

Influence of Education on Creative Skill Development among Senior Secondary School Students in Port Harcourt Metropolis, Rivers State, Nigeria.

Obioma-Onyenma, Olive (Ph.D)

oliveobioma@gmail.com

+234-8063661073

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Celestina Chinwenwa Johnson (Ph.D)

+234-8036687423

celestinanwankwoala@gmail.com

^{1&2}**Department of Educational Psychology, Guidance and Counselling, Faculty of Education, University of Port Harcourt. Rivers State, Nigeria.**

Abstract

The study examined the influence of education on creative skill development among senior secondary school students in Port Harcourt metropolis, Rivers State, Nigeria. Descriptive survey design was adopted. The population consisted of 2,450 SS2 students drawn from 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 in the study. Validity of the instrument was determined using experts vetting while Cronbach Alpha method was used to determine 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. Result of the study showed that education has a significantly average influence ($p=0.032<0.05$) with technological creativity. The result also showed that, there was a highly significant ($p=0.000<0.05$) influence of education on literary creativity of students. 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, et al., 2014). The term "education" can denote the mental states and qualities of educated individuals and the academic field studying educational phenomena (Jing et al., 2019). 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 as it impacts 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 et al., 2012). Additionally, besides bolstering economic prosperity, education contributes to technological and scientific advancements, reduces unemployment, and promotes social equity (Beatty, 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), 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 reminiscence 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 et al., (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. Creativity as noted by Ford (1996) is "a domain-specific, subjective judgment of the novelty and value of an outcome of a particular action" or as "the production of novel and useful ideas in any domain" (Amabile et al., 1996) and as "the generation of novel ideas, without too much regard for their usefulness" (Cook, 1998). Many theorists have tried to define creativity. In general, definitions are related to four different potential research areas: the creative person, process, press (i.e. the environment) and product (Batey & Furnham 2006; Runco 2004). Despite researchers' attempts to conduct research in order to understand the concept of creativity and the fact that policymakers have increasingly recognised the importance of creativity in education during the past 20 years, the concept of creativity is often neglected in schools' curricula and practice (Craft & Jeffrey 2008; Kaufman & Sternberg 2007; Steers 2009). Although creativity as a skill gains continuously more importance in our changing society, the occurrence and stimulation of creativity in schools are limited (Bamford 2007; Robinson 2006 & Schacter et al. 2006). Bearing the point of Ford (1996) in mind, it therefore ensues that creativity is not a one-pint score but just like the multiple intelligence theory. It means that creativity is in specific areas which involves but not limited to technological creativity, literary creativity, artistic creativity and others.

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.

It is also obvious that students can develop creativity in literacy. 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. For students, exploring and developing literary creativity is crucial not only for enhancing their language and writing skills but also for fostering critical thinking, empathy, and cultural understanding and that can only be made possible through the instrument of education (Wilson, 2011). Through education, students are exposed to skills. At its core, literary creativity involves the synthesis of language proficiency, storytelling prowess, and personal insight. It encourages students to delve into their imaginations, to experiment with different narrative styles, and to explore complex themes and perspectives (Purves et al., 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. Studying a diverse range of literary works from different cultures and time periods exposes the fact that with education, students are exposed to various storytelling traditions, narrative techniques, and thematic explorations. This exposure broadens their understanding of the world and helps them appreciate the power of literature to provoke thought, evoke emotion, and inspire social change. Education ensure that students develop literary creativity which can empower them to explore the depths of human experience through language and storytelling. By providing opportunities for students to engage in creative writing, analyze literary texts, and explore diverse perspectives, educators can foster a lifelong appreciation for literature while equipping students with essential skills for communication, empathy, and critical thinking (Eagleton, 2008).

Prummel (2006) noted that artistic creativity is the imaginative process of creating original works of art that express emotions, ideas, or perspectives through various mediums such as painting, sculpture, music, dance, literature, and film. It involves the unique synthesis of technical skill, personal vision, and cultural context to produce innovative and meaningful artistic expressions. 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. For secondary school students, engaging with artistic creativity plays a pivotal role in their holistic development. 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.

