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INFLUENCE OF EDUCATION ON CREATIVE SKILL DEVELOPMENT AMONG SENIOR SECONDARY SCHOOL STUDENTS IN PORT HARCOURT METRPOPOLIS, RIVERS STATE, NIGERIA

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Abstract
The study focused on Influence of Education on Creative Skill Development among Senior Secondary School Students in Port Harcourt Metropolis, Rivers State, Nigeria. Ex post factor research design was adopted. The population comprised of 2,450 SS2 students drawn in public secondary schools in Port Harcourt metropolis. A sample of 350 respondents was drawn using multi-stage sampling procedure. The "Education Influence on Creative Skill Development Questionnaire" (EICSQ) was designed by the researcher and used for the study. Validity of the instrument was determined by giving the instrument to experts in measurement and evaluation for vetting while the reliability of the instrument was determined using Cronbach Alpha method which yielded a reliability Index of 0.86. Data were collected vie face to face method. Independent t-test was used in analyzing the data. Result of the study showed that education has a significantly average influence on technological creativity ($p=0.032<0.05$) Again, there was a highly significant influence of education on literary creativity of students ($p=0.000<0.05$). On the other hand, there was no significant influence of education on artistic creativity ($p=0.143>0.05$) of students. Based on this finding, it was recommended among others that government and other stakeholders in education should integrating technology more into the curriculum in order to have more impact on the student's technological creativity.
Keyword: Education, Technological creative, Literary Creativity, Artistic Creativity.

Introduction

Education is the transmission of knowledge, skills, and character traits and manifests in various forms (Neil, 2014). Additionally, the term "education" can denote the mental states and qualities of educated individuals and the academic field studying educational phenomena (Jing, 2019). Many factors are identified which could influence the success of education like motivation, intelligence,

and personality. Education aims to expand and deepen learning outcomes, with a greater focus on subject-specific curricula, and teachers often specialize in one or a few specific subjects. One of its goals is to acquaint students with fundamental theoretical concepts across various subjects, laying a strong foundation for lifelong learning. In certain instances, it may also incorporate rudimentary forms of vocational training (Sternberg, 2011).

Education serves various roles in society, spanning social, economic, and personal domains. Socially, education establishes and maintains a stable society by imparting fundamental skills necessary for interacting with the environment and fulfilling individual needs and aspirations. In contemporary society, these skills encompass speaking, reading, writing, arithmetic, and proficiency in information and communications technology. Additionally, education facilitates socialization by instilling awareness of dominant social and cultural norms, shaping appropriate behavior across diverse contexts. It fosters social cohesion, stability, and peace, fostering productive engagement in daily activities. While socialization occurs throughout life, early childhood education holds particular significance. Moreover, education plays a pivotal role in democracies by enhancing civic participation through voting and organizing, while also promoting equal opportunities for all (Runco, 2020)

On an economic level, individuals become productive members of society through education, acquiring the technical and analytical skills necessary for their professions, as well as for producing goods and providing services to others. In early societies, there was minimal specialization, with children typically learning a broad range of skills essential for community functioning. However, modern societies are increasingly complex, with many professions requiring specialized training alongside general education. Consequently, only a relatively small number of individuals master certain professions. Additionally, skills and tendencies acquired for societal functioning may sometimes conflict, with their value dependent on context. For instance, fostering curiosity and questioning

established teachings promotes critical thinking and innovation, while at times, obedience to authority is necessary to maintain social stability (Holm-Adulla, 2020).

By facilitating individuals' integration into society, education fosters economic growth by impacting relevant skills that in turn ensues diminished poverty. It enables individuals to enhance their skills, thereby improving the quality of life, which ultimately fosters prosperity and enhances competitiveness (Holm-Adulla, 2012). Additionally, besides bolstering economic prosperity, education contributes to technological and scientific advancements, reduces unemployment, and promotes social equity (Beaty, 2016). Moreover, increased education is associated with lower birth rates, partly due to heightened awareness of family planning, expanded opportunities for women, and delayed marriage. On a more individual level, education fosters personal development, encompassing learning new skills, honing talents, nurturing creativity, enhancing self-knowledge, and refining problem-solving and decision-making abilities. Moreover, education contributes positively to health and well-being.

