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c. Edited Book:

i. *A book with editors:*

Davis, Carol Boyce & Anne Adams (Eds.), (1986). *Ngambika: Studies in Women in African Literature,* Trenton, New Jersey: Third World Press.

ii. *A book with an author who is also the editor:*

Burgess, R. G. (1982). 'The unstructured interview as conversation' in Burgess, R. G. (Ed.), *Field Research: A Source Book and Field Manual.* London: Allen and Unwin.

For further information, please consult our ***call for papers*** at the end of the Journal.

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EDITORIAL

This 9th volume is the second issue since the corona virus pandemic began. We extend a very warm welcome to our authors and readers. The pandemic rages on and researchers round the globe are doing various investigations related to it. We made a call for papers in 2019 and published in June 2020. Right after that, we made another call in August 2020. We are just lucky to maintain our minimum target of one publication per year (12-month intervals). We are grateful that God is helping us to hang in there.

Our call for papers for the current issue (Volume 9) had the theme, *the Global impact of The Corona Virus Disease on Education.*

Once again, our first article of Volume 9 is written by Inaku Egere, who responded specifically to our call for papers on the corona virus. Egere investigated mobile-learning (M–Learning) of undergraduate students in private universities in Nigeria during the COVID-19 pandemic lockdown. According to him, COVID-19 protocols caused a paradigm shift of pedagogy. To evaluate students' performance based on the shift of the learning pedagogy from face to face (F2F) to m-learning, a non-experimental quantitative design was used. A questionnaire was used to gather data from undergraduate students of the Faculty of Education, Veritas University Abuja and the Faculty of Arts and Social Sciences, Catholic Institute of West Africa Port Harcourt, Nigeria. The sample of 233 was derived from a total population of 560 students. Data analysis revealed that, m-learning improved students' performance. To get even better results the study recommended the embellishment of ICT hubs with e-learning facilities throughout Nigeria.

The second article of Volume 9 was authored by Abdulai and Diedong, who examined service quality and customer satisfaction of Mobile Telecom services in Tamale Metropolis in Northern Ghana. The study employed a mixed method research design. The sample size for the study was 401 respondents. Data was sourced from key informant interviews, questionnaires and focus group discussions. The results showed that customers perceived service quality and satisfaction differently. While most Vodafone customers were satisfied with their service, customers of MTN were dissatisfied. The study concluded that some aspects of the operations of both MTN and Vodafone networks require improvement. Service providers need to improve service quality.

The third and final article of the ICT section was conducted by George.

George, Rahman and Ofori believe that since the development of digital media technology, students have embraced the use of Information and Communication Technology (ICT) creativity. However, most of the students have challenges in the use of ICT and this has a negative impact on the pedagogy of creativity in education. To address this issue George sets out to investigate the challenges of using ICT in the creative process. This qualitative approach, a purposive sampling method used a sample of 150 students from the Communication Design Programme. The Statistical Package for Social Sciences (SPSS) was used to analyze the data. The results indicated that most of students lacked competence in using ICT on creativity. It is recommended that students are taught how to develop new concepts and ideas for creativity.

In the Pedagogy subsection, Nabie investigated the interactions of Circuit Supervisors (CSs) with basic school teachers in Ghana. The objective of these interactions was to facilitate the effective teaching of mathematics. The participants of the study were 55 basic school teachers (43

males 21 females). A 20-item anonymous questionnaire was used to gather data regarding CSs activities in the schools of participants. The data were descriptively analysed. The results showed that the feedback provided by CSs, which was intended to support instructional delivery was "at variance with mathematics teacher needs for effective practice and contrary to curriculum recommendations." The researcher suggested a qualitative study involving the CSs to generate further data to analyse with a view2 to address the challenge of effective mathematics instruction at basic schools in Ghana.

Adiyiah, Dieudonne and Ameyaw investigated the effect of teachers' self-efficacy on students' performance. They asserted that lately, data on Senior High students' Biology performance had been on serious decline nationwide. They therefore set out to examine the effect of teachers' self-efficacy on students' motivation and performance in biology. Six teachers and one hundred and twenty students from two Senior High schools in the Ashanti Mampong municipality of Ghana were the participants. The data collection involved the use of three instruments namely teacher self-efficacy questionnaire, students' motivation questionnaire and photosynthesis achievement test items. The results were analysed using Pearson product-moment correlation and one-way ANOVA. The findings revealed that teacher's self-efficacy motivated students and resulted in better academic performance in biology.

