green check mark etc.

9. Make sure the participant's commitment is enhanced in the learning process.

    Solution: Always make sure that the participants are carried along in the assessment process. There would be no movement to live sessions without completing the assessments as required. To make progress, start smaller and design more live components and by so doing learning takes place.

10. Maintaining a coordinated learning blend.

    Solution: The use of visual course map in conjunction with self-paced work can induce the participants to get organized. By using course website, contact information for the facilitator, producer and the technical support could be easily assessed in the page. It is very important to maintain a solid communication plan with dates and important information necessary for easy assessment when need be.

The development of any nation or society depends largely on the creative capacity of the citizens to be capable of effecting exploring the country's natural resources and transforming them into finished goods and services so as to enhance the standard of living of the citizens. Literature is replete with the fact that university education is not functional. This is become its system has failed to equip its beneficiaries with the needed skills for scientific, economic and technological development. It is axiomatic that the economic, scientific and technological development of any nation depends on the quantity and quality of skills offered by the school system to the citizens of the nation. The citizens do not benefit enough in the system of education offered to the students because in an university there are different groups of learners. We have digital natives and digital immigrants. They are as follows:

Digital Natives

Prensky (2001) defined digital natives as a new group of students who were born after 1980 following the introduction of digital technology. These children are born into it. They are classified as "native speakers" of the digital language of computers, videos, video games, social media and other sites on the internet. All over the world now, digital natives are surrounded by technology, often from childhood. They began their life experience with learning and using technological equipment. These groups of students are savvy to smartphones, ipads, xBox, facebook, whatsapp, twitter and other technologies.

Digital Immigrants

Prensky (2011) regarded these groups of students as those born prior to 1980. He termed the group as those who grew up reading newspapers, playing board games and cards. These people know what record is. They watch news in the television and watch the weather records. They are the group of people who mix the old system of life style with the new one.

The most interesting thing is that these groups of students are today in the universities attending lectures together. Most of the time the lecturers are digital immigrants teaching

digital natives mixed with digital immigrants. Let us look at the differences between digital natives and digital immigrants in the table below:

Table II

Digital immigrants	Digital natives
They prefer talking on phone or in person	They communicate through texts, chat, facebook, on line games, etc
They are not conversant with texts. They do that reluctantly	They text more than calling. They are very conversant with texts.
They communicate one on one in real time such as phone conversations	They communicate using e-mail, facebook or chat
Learn more through instructional materials that are sequential in steps	They do not relate to manuals for problem solving. They prefer trial and error system of approach to problems or by experimentation
Information are received gradually and sequentially	Information are received fast and simultaneously from multimedia sources
Does singular processing or limited tasks	Can do parallel processing many tasks at a time and can switch tasks.
More interested in reading books, texts, processing pictures, sounds and videos	Interested in processing and interacting with pictures, graphics, sound and video before text

Source: Dr. Prensky's (2001). Differences between Digital Immigrants and Digital Natives

Implications of Digital Divide between Digital Immigrants and Digital Natives

The swift move of technology which comes up with complicated computers and technological gadgets places a sharp divide between digital immigrants and digital natives. At times the digital immigrants are forced to meet with digital natives which generally results in conflicting ideologies. In the teaching process, the digital natives have an added advantage in that they have had an increased experience in teaching which has great influence in the way they interacts and handle digital devices. To teach these groups of digital natives needs that a teacher should move away from traditional teaching methods to the teaching methods that will be in line with their native language (digital).

On the other hand the immigrant teacher would be in conflict on how to teach the "digital natives" in immigrant language. Consequently, they struggle with proficiency level to meet up with the requirements of the digital natives in the process of integrating technology into the classroom. This struggle at times makes teachers look unprofessional in front of the students. Therefore it is imperative for teachers to embrace the new technology in order to enhance teaching and learning in the classroom. There are different ways the digital natives learn. These ways include power point, excel, webquest, web 2.0, interactive whiteboard, blogs, mobile tools, computers and wireless tools. See the diagram below.