Artistic creativity enhances students' cognitive abilities and academic performance by promoting interdisciplinary connections and fostering a deeper understanding of complex concepts. Studies have shown that engagement in the arts can improve critical thinking skills, enhance empathy, and cultivate resilience in students (Winner, et al., 2013). Artistic creativity is a transformative force that enriches the lives of secondary school students by stimulating their imagination, fostering self-expression, and promoting cultural understanding. Backer,

Lombaerts, De Mette, Buffel and Elias (2012), despite a more prominent role of arts education in the school curriculum, artistic creativity does not occur to a great extent in primary school practice. More opportunities for teachers to strengthen their know-how in the field of artistic creativity can therefore be considered important. Arts education projects focus on pupils' development of creativity by means of introducing artists with their divergent working methods into primary schools. Beside fostering pupils' creative openness and skills, arts education organisations aim to transfer artistic enthusiasm to teachers in each project. Although many people relate creativity to artistic products, it is by no means the sole prerogative of artists or of art. Creativity manifests itself in all fields of life, from science to gardening, and not everyone is equally creative in all fields (Craft & Jeffrey 2008; Prummel 2006).

Creativity is nurtured by education and artistic education can be considered a fertile area for the development of creativity, and is now a general learning goal within the current primary education curriculum (Prummel 2006; Van Ransbeeck 1996). It is important continuously to stimulate creativity during artistic education. After all, being artistically active does not automatically imply pupils working creatively. Imitation and repetition are important aspects of learning, but can hardly be considered creative (Prummel 2006; Van Ransbeeck 1996). Research shows that teaching in a creative way leads more easily to creative behaviour in pupils (Jeffrey & Craft 2004). However, such an approach rarely occurs in the domains of artistic education. These domains are often characterized by little creativity and are therefore unsuited to pupils' current needs (Elias & Duquenne 2002). 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 of the Study

The aim of the study is to examine the influence of education on creative skill development among senior secondary school students in Port Harcourt metropolis, Rivers State.

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

Methodology

The study adopted the descriptive survey design. The population of the study consisted of 2,450 SS2 students drawn from public secondary schools in Port Harcourt metropolis. A sample of 350 respondents was 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 with 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 the development of 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 the development of 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 the development of 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 the development of 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 the development of 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 the development of 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 $\text{sig } (p=0.143>0.05)$ 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 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. It can also foster in them skills in problem-solving, critical thinking, and artistic expression through technology. It can as well help them to explore, experiment, and learn from failures in technological endeavors as well as building their confidence and motivation to pursue technological creativity and innovation. In essence, education plays a crucial role in nurturing technological creativity among students, preparing them to succeed in an increasingly complex and technology-driven world. This finding may come because majority of students who are especially in the secondary school level have appreciated the fact that education has opened up their minds towards exploring technology. It therefore means that those without formal education may be limited in their achievement in technological skills. The findings of the study is not surprising to the researcher because she is quite aware of the power of education in empowering individuals. The findings of the study is in line with that as reported by

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 Frilli (2008) and Eagleton (2008) who all reported significant influence of education on literary skills of students.

Finally, findings three revealed that there is no significant influence of education on artistic creativity among students. This surprisingly means that the education system and learning experiences does not have a substantial impact on helping students to developing their ability to think creatively and generate original ideas in art, shape their skills in various art forms like drawing or painting, fostering students' ability to express themselves through different art mediums and techniques, encourage them to explore different styles, themes, and perspectives in their art as well as building their confidence and motivation to create and showcase their artwork.

The finding of the study however is surprising to the researcher as it implies that education cannot influence creativity in students. This means that by acknowledging the insignificant influence of education on artistic creativity, the important role that teachers, curriculum, and learning experiences play in nurturing students' artistic talents and creative potential is not recognized. Somehow, this finding lay claims to the function of natural talents and internal traits to promote creativity instead of education. The finding of the study is against that as reported by Craft and Jeffrey (2008) as well as Prummel (2006) who all reported significant influence of education in art development among students.

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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