These authors conducted a quasi-experimental study using concept mapping and its closeness indices assessment scheme as an alternative learning and assessment strategy. This was necessitated by prevailing inefficient rote learning technique, which could not help students to understand concepts and perform well in biology. A sample of students in the Ashanti Region of Ghana participated in the study. Data collection involved the use of an interactive 5-Es constructivist instructional model delivery, regularly using closeness indices scores and students'

performance test scores in photosynthesis. Analysis was done via one-way Anova statistical tool of SPSS version 21 software. The findings indicated that regular use of closeness indices assessment strategy positively influenced students learning outcomes. Specifically, it promoted their critical thinking and enhanced their conceptual understanding, which resulted in improved academic performance in photosynthesis among participating students of different abilities.

African Studies is the final section of IJOPPIE Vol 9. Dseagu's article on folktales starts the section. Dseagu's paper takes exception to Bascom's (1965) definition of African folktales as fiction that is not taken seriously in traditional societies in contrast to legends and myths. The paper adduces evidence to support the assertion that Bascom's (1965) view of African folktales is "unsustainable". It further asserts that Bascom's definition of folktales had been "discredited long ago". The paper therefore calls on African educators to discard Bascom's (1965) "fallacious" views on African folktales.

Next, under African Studies is Zuure's article on legal systems.

The study examined similarities and differences between the traditional court in Kongo and the modern state-court operating in the area. Additionally, the study explored the prospects of the traditional court in conflict resolution. This qualitative study used the case study design. Sixteen participants were purposively and conveniently sampled and interviewed for data. The findings revealed that the Kongo traditional court and the modern state court had similarities and differences in their approach to conflict resolution. It was also revealed that the Kongo indigenous mechanism to conflict resolution had great prospects. It was therefore, recommended that the two court systems in the area should collaborate for more effective conflict resolution, leading to a more peaceful and harmonious life.

In the third article under African Studies, Zuuri examined the influence of Livelihood Empowerment Against Poverty (LEAP) on household food consumption, access to health services, and children's school attendance of persons with disabilities in the Effutu Municipality in the Central Region of Ghana. The study adopted the qualitative research approach. A sample of thirty-four persons was purposively and conveniently selected to participate in the study. A semi-structured interview guide was used to gather data. The findings revealed that the LEAP programme had a positive influence on household food consumption, access to healthcare, and children's school attendance among PWD beneficiaries in the Effutu Municipality. Zuuri recommended that the programme be regularly reviewed to ensure that it achieves its goals.

Editor – in – Chief

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DIGITAL MEDIA AND DESIGN PRACTICES: THE USE AND CHALLENGES OF INFORMATION AND COMMUNICATION TECHNOLOGY ON CREATIVITY

By

George Kushiator

Department of Communication Design

Kwame Nkrumah University of Science and Technology, Kumasi, A/R, Ghana

Adams Rahman

Department of Communication Design

Kwame Nkrumah University of Science and Technology, Kumasi, A/R, Ghana

&

Hughes Dompreh Ofori

Department of Industrial Art

Kwame Nkrumah University of Science and Technology, Kumasi, A/R, Ghana

ABSTRACT

Since the development of digital media technology, students in design schools and colleges have embraced the use of Information and Communication Technology (ICT) for creativity. However, most of the students have challenges in the use of ICT and this has affected the pedagogy of creativity in education. Therefore, the purpose of this study is to explore the usage and challenges of ICT on creativity. Adopting the qualitative research approach, a purposive sampling method

was used for the study. The sample consisted of 150 students from the Communication Design programme. For the statistical analysis, Statistical Package for Social Sciences (SPSS) was used to generate the frequencies and percentages of the results obtained. The results indicated that a great number of students had no idea about the use of ICT on creativity. It is recommended that the use of ICT can stimulate students to develop new concepts and ideas for creativity.

Keywords: ICT; Creativity; Design Education; Usage; Challenges

INTRODUCTION

The evolution and development of digital media technology have one way or the other greatly impacted on many aspects of our life including education among others. Hence, the introduction of Information and Communication Technology (ICT) in our educational system has also affected the pedagogy of teaching and learning in schools and colleges. It is also believed that growth in the use of ICT for education seems to have increased tremendously and this has affected the pedagogy of creativity in education. On the other hand, students can make use of it to support their imaginative expressions (Loveless, 2002). The pedagogy of most design courses are still embedded in the process of conventional art practice, even though most design educators are struggling to embrace the development of digital media technology.

In many aspects of design practice, creativity in the design studio remains shrouded in the process of material practice. Whenever students are given projects to create art and designs works, they rely on the use of digital tools and thereby make use of ICT to create designs while others rely on traditional media tools to develop their concepts and generate new ideas. Some art educators and students believe that traditional pedagogical approaches to teaching and learning

promote creativity. Yet it is also believed that the use of traditional media and tools inhibits the development of creative expressions.

