TEACHING FOR CREATIVITY AND INNOVATION FOR SUSTAINABLE ECONOMIC DEVELOPMENT AMIDST COVID-19 PANDEMIC IN NIGERIA: IMPLICATIONS FOR EDUCATIONAL STAKEHOLDERS

[1]AHMED ALHASSAN, [2]ALIYU ABUBAKAR & [3]AGATHA NYAM A. P.

[1&3]Department of Educational Psychology and Counselling, Federal University Dutsin-Ma, Katsina State.
aalhassan1@fudutsinma.edu.ng

[2]Department of Security Management and Technology, Katsina State Institute of Technology and Management.
aliyuabubakar936@Gmail.Com

Abstract

This study examined the influence of teaching for creativity and innovation for sustainable economic development amidst Covid-19 pandemic in Nigeria, With a specific focus on understanding what is currently occurring with regard to the changes in society, our daily routines, and work life in response to COVID-19 as it affect teaching and learning. And also the specific outcomes of creativity and innovation on personal, organizational, and social well-being towards Educational development of the country. The writers relied on context analysis and used secondary data which include published and unpublished materials like text books, journals newspapers and internet materials. the paper finally recommended that: teacher should always be open to new ideas and ready to adjust to actual situations. Teachers should do all their best to endorse motivation on the children, creative outputs should also be given due consideration and recommendation, teaching courses focusing on creativity lead to student-centered learning, and directed toward activities of high interest to the learner, so teachers should highly encourage and give room for learned centered approach. Creativity is the foundation of change and innovation in the development of Education and attainment of creative society. Creativity and innovation is the best solution to many problems facing teaching and Learning in the contemporary world.

Keywords: Creativity, Innovation, COVID-19, Pandemic, Creative Skills, Creative Society

Introduction

The COVID-19 also known as the coronavirus pandemic, is an ongoing pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). It was first identified in December 2019 in Wuhan, China. The World Health Organization declared the outbreak a Public Health Emergency of International Concern in January 2020 and a pandemic in March 2020. As of 19 January 2021, more than 95.9 million cases have been confirmed, with more than 2.04 million deaths attributed to COVID-19, across 190 countries around the world UNESCO (2020).

The outbreak of the COVID-19 disease has posed great challenges to the worldwide economy and people's daily lives and will have far-reaching consequences beyond the spread of the disease. At the same time, crisis is also a strong driver of creativity and innovation.

Much of the research on creativity and innovation stresses the need for time and effort for creative thought, accomplishments, and innovation implementation. However, taking time to respond creatively may be a luxury that is not available when a crisis emerges like what we are now facing currently in different part of Nigeria, Examples, The Lagos Lekki toll gate Killings and crises, Hijacking of materials Worth billions from the Government Reserved Stores in many States of the Country, End SARS crisis, harder's and Farmers crisis, killings and banditry in the Northern part of Nigeria among Others. All aforementioned may happen if the creativity and innovation have been given official National recognition as one of the fundamental aims of the curriculum in Educational settings. Nevertheless, despite this crisis and uncertain situations, teaching for creativity and Innovation is at its gear state in different part of the country as some students still get access to their teachers through various creative skills adopted by the teachers, where they learn one or more creative ideas, Interestingly, the current COVID-19 crisis has suggested that it may not always be the case that time is needed to develop a creative and innovative response and creativity can nevertheless thrive underconditions. The purpose of this Research Topic is therefore to investigate the influence of COVID-19 crisis on teaching of creativity and innovation, and the role of creativity and innovation in the fight against COVID-19, as well as their relationship to resilience and coping. With a specific focus on understanding what is currently occurring with regard to the changes in society, our daily routines and work life in response to COVID-19. More also the specific outcomes of creativity and innovation on personal, organizational, and social well-being towards Educational development of Nigeria.

Creativity can be simply described as "successful personal activity intent on producing an appropriate new idea or object" (Newton & Newton, 2009). Within the domain of student learning, teachers can serve as facilitators or inhibitors of creativity and therefore, play an important role in the development of creative skills within the educational system (Sternberg, 2003). At the classroom level, the incorporation of teaching practices that promote creativity can lead to positive changes in student behaviour, social skills, self-esteem, motivation and academic achievement. Torrance, (1966) viewed creativity as "a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies, identifying the difficulty; searching for solutions, making guesses or formulating hypothesis about these deficiencies; testing and retesting these hypotheses and possibly modifying and retesting them; and finally communicating the results".

