

Effect Of National Gallery of Art on Promotion of Creativity in Arts, Science and Technology in Nigeria.

Professor Charles Nwekeaku¹ & Ibrahim Adamu, Tanko²

^{1&3} Department of Public Administration, Nasarawa State University, Keffi.

DOI: <https://doi.org/10.70118/AMR-0901-2025-13>

Abstract

The study examined the effect of the National Gallery of Art on Promotion of Creativity in Arts, Science and Technology in Nigeria. This research employed a mixed-methods approach, combining quantitative data form of survey with qualitative insights from documentary analysis. The Target Population is Staff of the Gallery, Artists and non-Artists that have participated in NGA programmes. The Simple Sampling Technique was used for data collection. Self-administered questionnaires were developed to gather quantitative data on participants' and artists' experiences with NGA's creativity-promoting initiatives. Data Analysis Techniques, such as, ANOVA (Analysis of Variance) and Regression Analysis were used to test the hypothesis. Thematic Analysis was used to identify recurring themes in the documents related to NGA's approach to promoting creativity. Findings revealed a significant impact of various initiatives on the promotion of creativity within the arts, science, and technology in Nigeria. The study also revealed the influence of technological integration on enhancing creativity across various fields in Nigeria. It is recommended among others that the NGA and other stakeholders in creative industry should provide robust exhibition programmes to further explore visionary opportunities for the emerging young artists and the students. The NGA should initiate constructive and fruitful partnership to support the acquisition of skills and new ideas through technology integration that would boosts commercial art works, including an extensive literary art tourist market.

Keyword: National Gallery of Art, creativity, Initiative, Entrepreneurship, Technological Integration and research and training workshops.

Introduction

The word Art sits at the foundation of all human activities and achievements, considering the Roman translation of Ars, which means skill. The contemporary African art and science is a product of human works of conception and perception worthy of aesthetic values. Anthropologically and archaeologically speaking art and science was the first physical weapon of survival through the production of shaped tools that allowed man an effective control over survival in his untamed environment, through which art and science researchers concluded that art is science and science is art. Ugiomoh (2012) stated that the earliest hominoid created the first work of art by responding to the inadequacies

of objects nature adapted for specific objects. For example, a stick without a stub to harvest a fruit will demand that it be properly adapted and filled with such device to serve the purpose of harvest and/or other functions that might be necessary. Retooling or reinventing which the stick has undergone automatically converts it to an artifact, a product of culture. Such activities undertaken by man need skill, as art.

Artistry primarily reflects one's ability to showcase mastery in a traditional form or discipline. The digital information age is a fusion of art and technologies that engender our time have not only changed what we do, or even what we think, but how we do and think about the same things we have always done. The concept of '*techne*' is a term in philosophy that constitutes the etymological root word 'art' meaning that the art challenges technology, while technology inspires the art. Art is becoming less static, taking new and different shapes as contemporary artists push the boundaries creating a big appetite for improving the technologies needed to accommodate the fundamental force in the development and evolution of art. Creativity is contrastingly marked by its spirit of innovation, representing a willingness to sidestep conventions, a zest for introducing fresh perspectives, and a courageous inclination to experiment, even if it means defying established norms. The visage between art and science with regards to the theory of perception in the art are divided into three faculties. I) the science in art which can be interpreted as the faculty of power to acquire immediately the fundamental knowledge through senses. This is often called the sense perception. II) the process of observation in art and critical analysis in science. III) the mental production obtained from the two fields of thought. These allow us to understand the relevance of science and art in representational forms. All forms of representation in arts have syntactical structures which is also present in science. Ekeada (1990).

The National Gallery of Art (NGA) in Nigeria stands as one of the beacon of cultural heritage and artistic excellence within the Country. Established to serve as a repository of modern Nigerian visual art, and to promote research, education, appreciation of works of art, the National Gallery of Art, a parastatal in the Federal Ministry of Art Culture and Creative Economy, was founded by Decree No. 86 of 25th August, 1993, later amended by the National Assembly Act on the 12th May, 2004. (2017).

The National Gallery of Art is mandated by law to: Acquire, collect, and showcase Modern Nigerian works of art; Organize Permanent and Temporary exhibitions; Organize competitions and talent hunts in fine and applied arts; Receive donations and endowments to support the National collection of works of art; Sponsor and encourage research into all aspects of the arts; Organize workshops, lectures, seminars and conferences on the theory, practice and appreciation of arts; Establish and maintain a documentation center on arts and artists; and, Promote excellence in the theory and practice of art through the

award of grants to artists and scholars. The National Gallery of Art by its mandate promotes creativity by creating a platform for Artists showcase their works, offer educational programmes, workshops, and lectures that cater to diverse audiences, foster community engagement by hosting art exhibitions and encourage public dialogue and social interactions, and safeguards national cultural heritage.