Some scholars, critics and artists argue that the use of digital media technologies extracts the "sensuality" from the process of art making that stifles students' creativity because digital process is detached from actual material practice (Loveless, 2002; Phelps & Maddison 2008; Wilks et al; 2012). The students for one reason or the other are not able to make use of ICT to create designs. This might be due to their inability to appropriate digital imagery into their creative works. Students in art schools and colleges most of the time makes use of traditional methods to create design works. Hence the knowledge of the students is shrouded in material practice and as a result there is discordance between ICT and the traditional handling of the creative process.

In such a cultural setting, it is important for students to be encouraged and assisted to construct critical thinking and creative enquiry schedules concerning the use of ICT (Coombes 2009). The features of ICT can equally make an unparalleled impact on creative processes; a tool where students can make use of the technology to support their imaginative expressions (Loveless, 2002). Even though the computer has aided students to visualize in fresh ways and form new possibilities for improvement, the advancement of technologies has imposed new challenges on students using ICT to create design works.

PROBLEM STATEMENT

Despite the new opportunities that new media and creative arts have together, some challenges emerged when students attempted to make use of ICT to create design works. It is assumed that the development of digital media technology has been embraced by the younger generation. However, many visual arts students who are part of the younger generation are faced

with the challenges of making use of ICT to transform their design works into expressive and skillful learning activities (Phelps & Maddison, 2008).

Furthermore, the rapid spread of ICT in our society sees individual students working with computers and individual laptops, and access to seemingly unlimited sources of information. Yet the ability to incorporate digital imagery into creative works becomes the major problem faced by many of the design students in our contemporary world. This situation is alarming. Therefore, art educators, designers, and stakeholders in the industry have expressed concern about a lack of creativity among design students in the classroom. They also expressed the need to enhance creative thinking skills in the usage of ICT to create designs (Brad Hokanson, 2006; Mokaram et al, 2011; Loveless, 2002).

OBJECTIVES

Many students in art schools and colleges are perceived to be digital literates, and yet many of them are unaware of the layered context of the art world and its evolving connection with digital media technology (Wilks et al, 2012; Lee et al 2011). In view of that, the study seeks to explore the following research objectives: One objective is to explore the extent to which students can make use of ICT to create art and design works. A second objective is to explore the challenges that students face when the make use of ICT to create design works. The two objectives stated above translate into the following questions as stated below: To what extent can students make use of ICT to create design works? What are the challenges that students face when they make use of ICT to create design works?

SIGNIFICANCE OF STUDY

Exploring the extent to which students can make use of ICT to create design works, the study can support the development and creation of concepts and ideas. Provided they reflect the methods to open-ended investigation and exploration in the influence of ICT. This situation would expand and improve upon students' competencies in the use of digital technology

Exploring the challenges in the use of ICT to create design works, the study would give students the opportunity to make knowledgeable choices of ICT tools. The knowledge of ICT is linked to processes of working and reflecting on the usage of ICT. This approach would improve and enhance the aesthetic sense of students accessible for diverse creative methods.

Exploring the use and challenges of ICT on creativity, would reveal the extent of students' knowledge and skills in creativity; the core essentials of design practices. By this approach the study would be able to identify the competences of students.

Finally, the study would promote the use of strategies to transfer and construct knowledge in creativity. Additionally, students would develop their creative potential and enhance their creative thinking abilities. The study would clarify students' judgments by representatively coding their intellectual abilities to face the challenges of creativity.

LITERATURE REVIEW

ICT and Digital Media Technology

The evolution and development of (ICT) have greatly impacted on the innovation of digital media technology. Subsequently, digital technologies have spread rapidly in many parts of the world (TWI2050, 2019). This novelty has resulted in a paradigm shift in the educational system.

ICT is changing the way people acquire knowledge and offering new alternatives to teaching and learning in the traditional classroom (Voogt, et la 2013). Today, the contemporary classroom sees individual students working with computers and laptops, an access to seemingly unlimited sources of information (TWI2050, 2019). This concerns all levels and fields of education, although there is an explicit emphasis on creativity in artistic, design and cultural fields.

Hence the introduction of ICT in schools and colleges is largely seen as having a greater impact on the creativeness of individual students and on the creative learning environment. Owing to the development of technologies, a significant transformation has taken place in all aspects of life. As a result of this development, digital media tools have the potential to improve teaching and learning. The development of digital technology is perceived as continuously transforming change in our educational system and the way students learn (Voogt, et la 2013). The discourse on how technology is perceived as changing education has repositioned from predictions of traditional method of learning to scenarios of ICT learning that question the conventional methods of learning (Voogt, et la 2013 p. 405).