According to Plucker and Beghetto, (2004). "Creativity is the interplay between ability and process by which an individual or group produces an outcome or product that is both novel and useful as defined within some social context". Creativity and Innovation has recently been granted official Global recognition as one of the fundamental aims of the curriculum in Educational settings in most of the developed countries, potential creative children are assets that can be used to change society and even the world at Large, they are creative and inventive (Torrance, 1966). Creativity and innovation cannot be taught in the classroom, but can only be guided by Teachers, Being a teacher is one of the most responsible and demanding tasks. A teacher is a person who directs and influences people, especially when it concerns teaching small children. People are mistaken to think that the task of a teacher is simply to share experiences and to test the knowledge of students. The truth is, teachers prepare students for the hardships and pleasures of life, they help Children to feel some sense of self-confident and motivated. This can only achieved when the students developed some sense of creative skills in them, A good teacher is able to inspire in a student a craving for knowledge, a bad teacher, on the contrary, can destroy a student's ambitions and aspirations. By diverting the student attention to think otherwise of his creative potentials,

It is vital for any teacher to constantly develop his creative skills. Creativity is highly appreciated everywhere.

A conducive environment must be created to generate new ideas and awaken curiosity and an innovative spirit. This can be achieved through integrative learning, which enables problem-solving in realistic and authentic situations. Such processes boost self-confidence, build competencies based on personal resources. If our goal is to encourage the development of creativity and innovation, then schoolwork may not be separated from the local community and the production process… Nonetheless, encouraging the students to produce new ideas is just the first step. A good idea must be developed, solidified, launched and eventually marketed (Likar, 2004, 2007). Talent and determination are not sufficient; an individual needs additional knowledge in order to succeed. In the model we advocate, students try to translate their creative ideas into useful results by means of the entire invention-innovation process, which involves through knowledge of certain phases and procedures that they can learn if properly instructed. As well as instructing students in innovation. It is also important to teach them how to present their ideas and projects to the public. In this way, we help them develop their competence in entrepreneurship, although their abilities may not be evident until they enter the "real world" of work or life outside of school (Svetlik, 2009). An individual cannot possibly display their competencies until they find themselves in such a context. The highest level of competence is best demonstrated when responding to atypical situations. Examples has clearly manifested during the current Covid-19 Pandemic, where students were distanced from schools, classes and even entire academic enviroment. Therefore outmost and emergency solution has only be achieved through creative skills. The curriculum should enable pupils to think creatively and critically, to solve problems and to make a difference for the better. It should give them the opportunity to become creative, innovative, enterprising and capable of leadership to equip them for their future lives as workers and citizens,

The Problem

The speed of the spread of the Covid-19 pandemic, leads to closure of all Educational education institutions across the country. Some institutions transited to online teaching, this was so swift that it hardly gave any time to plan and to reflect on the potential risks or the potential opportunities that such a sudden change could bring, one of which is passive learning by students, the sudden shift to online learning without any planning especially in countries like Nigeria where the backbone for online learning was not ready and the curriculum was not designed for such a format. This has created the risk of most of our students becoming passive learners and they seem to be losing interest due to low levels of attention span and subsequently killing their innovative skills.

More also, unprepared teachers for online education, Online learning is a special kind of methodology and not all teachers are good at it or at least not all of them were ready for this sudden transition from face to face learning to online learning. Thus, most of the teachers are just conducting lectures online via Zoom, teleconferencing etc. which may not be real online learning in the absence of a dedicated online platform specifically designed for the purpose. There is a risk that in such a situation, teaching for creativity and innovation through learning outcomes may not be achieved and it may be only resulting in engaging the students. The role of Nigerian educational institutions has been questioned (Craft, 1999) and blamed for "spoon feeding" and "killing" creativity (Kaila, 2005). The increased pressures to gear education towards meeting the requirements of national curriculum, inspections and monitoring has led to the feeling, for some, that creativity in teaching and learning has ceased to exist and this will prevent governments from achieving a "creative society" (Grainger, 2004). Which would subsequently leads to National Economic Development.