Through its various art related programmes which include, workshops, competitions, research, education and exhibitions, the National Gallery of Art provides a platform for artists to perfect their skills, explore new techniques, and engage in meaningful dialogue with Peers, Collectors and Patrons alike. Moreover, the NGA actively engages with local communities by organizing outreach programmes and initiatives aimed at promoting cultural literacy, preserving intangible heritage, and fostering community cohesion (NGA, 2017).

This study therefore examines the Effect of the National Gallery of Art on Promotion of Creativity in Arts, Science and Technology in Nigeria. To achieve the objective of the study, it was divided into five parts; introduction, conceptual clarification, literature review, theoretical framework, methodology, result & discussion, conclusion and policy recommendations.

Research into Nigerian visual art is on-going by various individuals, institutions and organizations. These researches have accomplished a number of things: a) Catalogue the state of Nigerian art. b) Establish the output capacities of individual visual artists at the local and national level. c) Determine a representative range of supportive information needs and topics. d) Define indigenous sources of permanent trade in arts in relation to their needs. This study seeks to ascertain the role of the National Gallery of Art in Promoting Creativity in Arts, Science and Technology in Nigeria. While the specific objectives are to: Examine whether: a) Art Exhibitions have enhanced creativity in arts, science, and technology in Nigeria, b) Assess whether Art Competitions have enhanced creativity in arts, science, and technology in Nigeria, and c) Evaluate whether Art research and training workshops enhance creativity in arts, science, and technology in Nigeria. This study seeks to answers the following questions; a) Do Art Exhibitions enhanced creativity in arts, science, and technology in Nigeria? B) Have Art Competitions enhanced creativity in arts, science, and technology in Nigeria? c) Does Art research and training workshops enhance creativity in arts, science, and technology in Nigeria? The following research hypotheses were formulated to guide the study;

Ho₁ Art Exhibitions did not significantly enhanced creativity in arts, science, and technology in Nigeria.

Ho₂ Art Competitions did not significantly enhanced creativity in arts, science, and technology in Nigeria.

Ho₃ Art research and training workshops did not significantly enhanced creativity in arts, science, and technology in Nigeria.

Conceptual Framework

The National Gallery of Art is an art institution that holds a distinct position in the cultural landscape of a country. It is primarily focused on the acquisition, preservation, and presentation of modern artworks that possess national significance. The Galleries serve as invaluable repositories of a nation's cultural heritage, ensuring that future generations have the opportunity to engage with and appreciate the artistic accomplishments of their predecessors (Smith, 2010). Art galleries serve as beacons of creativity, a vessel of cultural legacy, and a nexus of human connection. They are conduits of inspiration, transformation, and enlightenment. In their essence, art galleries stand as testaments to the enduring power of human imagination and the infinite possibilities that lie within the realm of artistic expression (Collins, 2018).

National Gallery of Art (NGA) and creativity in arts, science, and technology in Nigeria

The National Gallery of Art (NGA) in Nigeria stands as a cornerstone institution deeply committed to nurturing and fostering creativity across various disciplines, including the realms of arts, science, and technology. The gallery adopts a multi-faceted approach to achieve this objective, demonstrating its dedication through a range of impactful initiatives designed to enrich the cultural landscape of Nigeria. The National Gallery also has the secondary obligation of education, research, and policy formulation and implementation as envisioned in the Nigerian Cultural Policy.

Art Exhibitions and Competitions at the NGA serve as dynamic platforms that celebrate and promote the works of talented Nigerian artists, both established and emerging. These exhibitions and competitions, spanning diverse media such as painting, sculpture, photography, and new media art, provide artists with valuable opportunities to showcase their creativity, experiment with new forms of expression, and connect with a broad audience. By facilitating these exhibitions and competitions, the NGA cultivates a vibrant artistic community that thrives on innovation and exploration.

Further bolstering its mission, the NGA actively engages in Collaborations with art schools, universities, and cultural institutions to advance art education and research initiatives. Recognizing the transformative power of art as an agent for education and social change, these collaborations aim to foster a culture of

creativity and critical thinking among aspiring artists and scholars. By building bridges between diverse sectors, the NGA fosters a rich ecosystem that nurtures talent and facilitates meaningful dialogues on the role of art in society.

Complementing its exhibition and collaboration efforts, the NGA conducts Art Training Workshops that cater to artists of all ages and skill levels. These workshops provide a structured platform for artists to hone their craft, learn new techniques, and expand their artistic horizons. By investing in the growth and development of artists, the NGA empowers individuals to push boundaries, think innovatively, and contribute meaningfully to the artistic landscape of Nigeria.

While the NGA's primary focus remains on the visual arts, the organization also indirectly catalyzes creativity in science and technology through its interdisciplinary approach. By encouraging artistic expression and fostering a culture of creative thinking, the NGA lays the foundation for problem-solving skills that are transferable across various domains. This interdisciplinary mindset not only inspires artists to think differently but also cultivates a spirit of innovation that can drive advancements in science and technology.