As educators, it's important to understand that creating an engaging environment through the processes of teaching and learning is just the beginning, it must also include preparing students for the future and this depends totally on the ability to bridge the gap between ordinary teaching and creative teaching. According to Bamford (2006 as cited in Kent, 2019), it is necessary to equip students with the ability to tackle complex problems and think with different perspectives. In a constantly changing world, the ability to think deeply and meaningfully is essential. This means that the education that students should be exposed to now should be tailored towards embedding them with creative skills in which they can solve novel problems.

The concept of creativity helps in recalling one’s ability to imagine and come up with original ideas and solution. It is the ability to think about a task or

a problem in a new or different way, or the ability to use the imagination to generate new ideas. The willingness to leave what is known, what exists, and open up to what is possible. Magasamen (2023) noted that creative thinking allows us to connect information in new and meaningful ways and as such, it's the birthplace of innovation and invention, making it one of humankind's most valuable skills. It is often noted that the challenges of tomorrow's societies will not and can never be solved with today's solutions.

Torrance (2019) defined creativity as "the process of sensing problems or gaps in information, forming ideas of hypotheses, testing, and modifying these hypotheses, and communicating the results. This process may lead to any one of many kinds of products—verbal and nonverbal, concrete and abstract" "Creativity helps you see the world in a new way. Creativity helps you consider multiple angles instead of just one, and it helps create bridges between different fields of knowledge and between innovation and the tried-and-true. Quite literally, creativity can make the strange familiar, and the familiar strange" (Stouffer, 2014). Creative thinking leads to creative actions or something new: an idea, theory or product. "When approaching technical matters, the term 'innovation' is often used instead of creativity to describe the process that leads to insight or progress in a field, with a technique, or with a physical product" (Stouffer, 2014). Globally speaking, both creativity and innovations undoubtedly lead to the same goal: into an exciting world of discovery, creating new knowledge and processes that push forward science, technology and art.

Technological creativity encompasses the imaginative application of knowledge and skills to develop innovative solutions that address challenges or improve existing systems, the capacity or ability to conceive, develop, and implement innovative solutions using technical knowledge, skills, and imagination. At its core, technological creativity blends the realms of science, engineering, and design thinking. It involves identifying problems, conceptualizing solutions, and applying technical knowledge to bring those

solutions to life. According to Emerl (2017), education play a pivotal role in nurturing technological creativity. By creating a supportive and stimulating learning environment, teachers can inspire students to think outside the box and take risks in their learning journey. Encouraging interdisciplinary approaches and collaboration allows students to leverage diverse perspectives and skills, fostering a richer creative process (Cropley, 2015). Moreover, integrating real-world challenges into the curriculum provides students with meaningful contexts for the e-learning. As noted by Perez (2011), though education, students are exposed to technology which empowers them to innovate and contribute to the advancement of the society. By nurturing this creativity through hands-on learning experiences, interdisciplinary collaboration, and real-world applications, educators can prepare students to thrive in an increasingly complex and tech-driven world. Ultimately, cultivating technological creativity not only equips students with valuable skills but also inspires them to become lifelong learners and agents of change.

Also, literary creativity involves the synthesis of language proficiency, storytelling prowess, and personal insight. Demor (2015) defined literary creativity as the imaginative and inventive use of language, storytelling techniques, and literary devices to create original works of literature. It encompasses the ability to conceive, develop, and express ideas and emotions through written forms such as novels, short stories, poems, plays, and essays. It encourages students to delve into their imaginations, to experiment with different narrative styles, and to explore complex themes and perspectives (Purves, 2019). From education and by engaging in creative writing, students may develop their ability to articulate ideas clearly and persuasively, while also honing their capacity to empathize with diverse characters and viewpoints. According to Frilli (2018), educational approaches that nurture literary creativity include creative writing workshops, literature circles, and assignments that encourage students to explore their unique voices and perspectives. Such activities not only develop

technical writing skills, but also cultivate students' ability to think critically about the human experience, societal issues, and ethical dilemmas depicted in literature.