Design and Material Practice

Lacking creativity in design practice affects the potential and prospects for innovation (Amabile 1996). 'Studies increasingly indicate for a shortage of creative and innovative workers' (Voogt, et la 2013 p. 405). In many aspects of design practice, creativity in the design studio remains shrouded in the process of material practice. Over an inordinate length of time, the teaching and learning of art and design practices are fundamentally enmeshed in material practice. Throughout art history design methods and processes have been enmeshed in material practice.

'Visual arts and material practice have continually been knotted together in the 'histories of material culture that is crucial to visual arts education' (Hausma, 2000 P.17). Material culture is basically rooted in visual art education and that one cannot demonstratively comprehend visual art without the creation of art (Hausma, 2000). The cultural traditions of visual arts history, art making and visual knowledge have so far celebrate in an advantageous mutual integration with digital media technology. Traditional medium as well as ICT, carry messages about culture, values, histories and conventions.

Creativity & Cognitive Education

Creativity could be referred to as an important aspect of novelty and change, often a sought-after quality of intellectual thinking (Lewis 2008). Even though there have been comparatively few researches on creativity in classrooms, the use of ICT in educational system appear to have increased significantly (Henriksen et al 2016). Despite this situation, discussion on creativity has also been intensified in the fields of education and design practice (Sternberg, 2000; Sweller, 2009; Henriksen et al 2016). Most studies concentrate on how we can improve creativity, and who will be creative rather than on the ways that creativity may be assessed and explored in the classroom. There are nonetheless established techniques and best practices that can be used to foster creativity in the classroom (Kaufman, 2018, p.125)

Creativity could be described as a driving force in individual, economic and technological developments around the world (Kaufman, 2018, p.124-25). At the individual level, it is believed that creative students are more likely to obtain higher grades in school than others (Kaufman, 2018 p.124-25). The issue of how to evaluate creativity in art schools and colleges has recently emerged. There is not 'always practical connection between creativity assessments and what instructors

explore' in the classroom (Creely, 2019 p.3). There is lack of clarity in assessment of creativity in schools and colleges and this presents a significant challenge for instructors and students who consider the development of creativity as part of a learning process' (Creely, 2019 p.3).

Creativity researchers have used the term creative learning in a variety of ways to highlight or focus on some aspect of the relationship between creativity and learning (Beghetto & Karwowski 2018 p.148-149). At the individual level, this perspective describes how academic stimuli can trigger a combinatorial, cognitive process in students. This phenomenon involves blending new learning stimuli with students pre-existing knowledge and learning experiences (Beghetto & Karwowski 2018 p.148-149). In order to achieve this, students require a classroom environment that is conducive to encouraging students to develop and exhibit their unique perspectives and insights. Consequently, in the context of academic learning, students also need an opportunity to (Beghetto & Karwowski, 2018) engage themselves in making use of ICT to create design works.

RESEARCH METHODS

Adopting the qualitative research approach, a purposive sampling method was used for the study. Based on the purposive sampling method, students pursuing Communication Design programme were selected for the study. In this study it was necessary to use the non-probability sampling method. This involves identification and selection of groups of individuals that are considered to be knowledgeable, proficient, and experienced with a phenomenon of interest (Battaglia, 2008; Etikan et al, 2016). That is, participants were selected based on the knowledge and experience through personal judgment of the investigators (Etikan et al, 2015; Zikmund & Babin, 2010). The data collection instrument used for the study was a questionnaire. The

questionnaire was distributed among the students in the Department of Communication Design who had taken part in design projects and assignments.

For the statistical analysis, the researchers used the Statistical Package for Social Sciences (SPSS) to generate the frequencies and percentages of the results obtained. The scale was adopted to test the extent of knowledge and level of agreement of the students against the various activities. Two hundred questionnaires were distributed to Communication Design students. Out of this number 150 students responded to the questionnaire. The questionnaire contained demographic information and twelve other statements. The twelve statements were structured into two sections to collect information based on two important factors: the usage of ICT in creative processes and the challenges of ICT on students' creativity.

ANALYSIS

A) Table 1: Description of Respondents

VARIABLES	FREQUENCY	PERCENTAGE	TOTAL
GENDER			
Male	105	70%	150
Female	45	30%	
AGE			
15-20	105	66.7%	150
21-25	44	29.3%	
26-30	1	0.7%	

Source: Field Data, 2020

In general, one hundred and fifty (150) students responded to the questionnaire, and out of this 70% were males and 30% were females respectively. Descriptive statistics for the total sample for the respondent's group and the challenges of ICT on their creativity is displayed in Table 1. Respondents aged from 15 years to 20 years dominated with a percentage of 66.7% while those from the ages of 21 year to 25 years had a percentage of 29.3%. The least percentage was 0.7% which stands for the other respondents within the ages of 26 to 30 years old. This implies that, the average respondent in Communication Design Department is in his/her late teenage or early twenties.