Table III: Best Approaches to Educating the Digital Natives
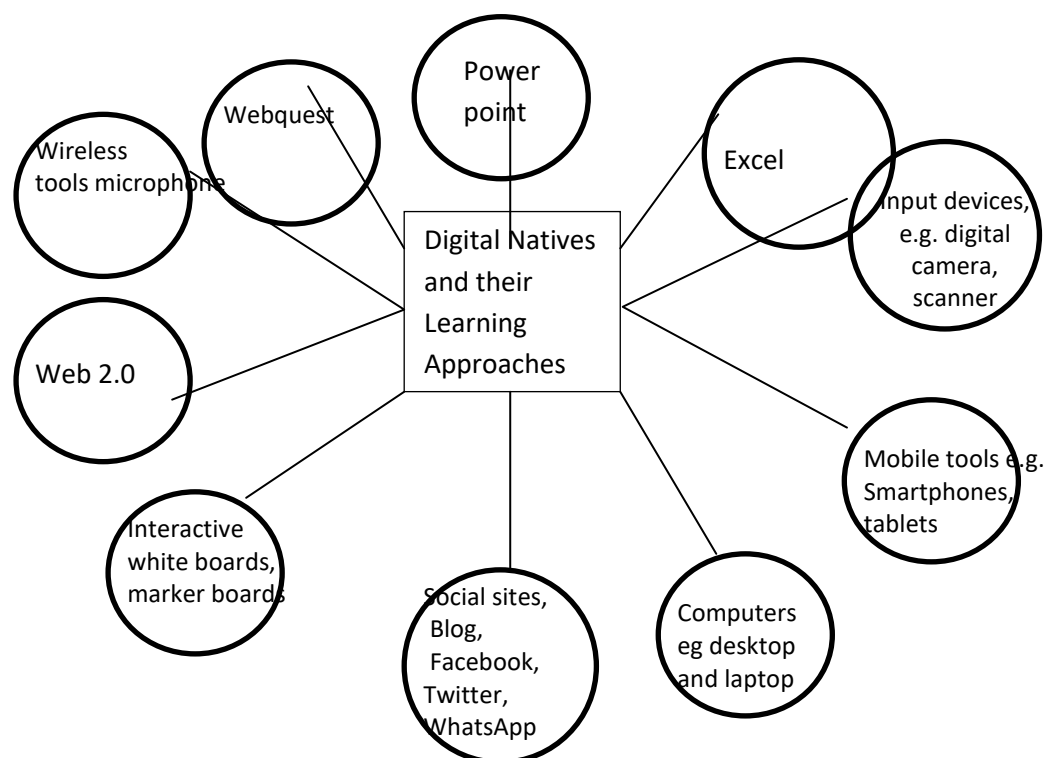
The above teaching approaches are reliable tools for teaching the digital natives (Pacansky – Brock, 2013). It is therefore imperative that the digital immigrant will give themselves to personal development so as to have the wherewithal in the use of the emerging technologies. As advancement in technologies continue to revolutionalized the global trends in teaching and learning as students make their choices, educators in the developing world are to be familiar with the ways to apply the new devices as shown above in the learning arena.

Table IV: Ranking of Social Networking Sites

S/N	Sites	Number of Visits per Month
i.	Facebook	1,100,000,000
ii	Twitter	310,000,000
iii.	LinkedIn	255,000,0000
iv.	Pinterest	250,000,000
v.	Google Plust	120,000,000
vi.	Tumbler	110,000,000
vii.	Instagram	100,000,000
viii.	VK	80,000,000
ix.	Flicker	65,000,000
x.	Vine	42,000,000
xi.	Meetup	40,000,000
xii.	Tagged	38,000,000
xiii.	Ask.fm	37,000,000
xiv.	Meetme	15,500,000
xv.	Classmates	15,000,000

Source: http:www.ebizmba.com/articles/social-networking-websites. Adapted from Fomsi and Nwaizugbu (2016)

In another angle, Fomsi and Nwaizugbu (2016) highlighted some social network sites which are very beneficial to both the digital natives and digital immigrants for interconnectivity globally and collaboration among developing and developed nations. The social network sites that enhance learning in digital era and the number of individuals who normally make use of the sites in a month are shown below:

Problems of Developing Nations in Adapting the New Technology in Teaching

The third world nations are still far behind in technology. The factors for the backwardness are not far-fetched. They include among others:
1. Poor living conditions
2. Poor productivity output
3. Population explosion and dependency burden problem
4. Unemployment and underemployment burden
5. Predominantly agricultural
6. Very low technological usage in everyday activities and in school.
7. Highly dependent on international economy for survival
8. Hardships due to economic down turn of third world economy
9. Diseases and poor health facilities
10. Infant mortality rate increase
11. Political instability and terrorism.