More so, engaging with artistic creativity plays a pivotal role in their holistic development. Artistic creativity involves the ability to produce novel and original ideas, solutions, or works of art, often expressed through visual, auditory, or other artistic mediums. It's a fundamental aspect of human expression and can be cultivated through practice, exploration, and a willingness to experiment (Joel, 2018). At its essence, artistic creativity transcends mere technical proficiency; it encompasses the ability to perceive the world in novel ways, to interpret and communicate those perceptions through creative forms, and to evoke emotional or intellectual responses in others. Artists often draw inspiration from their surroundings, personal experiences, social issues, and cultural heritage, using their creativity to challenge conventions, provoke thought, or convey beauty. It encourages self-expression, fosters imagination, and nurtures emotional intelligence. Through exploration of various art forms and mediums, students not only learn technical skills but also develop critical thinking, problem-solving abilities, and a deeper appreciation for aesthetics and cultural diversity.

Education that integrates creativity, skill development, technological proficiency, and literary exploration is vital for secondary school students. Schools are being seen as places for the encouragement of creativity because they can do this in a “more efficient” manner and can develop it “not merely in elites but in masses of students. Creativity helps disrupt conventions, forge new routes, and make free and unique associations between ideas, concepts, emotions, memories, symbols, imaginative forms, objects, and words that can be developed into the most fulfilling and original artworks. In the light of these, this study therefore sought to explore the extent to which education influences creativity and skill development amongst students in secondary schools in Port-Harcourt, Rivers State.

Aim and Objectives

1. To find out the extent education influences technological creativity among secondary school students.
2. To find out the extent education enhances literary creativity among secondary school students.
3. To find out the extent education enhances artistic creativity among secondary school students.

Research Questions

The following research questions were asked to guide the study.

1. To what extent does education influence the development of technological creativity among secondary school students in Port Harcourt Metropolis?
2. To what extent does education influence the development of literary creativity among secondary school students in Port Harcourt Metropolis?
3. To what extent does education influence the development of artistic creativity among secondary school students in Port Harcourt Metropolis?

Hypotheses

The following hypotheses were formulated to guide the study;

1. There is no significant influence of education on development of technological creativity among secondary school students in Port Harcourt metropolis.
2. There is no significant influence of education on development of literary creativity among secondary school students in Port Harcourt metropolis.
3. There is no significant influence of education on development of artistic creativity among secondary school students in Port Harcourt metropolis.

Methods

The study adopted the ex post facto research design according to Nwankwo (2011) is that design that allows the researcher to draw a sample from a larger population, determine their responses and analyse them without manipulating any variable. The population of the study comprised of 2,450 SS2 students in public

secondary schools in Port Harcourt metropolis. The researcher used this population because at the secondary school level, they were considered to be able to provide adequate data needed for the study. A sample of 350 respondents were drawn using multi-stage sampling procedure. First the Taro-Yemen formula was applied to get the sample size of 344. However, the researcher increased the sample to 350 based on her capability. At stage one, simple random sampling through balloting was used to draw 10 public schools from the metropolis. This was achieved by simply noting down the names of the public schools in the area in a piece of paper, folded it and drew 10 pieces after adequate shuffling. At stage two, the researcher used purposive sampling to focus only on SS2 students since this was the target population. At stage three, the researcher used non-proportional sampling technique to draw thirty five (35) students from each of the schools giving a total of 350 students from the 10 schools drawn. An instruments named, "Education Influence on Creative Skill Development Questionnaire" (EICSQ) was designed by the researcher and used in the study. The instrument was designed using 4-point Likert scale of Strongly Agreed (SA), Agreed (A), Disagree (D), and Strongly Disagree (SD). The instrument contained two sections (A and B). Section A measured the gender status of the respondents. The section also contained instructions on the respondents. On the other hand, section B contained 30 items which were used to measure the influences of education on skill development. Section B was further divided into three sub-sections (Sub-section I-III). Sub-section I contained 10 items that measured the level of education influence on technological creativity, sub-section II contained 10 items that measured the level of education influence on literary creativity while sub-section III contained 10 items that measured the level of education influence on artistic creativity of students. Validity of the instrument was determined by giving the instrument to experts in measurement and evaluation for vetting while the reliability of the instrument was determined using Cronbach Alpha method which yielded a reliability Index of 0.86. Method of data collection