B) Table 2: The challenges of ICT on creativity.

VARIABLES	FREQUENCY	PERCENTAGE	TOTAL
Manipulation of software			
Strongly agree	70	46.4%	150
Agree	30	19.9%	
Neutral	20	13.2%	
Disagree	10	6.6%	
Strongly disagree	20	13.2%	
Knowledge on design software			
Strongly agree	15	10%	150
Agree	25	16.67%	
Neutral	30	20%	

Disagree	20	13.33%	
Strongly disagree	60	40%	
Digital medium over traditional medium			
Strongly agree	20	13.33%	150
Agree	80	53.33%	
Neutral	10	6.67%	
Disagree	15	10%	
Strongly disagree	25	16.67%	
Learning ICT skills personally			
Strongly agree	45	30%	150
Agree	25	16.67%	
Neutral	30	20%	
Disagree	20	13.33%	
Strongly disagree	30	20%	
Assistance in using ICT to create			
Strongly agree	10	6.67%	150
Agree	20	13.33%	
Neutral	20	13.33%	
Disagree	25	16.67%	
Strongly disagree	75	50%	

Access and to computer power			
Strongly agree	50	33.33%	150
Agree	20	13.33%	
Neutral	10	6.67%	
Disagree	30	20%	
Strongly disagree	40	26.67%	
Access to the internet			
Strongly agree	30	20%	150
Agree	25	16.67%	
Neutral	15	10%	
Disagree	30	20%	
Strongly disagree	50	33.33%	

Source: Field Data, 2020

What are the challenges that students face when they make use of ICT to create design works?

Table 2, above sought to know whether students find difficulty in manipulating the design software for their creative design works. 46.4 percent representing 70 respondents strongly agreed that they find difficulty in manipulating design software for their design works while 19.9 percent representing 30 respondents agreed that they find difficulty in manipulating design software for creative design works. 13.2 percent representing 20 respondents didn't know whether they find

difficulty in manipulating design software or not. 6.6 percent representing 10 respondents disagreed that they find difficulty in manipulating design software for their design works while 13.2 percent representing 20 respondents strongly disagreed that they find it difficult in manipulating design software for their creative design works. This implies that majority of respondents strongly agreed that they find it difficult manipulating design software for their creative design works.

Before one can manipulate the design software, the knowledge on how to use it is needed. The table (Table 2) above sought to enquire whether students have enough knowledge on the design software. 10 percent representing 15 respondents strongly agreed that they have enough knowledge on the design software while 16. 67 percent representing 25 respondents agreed to have knowledge on the design software. 20 percent representing 30 respondents were neutral to whether they have knowledge on the design software or not. 13.33 percent representing 20 respondents disagreed to the fact that, they have enough knowledge on the design software while 40 percent representing 60 respondents strongly disagreed that they have enough knowledge on the design software. The analytical result above tells us that, majority of respondents strongly disagreed to have had enough knowledge on the design software.

Table 2 above sought to know whether respondents had challenges using digital medium as compared to the traditional medium in creating their design works. 13.33 percent representing 20 respondents strongly agreed that they have challenges using the digital medium over the traditional medium while 53.33 percent representing 80 respondents agreed that they have challenges using the digital medium compared to the traditional medium. 6.67 percent representing 10 respondents did not know whether they have challenges using the digital medium over the

traditional medium or not. 10 percent representing 15 respondents disagreed that they have challenges using the digital medium compared to the traditional medium while 16.67 percent representing 25 respondents strongly disagreed that they find difficulty using the digital medium as compared to the traditional medium for their creative designs. This implies that majority of respondents agreed to the fact that they have challenges using the digital medium as compared to the traditional medium of creating design works.

Most times, students are taught the basics of ICT in the classroom and are left to learn more on their own. Table 2, above sought to know whether students have challenges learning ICT skills on their own. 30 percent representing 45 respondents strongly agreed that they have challenges learning ICT on their own while 16.67 percent representing 25 respondents agreed that they have challenges learning ICT skills on their own. 20 percent representing 30 respondents are neutral as to whether they have challenges learning ICT skills on their own. 13.33 percent representing 20 respondents disagreed that they have challenges learning ICT on their own while 20 percent representing 30 respondents strongly disagreed. Majority of respondents agreed that they have challenges learning ICT skills on their own.

The analytical result in Table 2 above shows the response of respondents on the research question entitled "Do teachers assist you in creating your design works?" 6.67 percent representing 10 respondents strongly agreed that they receive assistance from teachers in creating their design works with 13.33 percent representing 20 respondents agreeing. 13.33 percent representing 20 respondents were neutral whether teachers assist them or not. 16.67 percent representing 25 respondents disagreed that teachers assist them in creating their design works while 50 percent representing 75 respondents strongly disagreed to the fact that, teachers assist

them in creating their design works. This implies that majority of respondents strongly disagree that teachers assist them in creating their design works.