Based on the above factors, the third world nations are not in line with the developed world technologically. Digital natives and digital immigrants are terms used to describe the technological timeline the individual was born either before 1980 or after 1980 (Prensky, 2001). In the third world nations, "native speakers" who are "born digital" are very scarce rather we have a handful of "digital immigrants" who handle the educational settings in all the educational institutions. But very recently the "digital immigrants" in the universities are learning the digital language of computers, videos, video games, social media and other sites on the internet in order to be able to teach the "digital natives" already in the class. At the same time, the "digital immigrants" should accommodate the digital natives so that they should work together and learn together through blended learning.

The web outlined what the digital natives shall teach the digital immigrants when they come together to learn in the blended classroom and what the digital immigrants will teach the digital natives as well.

Lessons from Blended Learning

Digital natives teach the digital immigrant the following:
1. To work together across boundaries with different sets of people
2. To integrate value culture in life
3. To come up with horizontal solutions to issues

Digital immigrants teach the digital natives the following:
1. To achieve immediate goals
2. To maximize resources in building things appropriately
3. To revamp the existing institutions

Therefore, there is need to encourage developing nations to get developed especially in education. That would make the students to be equipped with 21st century skills. Such skills are strong communication and collaboration skills, expertise in technology, innovative and creative thinking skills, and the ability to solve problems. The above skills will prepare the

third world nations to meet up with the necessary workforce that will transform the face of those nations to belong to interconnected world.

Benefits of Interconnected World

The NCTE defines the 21st century literacies as follows:
- develop proficiency and fluency with tools of technology
- to have international cross-cultural connections and relationships with others in order to access and solve problems in a collaborative way to help strengthen independent thoughts.
- to formulate and share information for the consumption of global community
- to control, analyze, synthesize a stream of information simultaneously.
- create, critique, analyse and evaluate multimedia texts
- to meet up with the professional ethics enshrined in the complex environments.

Blended Learning Affordances

- The students have the opportunity to learn more new things due to the introduction of different learning environments, online and face-to-face encounter.
- Students are motivated as they learn new skills for their projects and other learning tasks.
- Students learn the process of interacting with one another. They have the opportunity to voice out their opinions and share others opinions for effective learning to take place.
- Time efficiency is inherent in blended learning. The students could be in a better position to ask questions above the lesson content and equally respond to questions without time limitation. It is more effective on the part of the students when they are supported online after F2F encounter with the teacher (Ganham and Kaleta, 2002).
- Reinforcement in the learning process enables the students to work harder. The combination of F2F encounter with the online support gives the students the opportunity to conduct more research, do group work, quizzes and projects (Johnson, 2008; Kreijns & Jochems, 2003).
- More resource availability is an added advantage. Here the students using online environment supported by F2F environment are helped to enhance discussion and peer interaction. In other words, the opportunity to encourage multiple avenues in a learning process increases the learning potentials of students in both environments (Woods & Hopper, 2004).
- The interactions processes in online and F2F environments, Moore (1989) and Anderson (2003) enhance strong interaction which would increase opportunities for different interaction processes to take place. Therefore the combined online and F2F delivery methods of teaching and learning has the ability to offer the students the opportunity to utilize different media available to them to support their learning in any of the environments such as in synchronous and asynchronous discussion moments.
- The blended classroom environment gives the teacher the opportunity to prepare and deliver lectures in more flexible way than in a traditional classroom setting.
- Blended classroom teaching is cost effective as more students are taught more effectively at lower cost to the school.
- Blended learning collects and stores data, customize instruction, assess students records and provide information, parents details and that of the teachers.

- Talented students can use educational technology to achieve greater feat in technology than their counter parts.
- Blended learning gives the students the sense of ownership over the learning process and this sense of ownership propels them to greater heights.
- Blended learning provides the students with real life skills that can transform them to acquire some innovative skills for national productivity and greatness in life.

Nevertheless there are disadvantages in this blended learning affordances, the above benefits notwithstanding. There are equally many drawbacks.