was on face to face basis while the independent t-test was used in analyzing the data.

Results

Research Question One: To what extent does education enhance technological creativity among secondary school students in Port Harcourt metropolis?

Hypothesis One: There is no significant influence of education on development of technological creativity among secondary school students in Port Harcourt metropolis.

Table 1: One-sample t-test analysis of the influence of education on technological creativity among secondary school students in Port Harcourt metropolis.

Variable	N	μ	Mean	Std. D	Df.	Alpha	t	Sig	Result
Technological.	350	20	16.54	8.01	348	0.05	5.12	0.032	Significant

Table 1 above shows that means and standard deviation values to be 16.54 and 8.01 respectively. From the mean values (16.54) when compared to the population mean (μ) of 20, it is seen that education influences technological creativity among students averagely. Calculated t is 5.12 while sig value is 0.032. Hence, since sig ($p=0.032<0.05$) is less than alpha value of 0.05, the null hypothesis is rejected meaning that there is a significant influence of education on development of technological creativity among secondary school students in Port Harcourt metropolis.

Research Question Two: To what extent does education enhance literary creativity among secondary school students in Port Harcourt metropolis?

Hypothesis Two: There is no significant influence of education on development of literary creativity among secondary school students in Port Harcourt metropolis.

Table 2: One-sample t-test analysis of the influence of education on literary creativity among secondary school students in Port Harcourt metropolis.

Variable	N	μ	Mean	Std. D	Df.	Alpha	t	Sig	Result
Literary Creativity	350	20	17.23	3.32	348	0.05	4.38	0.000	Significant

Table 2 show mean and standard deviation values to be 17.23 and 3.32 respectively. From the mean values (17.23) when compared to the population mean (μ) of 20, it is seen that education influences literary creativity among students highly. Calculated t is 4.38 while sig value is 0.000. Hence, since sig ($p=0.000<0.05$) is less than alpha value of 0.05, the null hypothesis is rejected meaning that there is a significant influence of education on development of literary creativity among secondary school students in Port Harcourt metropolis.

Research Question Three: To what extent does education enhance artistic creativity among secondary school students in Port Harcourt metropolis?

Hypothesis Three: There is no significant influence of education on development of artistic creativity among secondary school students in Port Harcourt metropolis.

Table 3: One-sample t-test analysis of the influence of education on artistic creativity among secondary school students in Port Harcourt metropolis.

Variable	N	μ	Mean	Std. D	Df.	Alpha	t	Sig	Result
Artistic Creativity	350	20	8.01	4.06	348	0.05	1.82	0.143	Insignificant

Table 3 show mean and standard deviation values to be 8.01 and 4.06 respectively. From the mean values (8.01) comparing with the population mean (μ) of 20, it is seen that education influences on artistic creativity among students is poor. The calculated t is 1.82 while sig value is 0.143. Hence, since sig ($p=0.143>0.05$) is greater than alpha value of 0.05, the null hypothesis is retained meaning that there is actually no significant influence of education on

development of literary creativity among secondary school students in Port Harcourt metropolis.