The use of ICT requires an access to a computer with a power source and the table 2, above sought to know whether students have access to computer and power for their creative design works. 33.33 percent representing 50 respondents strongly agreed that they have access to computer and power source for their design works while 13.33 percent representing 20 respondents agreed that they have access to computer and power source. 6.67 percent representing 10 respondents were neutral, not knowing whether they have access to computer and power or not. 20 percent representing 30 respondents disagreed to the fact that they have access to computer and power source for their design works whiles 26.67 percent representing 40 respondents strongly disagreed that they have access to computer and power source for their creative design works.

The analytical result in table 2 above shows that the number of respondents who generally agreed that, they have access to computer and power source are equal to the number of respondents who generally disagreed to the fact that, they have access to computer and power source. This implies in one way or another that, access to computer and power source could be relate and dependent on the individual as well as the environment the student finds him/herself.

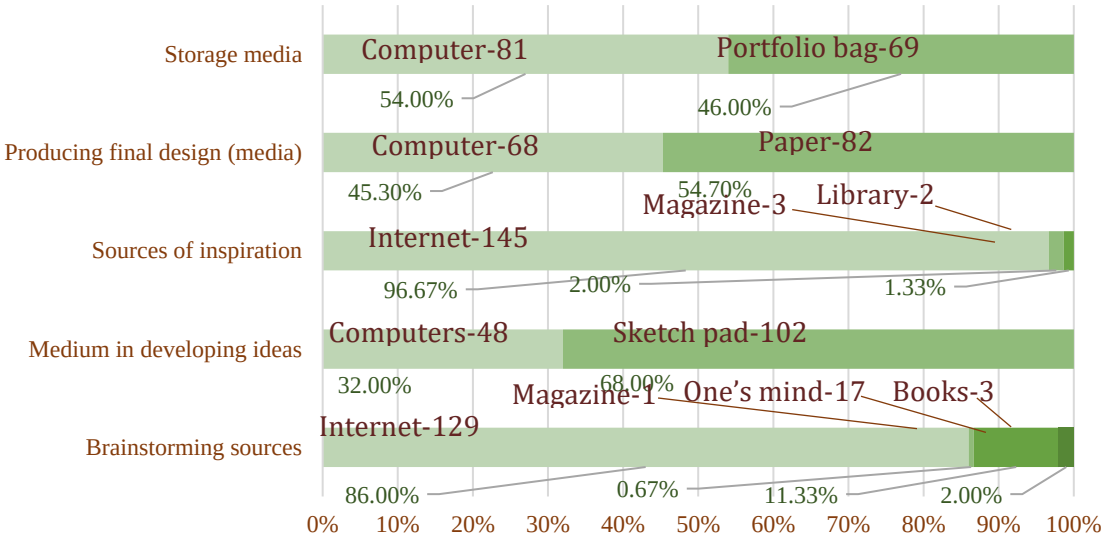
Table 2, above sought to know whether students have access to the internet for ideas from already existing design works. 20 percent representing 30 respondents strongly agreed that they have access to the internet while 16.67 percent representing 25 respondents agreed that they have access to the internet. 10 percent representing 15 respondents were neutral and 20 percent representing 30 respondents disagreed to the fact that they have access to the internet for design purposes while 33.33 percent representing 50 respondents strongly disagreed that they have access

to the internet. This implies that, majority of respondents strongly disagreed that they have access to the internet for their design purposes.

C) To what extent can students make use of ICT to create design works?

In order to analyze the research problem, it is important to establish whether or not, students use ICT in their creative processes. Figure 1 below explains the use of ICT on creativity and presents the analytical results on the data collected on the source students go to for ideas during brainstorming. Looking at the figure from the bottom, the result shows that, 86 percent representing 129 students refer to the internet for ideas during brainstorming. While 11.33 percent representing 17 students use their minds to brainstorm for ideas, 2 percent representing 3 students refer to books for ideas and 0.67 percent representing 1 student who refers to magazines for ideas during brainstorming. This implies that majority of the students use ICT for gaining ideas during brainstorming in their creative processes.

Figure 1. The usage of ICT on creativity



Source: Field Data, 2020

Figure 1 also analyses the medium used by students in developing their ideas. The researchers intended to know whether ICT is used in developing the ideas had in brainstorming or the traditional method is still employed. In the analytical results in the Figure 1 above, 32 percent representing 48 students use the computer to develop their creative ideas while 68 percent representing 102 students used the sketchpad in developing their creative ideas. This means that majority of the students opted for the usage of the traditional medium of developing their creative ideas to the usage of the computer or ICT.