We need knowledge that will lead to the creation and attainment of a creative society which will help the Nation to stand on its own economically, capable of producing all its required and compete with any developed Nation. The level and standard of Education of a nation is what is used as a judgmental standard to determine whether or not a country is developing or otherwise, this is evidently clear at recent various crisis across Nigeria as a nation, where majority of the participant in those crisis are Youth who supposed to be in the class learning various Creative skills so as to make impact to themselves and to the Nation, in Contrary and unfortunate they end up in the street Violently protesting for one thing or the other. The research work will vividly show the role of covid-19 pandemic and its effect on creativity and innovation as a focal centre of attention, and reason why and how creativity and innovation need to be given special consideration, so as to achieved the desired objective of the educational system for the creation of creative society.

Role and Importance of Creativity and Innovation in Classroom
A good classroom environment always has some elements of creativity which makes the lessons more interesting and interactive. The right mix of creativity along with curriculum helps students to be innovative and also encourages them to learn new things. Students can grow up as good communicators in addition to improving their emotional and social skills. Creative classrooms can really transform the way students acquire education and how they apply it in their real life. In fact, creative expression plays a key role in a student's emotional development.

However, it is the role of a good teacher to bring in the right mix of creativity in classrooms and bring out the best in the students. The pleasure of creativity also contributes a lot to improved health and this helps them to have a continued growth in academics as well as world of creativity. During a TED talk, Sir Ken Robinson, (2020) raised the utmost significance of creativity in today's education when he said "Creativity now is as important in education as literacy and we should treat it with the same status." Every child has some inbuilt creativity in them and proper guidance from the teacher coaxes and cultivates it to help them grow up as creative individuals. You will agree with the fact that education should provide you with skills that will help you prepare for and face the challenges life throws at us. Days of traditional educational systems where students learnt lessons by rote has gone. Where by students were not allowed to think out-of-the-box, it was the age when teachers too were not equipped with skills that they could ignite the creativity in students.

With modernization, this drawback paved the way to include classroom activities aimed at improving the creativity of students. Teaching creativity as one of the subjects of study was made possible through a model of giving instructions to students with an intention to hone their creativity; a natural ability to thrive in a fast-paced and highly-competitive environment.

Teaching and Creativity Sternberg, (2003) in his critique of creative thinking in the classroom stated that: "Teachers who reward all kinds of creativity are those who are likely to find among their students those who have made one of the most important decisions a person can make in his or her life: the decision to be creative". In light of this, a number of studies have been undertaken with a focus on assessing the knowledge of teachers in regards to creativity and the effect of teaching characteristics on student creativity.

The study of Hosseini (2002) showed that the provision of information to teachers regarding alternative educational structures focusing on creativity promoted changes in knowledge and attitudes that resulted in the incorporation of new skills suited to the development of student creativity. Results indicated that the

teachers developed a stronger awareness that creativity can be expressed by every student and that creativity can be enhanced. In general, research has shown that teachers who maintain positive relationships, with a genuine interest in and respectful acceptance of student skill levels, are effective in the development of creativity (Sternberg and Williams, 1996). Teachers are more capable of promoting creativity in their students if they acquire an improved understanding of the concept themselves (Seo, 2005). Knowledge of creative thinking assists in the establishment of a creative atmosphere in classroom, improved learning and in the formulation of positive attitude towards their students. Teachers' deeper understanding of creativity will facilitate the development of strategies for enhancing creativity and the creation of educational programs that focus on creativity (Murdock, 2003; Slabbert, 1994).