Summary of Findings

From the analysis in the tables, it is found that;

1. There is a significant influence of education on development of technological creativity among secondary school students in Port Harcourt metropolis.
2. There is a significant influence of education on development of literary creativity among secondary school students in Port Harcourt metropolis.
3. There is no significant influence of education on development of literary creativity among secondary school students in Port Harcourt metropolis

Discussion of Findings

Finding One reveals that there is a significant influence of education on technological creativity among students. This finding means that that the education system and learning experiences have a substantial impact on helping students to develop ability to think creatively and generate innovative ideas in the context of technology. It also means that education can shape students' capacity to design, develop, and implement novel solutions using technology. This study agress with the previews study by Singh (2020) who stated that in today's era, educational technology developments enable educators to disseminate knowledge effectively and efficiently. It helps students hone their creative thinking and innovative problem-solving capabilities. Also, in agreement with this study, Courts and Tucker (2019) revealed that new education technology apparatuses enable youth learners to be efficient and effectively deal with real-world situations So, educational technology can be a potent tool to develop students creativity and innovation

From research finding two, it is revealed that there is a significant influence of education on literary creativity among students. This finding means that the education system and learning experiences have a substantial ability to

developing students' ability to think imaginatively and generate original ideas in writing, shaping students' capacity to craft engaging stories, foster students' skills in language use, encourage students to explore different perspectives in writing as well as building students' confidence and motivation to express themselves creatively through writing. It also implies that education providing writing opportunities, expose students to various literary works and authors, teach them writing techniques and strategies, encourage them to experiment and take risk in writing and also fostering a supportive and creative writing environment for them. This finding is not surprising to the researcher as well again simply because of the power of education. The finding of the study is in line with that reported earlier by

Frank (2018) asserted that literary is the best stimulator for creative writing. He urges educators to make it a vehicle for familiarizing their students with literature in all its forms. Frank believes that literature is the best means to stimulate and encourage students to write which stimulate creativity.

Finally, findings three revealed that there is no significant influence of education on artistic creativity among students. Art teachers tend to be more rigid in their classroom as they have to follow a certain curricula and meet a certain quota in terms of teaching material. On the other hand, teachers who are fostering creativity, they often put emphasis on flexibility and accepting other alternative ideas as well as encouraging the expression of the students feeling and ideas. Despite that, number of this kind of teachers are not that high, due to the firm controlled educational system with stiff rules and conditions such as general curricula, assessment and examination systems as this will hinder the creativity and prevent it from flourish. In disagreement with the present study, Freedman & Stuhr (2022) augured that in this 2lst century, the increasing number of visual art objects and images shapes artistic education significantly. This was also expanding to include the inter-graphical and inter-textual connections between different visual forms. Also, the present study is not in line with the previews

study by Herz, (2020) who stated that artistic is still very valuable in education and considered as an important element of historical and modern visual culture. Teachers knows the dimensions of practical practices in visual arts as a way in enhancing these kinds of value learning

Conclusion

Education that integrates creativity, skill development, technological proficiency, and literary exploration is vital for secondary school students. This holistic approach prepares them for the complexities of modern life and fosters well-rounded growth. Through education, technological and literacy creativity is enhanced. Students learn digital skills, coding, and how to use technology for research, communication, and creative expression. These skills are not only practical but also empower students to navigate the digital landscape confidently. Unfortunately, students dependence on education to promote artistic skills is not very feasible. However, integrating these elements into education promotes collaboration and communication skills.

Recommendations

Based on the findings, the following recommendation are made;

1. Government and other stakeholders in education should Integrating technology more into the curriculum in order to have more impact on the students technological creativity. They should also provide resources and tools, offer access to cutting-edge technology, software, and mentorship to support students' creative pursuits.
2. Teachers and other stakeholders should help to literary culture more in school in order to have a continuous positive effect on students. They can achieve this by creating librares, encourage formation of literary clubs etc. in schools.
3. Since education is found not to influence artistic development, government and school authorities should integrate art into the curriculum by

organizing and incorporate art classes, workshops, or projects to foster creativity.

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