Drawbacks of Blended Learning

- Heavy workload: The combination of workloads in the two environments makes the course load heavier than available in a single environment load. Consequently, the students in the learning process have no time to most of their other needs.
- Assignments and readings in the two environments are overwhelming. Also some students experience difficulties in online environments such as in uploading documents, responding to discussion contents without teacher's guidance. In all, the students battle a lot to balance the workload and be able to meet up with good academic performance.
- The problem associated with cultural context and language in use: In a class for instance, the students could come from different backgrounds including different countries with different languages. Some may not be fluent in English Language but the language of instruction in university is English. The language could be a barrier to non-native speakers of English language and for those students with deficient writing skills (Palloff and Pratt, 2007). This could make them drawback from the activities and the team work experience which they are supposed to acquire among the group members.
- The students feel that the interdependence of the two environments is a barrier to them in that success in one environment is as a result of the success in the other. They see F2F activities bound to online activities which make their participation and learning difficult.
- In-person supervision: Without in-person supervision, students could spend most of the useful time operating social media, charting with friends instead of engaging in their school work.
- How prepared are teachers trained for blended classroom learning? The question that comes to mind is how far are teachers trained in technological facilities to enable them perfect in blended learning? To achieve this feat, teachers must be given adequate training on how to teach the students in blended learning context. Adequate technological approach is required but if the teacher cannot operate the facilities well, the blended learning would be ineffective.
- How are the infrastructure? Are they appropriate to operate technological gadgets in the classroom? Without infrastructural facilities, it would be very difficult to operate blended classroom.
- High maintenance cost: The cost of acquiring modern technological gadgets is very high. This could be one of the reasons why most universities in developing nations suffer from inadequacy of technological facilities. Consequently such universities still rely on traditional approach to teaching and learning.
- Digital literate lecturers who can conveniently integrate technology into teaching with face-to-face approach are not easy to come by in developing nations. Anekwe (2016)

made an observation that technological facilities like social media devices are still used to a low extent in universities in developing nations.

Strategies for Improvement

Blended Learning should be improved in various ways as outlined below:

- The government should increase the funding of the universities in order to select the highly qualified lecturers to handle blended classroom education.
- The quality and availability of teaching materials technical and otherwise should be made available to the competent lecturers.
- The lecturers should be very conversant with the quality and content of the instruction and curriculum.
- The infrastructure must be made adequate for effective learning such as classrooms, libraries, laboratories and other physical facility investments.
- There should be enough modern teaching techniques such as those available to the digital natives which the lecturer should employ to stimulate both digital natives and digital immigrants in the learning process.
- Availability of specialized lecturers to handle some special issues online and F2F encounter.
- Consideration should be given to the workload given to students by the lecturers both in online and face-to-face encounter.
- Modern management and administrative techniques should be constantly applied to monitor and evaluate performance of both lecturers and students.
- The lecturers should use the lecture language in such a way that students from other learning environments should be carried along in the learning process.
- Adequate supervision should be instituted to make sure that students do not waste their precious time in operating social media, charting and watching films in the social media.

When the above factors are taken into consideration, the learning affordances would be fortified and the drawbacks would be reduced.

SUMMARY

The blended learning in university education is a new strategy to integrate digital natives and digital immigrants in a learning process in a classroom setting. It involves personalized learning, differentiated instruction, integrated instruction, flipped classroom and e-learning process was discussed based on constructivist theory, Vygotsky social theory and Piagets theories. The engagement theory was used to emphasize the importance of effective engagement of the students in the learning process in the universities. Various problems associated with the blended learning were highlighted. The digital natives and the digital immigrants were discussed together with the problems associated with the third world adapting the new technology in teaching. The affordances and drawbacks of blended learning were extensively treated. The strategies for improvement were equally highlighted.

CONCLUSION

As the developed nations are technologically imbued with advanced technology and the third world nations are technologically in limbo, it is therefore necessary that this technological

gap should be bridged by blended learning strategy. The third world nations are used to face-to-face and chalk and talk method of lecture delivery. This group of learners are the digital immigrants. But the developed nations use computers and other technological gadgets in teaching and learning and the learners are called digital natives. It is in the blended classroom system that the two groups should come together to learn. There will be a cross fertilization of ideas; the digital immigrants and the digital natives would interact with each other and share ideas together. By so doing, the digital immigrants would be able to teach the students and the digital natives would be able to learn from the digital immigrants as the case maybe. This will bring about intellectual harmony and global interdependence among nations. This is the crux of this study.

REFERENCES

Anekwe, J. U. & Augustine, S. E. (2016). Instructional system design. In C. Williams and E. Avwiri (eds.) *Information and Communication Technology in Education: A new Learning Portal.* Pg 291 – 311. Port Harcourt: Pearl Publishers International Ltd.

Anekwe, J. U. (2006). *Effect of constructivists based instructional model on students' interest and academic achievement in French Language in Anambra State.*

Bonk, C. J. & Graham, C. R. (2006). *The handbook of blended learning environments.* Global perspectives, local designs. Sam Francisco: Jossey – Bass/Pfeiffer. P.s

Carr-Chelman, A. A. (2006). Desperate technologists critical issues in e-learning and implications for higher education. *The Free Library.* Retrieved January 25, 2011, from http://www.thefreelibrary.com/Desperate+technologist%3a+critical+issues+in+e-learning+and...-a0142788515.