In order to know whether respondents use ICT in their creative processes in figure 1 above, the researchers sought to know where students go to for inspirations from other creative design works. In the chart in figure 1 above, 96.67 percent representing 145 students refer to the internet for inspirations from other design works while 2 percent representing 3 students who found

inspiration from magazines and 1.33% representing one student going to the library for inspirations from other design works. This means that majority of the students if not all resorts to the internet for inspirations from other design works.

The creative process includes production of the final work and in the usage of ICT in the creating design works, the researcher sought to know which media is used by students in producing their final design works. In the analytical results in Figure 1 shows that, 45.3 percent representing 68 students who used the computer for producing their final design works while 54.7 percent representing 82 students used the traditional method of producing design works which is using brush or pencil on paper to execute the final design works. This implies that most students use the traditional method in producing their final design works as compared to the use of ICT.

The final part of Figure 1 which is at the top of the chart, analyses the media used by students to save their design works. And this shows that, 54 percent representing 81 students save their design works on the computer while 46 percent representing 69 students save them in portfolio. This implies that, most students save their design works on the computer for safety. The students also are of the view that saving design works in a physical portfolio can with time affect the quality of the works. Even though saving design works on the computer is good there is also the fear that students might lose their works when the computer gets crashed. More so the file or storage facility could even get corrupted with time especially if the file is damaged.

RESULTS

From the analysis generated above, it is strongly believed that despite students make use of ICT to create designs, they still face challenges. Looking at Figure 1 above, decisions taken there is based on their experiences in Table 2. Having challenges again in the use of digital medium

in creating design works because of their little knowledge in the manipulation of the design software. The analysis shows how through the challenges, respondents still make use of ICT to the maximum effect. Because 50% representing 75 respondents strongly disagreed to the fact that, teachers assist them in creating their design works. This gives them the opportunity to expand their horizon of thinking and to be responsible for every decision they take concerning their design work. This in effect brings the best in them, hence having an influence on them and their creative work. Looking at the relationship that exists between usage and challenges of ICT and creativity from a distance, the former one way or the other affect the creative processes. This is for the reason that students depend on the internet for brainstorming.

To come up with creative designs, the students first of all look at what is going on in the internet irrespective of the devices they use. This phenomenon exists because of the ubiquitous access to the computer; hence the internet as compared to brainstorming from magazines and books. One of the reasons according to the students is that the books and magazines have limited information and resources as compared to the use of ICT. According to the students creating designs with the sketch pad from the scratch put one's acumens in a limited compartment. The internet has new information uploaded incessantly as compared to the magazines and books. Not to say that they do not have relevant information but getting access to them compared to the internet. Also, this shows that without internet the result of the creative processes will be different from when done depending on the internet.

In such a situation students or respondents are open to variety of design works and academically related materials which stimulate or challenge them to do something either extraordinary or exceptional. This intends to affect their decisions towards their works. Looking

at the statistics for which this is based on, 96.67 percent against 3.33 percent they easily access the internet and looking into magazines and going to the library for inspiration is a problem to them. If you can get all the information and all you need for the progress of your work without geographical limitation but all made available on the internet. Even information from the magazines and libraries can be checked on the internet.

As regards the storage of their creative works in (Figure 1) majority of the students prefer to store their works on the computer even though some of the students prefer storing their works using the portfolio. The fact is that most of the participants would love to save their works or final designs on the computer. The majority went for computer over portfolio bags. This is reducing the time and strength used when it comes to the portfolio bags. In terms of space and other factors like water and dust which affect the use of the portfolio bags massively, saving works on the computer is not a difficult knowledge to have. So, respondents would always choose computer over the portfolio bag. ICT has made it possible for them to save on computers instead of keeping the works in portfolio bags that would take space physically and wear and tear as it depreciates. With the computer more work could be saved and copies could even be made for other use easily.

Making use of sketch pad as medium in developing ideas over the use of the computer, most students would prefer to put their ideas on paper. Computer may not be used here at this stage of the design process, but whatever the outcome may be on the sketch pad, it had an influence from the ideas generated from the use of ICT. This even opens the students' mental faculty to put on the sketch pad varieties of ideas despite the challenges they face. Even the challenges bring positive feedback as well as negative so far as creativity is concerned. The feedback is reflected in the use and manipulation of software to having access to internet. That is to say if "I am not good

in the manipulation of software and do not have enough knowledge on design software, definitely, I will operate the software to that extent" as shown by the chart in Figure 1 above.