Teaching for creativity according to Torrance (1966), include the following expectations from the teachers:

1. Teachers should consider the characteristics of creative children
2. There should be informal school system where there will be all available materials required 3. Engage expert in the field for them to interact with
4. Individual oriented teaching method and assessment should be applied
5. Teachers should encourage learner centered approach

6. Provide in-class time for individuals and groups to just think and let their ideas marinate.
7. Reward creative ideas and products through public recognition - even if the ideas are still developing or perhaps fail.
8. Encourage students to take unique and different approaches in their work and reward any efforts in this direction.
9. Allow mistakes and model positive, supportive responses to mistakes. Encourage learning from their mistakes.
10. Encourage mental flexibility - taking other viewpoints that they might not usually take.
11. Explore the environment to stimulate curiosity about their world.
12. Question students' assumptions and guide them to dig deeper and consider their beliefs and others' to expose students to other ideas.
13. Stop evaluating or judging too soon. There is a time and place when ideas and their constraints need to be considered, but not too soon or the process will flounder.
14. Foster cooperation rather than competition.
15. Offer choices.
16. Encourage dissent and diversity.
17. Regularly provide positive feedback.

Global Issues on Creativity and Innovation amidst Covid-19 Pandemic.
Covid-19 Pandemic has made many Individuals, expert and professional teams and organizations to finding Emergency Innovative Solutions to the challenges posed by the pandemic globally. Another component of creativity according to Amabile, (2020), implies that merits explicit attention – the ability to make something happen. Ideas, said Peter (2016) are "cheap and abundant; what is of value is the effective placement of those ideas into situations that develop into action."

Like all skills, mastery of creative thinking requires practice and an encouragement to play, experiment, fail and persevere. Therefore teachers have a lot of role to play so as to encourage and develop a sense of intrinsic motivation among their students, as well, Executives leader's ability and encouragement has direct influence to the system. Most of the Covid 19 problem-solving is being done by people with little

extrinsic motivation. Keyworkers appreciate our sincere outpouring of gratitude but it is not *Clap for Carers* that draws them to hospital every day nor is it their wages.

It is *intrinsic* motivation that explains so much of the heroism and innovation we are seeing around the world, fueled by a desire – or sense of duty – to save lives. Problems are being solved precisely because people have an inner passion to apply their talents meaningfully.

Motivation can come from the task itself, and the encouragement from those setting it. How we frame that challenge really matters. Good example has been seen in some of the Nigerian Universities where Technologist and Expert in the academic system come to realize the relevance and need for them to contribute their quarter towards reduction of the spread of the Covid-19 pandemic. They come up with hand sanitizers, Face masks etc., locally made from the little resources available in those Universities, which really gave an immense contribution to the system.

The France's largest companies have joined forces to 'produce 10,000 ventilators in 50 days'. Might the UK's Health Minister have framed the need for increased testing in a way that was as immediately and intrinsically motivating, instead, a goal of 10,000 tests a day was soon shifted to 25,000 and again to 100,000 tests. A challenge needs to be stretching *and* achievable if it is to instill confidence and to act as a magnet for the diverse talent it will need to solve it.

In the High Performance Powertrains department of Mercedes AMG, experts typically apply their technical excellence to power Lewis Hamilton to F1 World Drivers Championships. With ventilators in short supply, they asked themselves, how can more patients be kept out of intensive care? Collaborating with engineers from University College London and clinicians at University College London Hospital, the Powertrains people created a new device, the Continuous Positive Airway Pressure (CPAP), secured the approval of health regulators, and launched it in less than a week.

More also, EdWeek Research Center Survey (ERCS) conducted a research, and conclusion was made based on the responses obtained from various teachers who participated in the online teaching during the covid-19 pandemic, various responses was received via interviews and an open-ended question so to ascertained views and perceptions on how COVID-19 Change Teaching, for Better or Worse? Semistructured interviews with teachers These interviews comprised Eight main topics: level of technology use by teachers before the COVID-19 pandemic; methods of lesson implementation in the classroom before the COVID-19 pandemic; level of teacher concerns; methods of online learning implementation and student assessment; assessment of remote learning, challenges, and opportunities, attitudes toward remote or online learning; and level of motivation of teachers to implement online learning. In addition to the areas explored, the general characteristics of the participants were collected during the initial part of the interviews.