Dele, H. S. (2008). *Learning theories: An educational perspective.* Pearson, London.

Devries, B., Zan. B. (2003). When children make rules. *Educational leadership,* 61(1), 64-7.

Driscoll, M. P. (2004). *Psychology of learning for instruction* (3rd ed). Upper Saddle River, N.J: Allyn & Bacon.

Encyclopedia 2. *The freedictionary.com/university+Edu:*

Federal Republic of Nigeria (2004). *National Policy on Education.* Yaba NERDC Press.

Federal Republic of Nigeria (2013). *National Policy on Education.* Yaba, NERDC Press.

Fomsi, E. F. & Chimezi, N. (2011). Undergraduate students readiness for use of online chart for collaborative learning. *TechnoLEARN,* 1(1), 1 – 11.

Fomsi, E. F. & Nwaizugbu, N. O. (2016). Social networking: The apps and learning potentials. In C. Williams and E. Avwiri (eds), *Information and Communication Technology in Education: A new Learning Portal.* Pg 114 – 125. Port Harcourt: Pearl Publishers International Ltd.

Gagne, R. M. (1970). *The conditions of learning.* 2nd edition. Holt, Rinehart and Winston, Inc.

Ganham, C. & Kaleta, R. (2002). *Introduction to hybrid courses (electronic version). Teaching with Technology Today,* 8(6), Retrieved January 5, 201 from http://www.uwsa.edu/ttt/articles/garnham.htm. http://www.huffingtonpost.com//jeff-degraff/digital-natives-vs-digitalb5499606.html

Izuagba, A. C. (2012). *Effective teaching, principles and practice.* Mercy Devine Publishers, Owerri, Nigeria.

Johnson, D. W. & Johnson, R. T. (2008). Cooperation and the use of technology. In J. M. Spector, M. D. Merril, J. Van Merrienboer and M. P. Driscoll (Eds.). *Handbook of Research on Educational Communications and Technology.* 3rd ed, pp. 401-423. New York: Lawrence Erlbaum Associates.

Lothridge, Karen; et al. (2013). Blended learning: efficient, timely, and cost effective. *Journal for Forensic Sciences.*

Mangal, S. K. & Mangal Uma (2009). *Essentials of educational technology.* New Delhi PHI Learning Private Limited.

Martyn, Margie (2003). *The hybrid online model: Good practice.* Educause Quarterly: 18-23.

Moore, M. G. (1989). Editorial. *An expanded sourcebook: Qualitative data analysis.*

O'Brien, H. L. & Tom, E. G. (2008). User engagement with technology. *Journal of American Society for Information Science and Technology* 59, 6(2008), 938 – 955. DOI: http://dx.doi.org/10.1002/asi 20801.

Olutola (1983). *Cosmetics policies and the challenge of education for national development. The Inaugural lectures.* University of Ilorin, Ilorin, Nigeria.

Omotayo, D. M. (2008). The state of university education and academic excellence in Nigeria. *Journal of Qualitative Education* 4(4), 14-19.

Onwuka, Uga (1996). *Curriculum development for Africa.* Onitsha. Africana Fep Pub.

Pacansky – Brock, M. (2013). *Best practices for teaching with emerging technologies.* N.Y: Routledge Publishers.

Prensky, Marc (October, 2001). *Digital natives, digital immigrants.* On the Horizon. 9(5): 1-6.

Robert, E. S. (2009). *Educational Psychology theory and practice.* Pearson, London.

Santrock, J. W. (2001). *Educational psychology.* New York: MacGraw-Hill.

Tadaro (197), *Economic development in the third world: An introduction to problems and policies in global perspective.* Longman Group Limited, London.

The American Heritage Dictionary of the English Language (1979:774), Houghton Miffin Company, Boston 02107.

The NCTE Definition of 21st Century Literacies". www.ncte.org. Retrieved 2016 – 01 – 30.

Vikoo, B. (2015). *Learning theories and instructional processes.* Pearl Publishers International Ltd., Port Harcourt.

Vygotsky, L. S. (1978). *Mind in society.* Cambridge, M. A: Havard University Press.

Woods, R. Baker, J. D. & Hopper, D. (2004). Hybrid structures: Faculty use and perception of web-based courseware as supplement to face-to-face instruction. *The internet and Higher Education.* 7(4), 281 -297.