CONCLUSIONS

It can be established from the literature review that creativity is a dynamic module in design education. The scholarship of design requires students to engage in the use and challenges of ICT tools and skills and make use of their mental ability for the development of creative designs. This is because most of the students have challenges making use of ICT to create designs as indicated in study. This is because the knowledge and the skills needed to create designs are almost zilch. The study also requires students to get involved in problem solving activities to enable them gain the experience needed for creative designs. The digital environment is more likely to lead to the generation of ideas and for the design students to function in a creative way

In terms of manipulation of software and knowledge on design software, it is recommended that a tutorial section be provided for them and make available computers with internet facilities and provide software tools such as Adobe Photoshop Software. Then more practical assignments should be given, that which will draw from them the knowledge acquired through their ICT skills. This will tend to reduce the use of paper for final design creation instead of making use of digital media. Even though some design students believe that exploring the use of paper to create design works makes them feel more comfortable, others believe that exploring the process of creating design and making use of ICT is faster and gives them the sense of having the whole wide web under their feet to explore for ideas and concepts.

The focus of this study involves the use and challenges of ICT on creativity among students in the classroom without the participation of art instructors. In contemporary art education, it is

assumed that art instructors are well trained to impart knowledge to their students, and yet it is perceived that most of them lack the knowledge of ICT skills. As a result of this development, art instructors have failed to impart an integrated ICT and creative skills to their students. This accordingly, has an adverse effect on the development and improvement of integrated ICT and creative skills among students. This situation has created a research gap in contemporary art education that needs to be explored. Therefore, it is recommended that scholars and researchers must take up the challenge to make assessments and evaluation of integrated knowledge of ICT and creativity skills among art instructors in schools and colleges.

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IJOPPIE

INTERNATIONAL JOURNAL OF PEDAGOGY, POLICY AND ICT IN EDUCATION

CALL FOR PAPERS

The journal is calling for papers on the theme:

The Global Impact of COVID-19 on Education

In view of the new world order brought about by COVID-19, the Journal invites articles that address research, theory or practice in pedagogy, Language Policy and ICT in education, with specific reference to the impact of COVID-19 on education. The Call is open from 30th September to 31st December 2021. Accepted articles are expected to be published in the first quarter of 2022. Depending on response the publication could be earlier.

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Preliminary requirements: All articles should have the following subheadings in the body as the organizing principle: *topic*, *abstract*, *the problem*, *objectives/purpose*, *research questions* or *hypotheses*, *significance of the study*, *methodology*, *the results/findings*, *discussion of findings*, *conclusion and recommendations* (may include suggestions for further research) and *references*. **NB**: Articles that disregard these preliminary requirements would be deleted, with no further action taken.

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2. **Every effort should be made to see that the manuscript itself contains no clues to the authors.** The cover page should contain the title of the manuscript, names and addresses of the authors.
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4. Letters to the Editor are encouraged to promote interactivity and healthy debate on current research issues regarding COVID-19. Such letters should not be more than 1000 words. **They should include all authors' names, degrees, institutional affiliation** and **contact address**. Again, letters should use references to strengthen arguments being made.
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REVUE INTERNATIONALE DE PÉDAGOGIE, DE POLITIQUE ET DE TIC DANS L'ÉDUCATION

APPEL À CONTRIBUTIONS

 Le journal lance un appel à des articles sur le thème : 

L'impact mondial du COVIDE-19 sur l'éducation

Compte tenu du nouvel ordre mondial instauré par COVIDE-19, le Journal invite à des articles qui traitent de la recherche, de la théorie ou de la pratiqu e en pédagogie, de la politique linguistique et des TIC dans l'éducation, en faisant spécifiquement référence à l'impact de COVIDE-19 sur l'éducation. L'appel est ouvert du 30 septembre au 31 décembre 2021. Les articles acceptés devraient être publiés au premier trimestre de 2022. Selon la réponse à cet appel, la publication pourrait être plus tôt.

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Exigences préliminaires : Tous les articles devraient avoir les sous-titres suivantes dans l'organisme comme principe d'organisation : sujet, résumé, problème, objectifs/but, questions ou hypothèses de recherche, importance de l'étude, méthodologie, résultats/résultats, discussion des résultats, conclusion et recommandations (peuvent inclure des suggestions pour des recherches postérieures poussées) et des références.

NB : Les articles qui ne tiennent pas compte de ces exigences préliminaires seraient supprimés, sans que d'autres mesures ne soient prises.

1. Une lettre doit accompagner chaque article. Il devrait inclure tous les noms des auteurs et leurs l'affiliation institutionnelle. La lettre d'accompagnement devrait avoir l'adresse courriel de l'auteur correspondant, à qui toute correspondance concernant l'article serait dirigée. L'adresse postale, à laquelle des copies du journal, après publication, seraient expédiées devrait également être fournie.

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5. Les articles doivent être originaux, cohérents, logiques et dépourvus d'erreurs typographiques.

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