Results
Table 1. Data of the participants – total number of teachers (n = 20) seven were women and thirteen men, with an average age of 15.5 years of working experience.

item		N	%
Gender	Men	13	65
	Women	7	35
Level of education	Ass.Prof	1	5

Masters		9	45
Bachelor's		7	35
Others		3	15
Average no of students	N	20	
Average		30.5	
Years of working experience	N	20	
	Average	15.5	
Age	N	20	
	Average	53.5	

The findings stresses that: "Teachers who reward all kinds of creativity are those who are likely to find among their students those who have made one of the most important decisions a person can make in his or her life: the decision to be creative". In light of this, a number of studies have been undertaken with a focus on assessing the knowledge of teachers in regards to creativity and the effect of teaching characteristics on student creativity.

Teachers play an integral role in the education system in general. When they are provided with the opportunity to commit to professional development programs that make strong connections with theory, research and practice they are better prepared to influence the knowledge and skills of their students in a positive manner. Creativity is one of such area, particularly in countries such as Nigeria, where educational change and restructure is an important priority, targeting towards achieving a creative society. Constraints – like lack of time and money – are more creatively overcome when the goal is certain, particularly when the uncertainty of the context – a pandemic – is itself debilitating

"Everything that is really great and inspiring is created by the individual who can labor in freedom." - Albert Einstein, (1950). Creativity is the foundation of change and innovation. It is the solution to many problems. Therefore, it is the responsibility of education to foster creativity in our students. The concepts behind enhancing creativity are easily integrated in problem-based instruction, resource-based learning, experiential learning, and collaborative learning. As a field of study, creativity is still young and growing. With further research may come more recommendations for classroom teachers and hopefully changes in school organization, curriculum, and facilities, Creativity research could change how we look at our educational settings, and will address problems facing our Education system. Kamlesh Misra, (2020), identifies key areas and opportunity of creativity and innovation arose from the covid-19 pandemic as follows:

1. **Rise in Blended Learning**

Universities and colleges will shift to a model of blended learning where both face to face delivery along with an online model will become a norm. This will require all teachers to become more technology savvy and go through some training to bring themselves to the level that would be required. New ways of delivery

and assessments of learning outcomes will have to be adopted which opens immense opportunities for a major transformation in the area of curriculum development and pedagogy.

2. Learning management systems to be the new norm

A great opportunity will open up for those companies that have been developing and strengthening learning management systems for use by universities and colleges.This has the potential to grow at a very fast pace but will have to be priced appropriately for use by all institutions.

3. Improvement in learning material

There is a great opportunity for universities and colleges to start improving the quality of the learning material that is used in the teaching and learning process. Since blended learning will be the new format of learning there will be a push to find new ways to design and deliver quality content especially due to the fact that the use of learning management systems will bring about more openness and transparency in academics.

4. Rise in collaborative work

The teaching community to a large extent has been much insulated and more so in a country like Nigeria. There is a new opportunity where collaborative teaching and learning can take on new forms and can even be monetized. Faculty members/ teachers can deliver online courses to even students from competing institutions. Collaborations can also happen among faculty/teachers across the nation to benefit from each other.

Finally, it is expected that there will be a massive rise in teleconferencing opportunities which can also have a negative impact on the travel. A large number of academic meetings, seminars and conferences will move online and there is a possibility that some new form of an online conferencing platform will emerge as a business model, this will beyond reasonable doubt promote the national economic development.

Conclusion   One of the reasons why educational systems have been regarded as barriers to developing and "releasing creative potential in teaching and learning" is that the teaching focuses on "knowledge acquisition" (Davies, 2002). Knowledge, as an outcome of education is said to be no longer sufficient (Scoffham, 2003; Guilford, 1975). This is because it is difficult to know what knowledge will be needed in the future (Parnes, 1970). The country need many creative potentials so as to promote the actual teaching for creativity and innovation across all level of education. This will ensure attainment of creative potential into the students, and guidance/motivation are essential nutrients that will aid the process that will lead to attainment of excellent result.

Recommendations

The research comes up with the following recommendations as observed by the researcher

1. The students participate in classroom activities with stronger motivation, so teachers should do all their best to endorse motivation on the children.
2. Completion of a teaching course focusing on creativity lead to student-centred learning, and directed toward activities of high interest to the learner. Teaching and as a consequence learning, was perceived to be more successful when accomplished and contributed to an improvement in the educational progress of the students.
3. Students should be given much assistance in providing new and novel ideas.

4.   Their creative outputs should also be given due consideration and recommendation, because lack of concern in their invention diminish their interest.

5.   Teachers should be current and up to date with issues regarding creativity, this will deeper understanding of creativity and will facilitate the development of strategies for enhancing creativity and the creation of educational programs that focus on creativity.

References

Amibile, P. (2020). Integrating learning technology into classrooms: The importance of teachers' perceptions. *Journal of Educational Technology & Society*, 5(1), 67-74.

Almutari, H. (2009). Social media for professional development and networking opportunities in academia. *Journal of further and higher education*, 40(5), 706-729.

Bear, B. & Kim, G,(2015). Evaluating the use of Facebook to increase student engagement and understanding in lecture-based classes. Higher Education, 69(2), 303-313.

Craft, Y. (1999). *Leading strategic change*. Cambridge: Cambridge University Press.

Davies, K. (2002). Research on the administrator professional training and its role in the implementation of educational institutions reforms in Kosovo. *Interdisciplinary Journal of Research and Development*, 1, 26-30

Ecoffan, S. & Guildford, J. (1975). Empowering or disempowering the international Ph. D. student? Constructions of the dependent and independent learner. *British Journal of Sociology of Education*, 28(5), 589-603.

Goode, S., Willis, R. A., Wolf, J. R., & Harris, A. L. (2007). Enhancing IS education with flexible teaching and learning. Honey, M., Culp, K. M., & Carrigg,

Grainger, F. (2004). Perspectives on technology and education research: Lessons from the past and present. *Journal of Educational Computing Research*, 23(1), 5-14.

Husseini, R.H., (2020). *Handbook on Facilitating Flexible Learning during Educational Disruption:* The Chinese Experience in Maintaining Undisrupted Learning in COVID-19 Outbreak. Beijing: Smart Learning Institute of Beijing Normal University.

Kaila, Y. (2005). Educational use of social networking technology in higher education. Teaching in higher education, 15(6), 703-714.

Kothari, C. (2010). Research Methodology. New Delhi: Wishwa Prakashan.

Kamlesh, M. (2020). Teacher resistance to educational change in India. *International Journal of Research Studies in Education,* 2(3), 2536.

Liker, J. B. (2004, 2007). A Case Study of Teachers' Perceptions of Change and Change Implementation at a Rural Public School. ProQuest LLC. 789

Mordock, J. A. (2005) & Slabbert, H.(1996) Coaching teachers for change: Using the concepts of psychological type to reframe teacher resistance. *Journal of Psychological Type*, 65(6), 47-58.

Newton, N. (2009). Benchmarking the motivational competencies of academically and professionally qualified teachers in Nigerian Secondary Schools. *African Symposium Journal of Africa Educational Research Network,* 5:17-37.

Pernes, F. (1970). Understanding behavioral intention to participate in virtual communities. CyberPsychology & Behavior, 9(5), 540-547.

Plucker, S., & Beghetto, M. (2004). Exploring digital scholarship: *A study on use of social media forScholarly communication among American academics*. In Research 2.0 and the impact of digital technologies on scholarly inquiry (pp. 117-142)

Sternberg O, S. (2003). Creative mood swings: divergent and convergent thinking affect mood in opposite ways. *Journal of Psychological Research,* 76 (5), 634-640

Sternberg, O. & Williams J. (1996). *Thinking Styles Review*. Cambridge, UK: Cambridge University Press. Slavin, O, (2015).Measuring academic programme performance and accountability. Florida: Macmillan.

Soe. R, (2005). Flexible Teaching and Learning: Perspectives and Practices, Uni-Serve Science News. Lurvnik:

Suetlik, L. (2009). Education reform and the role of administrators in mediating teacher stress. Teacher Education Quarterly, 33(4), 143-159.

Torrance, M. (1966). Investigation the effect of the harmony in Students and teachers cognitive Styles in Students and Teachers Cognitive Styles on the academic achievement of First Year Students of Shahrood. Master Dissertation.

UNESCO. (2020, March 30). COVID-19 Webinar: A new world for teachers, education's frontline workers. https://en.unesco.org/news/covid-19-webinar-newworld-teachers-educations frontline-workers,