Moreover, the NGA actively explores Technological Integration as a means to re-imagine the intersection of art and technology. By incorporating cutting-edge technological tools and methods into artistic practices, the gallery pioneers new forms of artistic expression and experiences. This integration opens up endless possibilities for artists to experiment with innovative mediums, collaborate with tech experts, and push the boundaries of traditional art forms. In doing so, the NGA fosters a culture of experimentation and exploration that fuels creativity and ingenuity within the artistic community. (NGA 2019).

In essence, the National Gallery of Art serves as a pivotal force in nurturing creativity in Nigeria and shaping a dynamic cultural landscape. Through its unwavering commitment to promoting artistic excellence, fostering interdisciplinary collaborations, and embracing technological innovation, the NGA plays a central role in advancing the creative potential of individuals and communities. By championing creativity in all its forms, the NGA enriches the cultural fabric of Nigeria, inspiring a new generation of artists and innovators to push the boundaries of creativity and pave the way for a brighter, more vibrant future.

Creativity

Creativity is the spark that ignites the artistic process, while art serves as the tangible product of that creativity. Creativity forms the foundation upon which the entire artistic process is built, acting as the initial spark that sets the entire journey into motion (Brandt, 2021). Without creativity, ideas would remain

dormant, waiting to be brought to life through the channels of inspiration and innovative thinking. As the essential driving force, creativity serves as the bridge between imagination and reality, transforming abstract concepts into tangible creations (Curuțiu-Zoicaș, 2019). In contrast, art emerges as the tangible manifestation of this creative spirit, embodying the depth and breadth of the artist's vision. Through skillful execution and thoughtful expression, art breathes life into intangible ideas, allowing them to transcend the boundaries of thought and materialize into forms that can be seen, felt, and experienced. In this way, creativity and art exist in a symbiotic relationship, each nourishing and sustaining the other, as creativity fuels the artistic process, and art reflects the beauty and complexity of creative expression (Curuțiu-Zoicaș, 2019).

Artistic creativity is a powerful force that allows us to see the world in new ways, express ourselves in unique forms, and connect with others on a deeper level. Artistic creativity is the wellspring from which all art forms flow. It's the ability to generate new and original ideas, experiences, and objects within the realm of the arts (Curuțiu-Zoicaș, 2019). This encompasses a wide range of artistic disciplines, including visual arts, music, literature, design, architecture, film, and even advertising. The key aspects of artistic creativity are: i.) Originality: At its core, artistic creativity involves creating something new and unique. This doesn't necessarily mean it has to be entirely unprecedented, but it should offer a fresh perspective or interpretation (Pigrum, 2020), ii.) Expression: Creativity allows artists to express their inner world, emotions, experiences, and ideas in a way that transcends everyday communication. This expression can be personal or evoke a broader range of human experiences (Changeux, 2019), and, iii.) Skill and Knowledge: While some view creativity as a bolt of inspiration, it's often fueled by a foundation of skills and knowledge within a particular artistic domain. Mastering techniques and understanding artistic traditions allows for a more informed and impactful creative process.

Empirical Review

Tapfuma, Musavengane, & Magwaza, (2024) examined the role of creative tourism through arts and crafts in promoting inclusive tourism in Zimbabwe using qualitative approaches. The study utilized survey study research Design. The Populations are tourists. The sampling technique is simple sampling. The method of Data Collection is primary and secondary method. The key findings of the study indicated that when managed well, visual arts and crafts have great potential in promoting inclusive tourism through the reduction of poverty and improvement of the livelihoods of the marginalised communities. However, artists encounter challenges in the production of arts and crafts that include lack of capital, lack of production space, lack of marketing, rivalry products from other countries, and lack of support from the government and local tourism

organisations. Despite the challenges faced, artists appeal for strategies in financing and marketing, fair competition and relaxed government policies.

Etzkowitz, Kehl, & Schofield, (2022) evaluated from STEM to PAVAM: A unified arts strategy for innovation, industrial and regional policy. The potential of the arts and sciences for economic and social development is under conceptualized. However, the recent development of STEM (science, technology, engineering, and mathematics), justifying increased support for training in the sciences, shows a parallel pathway forward for the arts. The arts are increasingly relevant to the economy, amenable to policy influence as well as an area of human activity in their own right. Findings revealed that a unified arts framework: PAVAM (performing arts, visual arts, and music), complementing STEM as the basis for a strategy of arts-based interdisciplinary “industrial” policy making. The growing salience of the arts as an industrial sector in the UK and USA is shown. By identifying sources and pathways of value creation from the arts, clear entry points for policy action become identifiable to promote innovation, entrepreneurship, and economic development. Comparative case studies suggest a typology of the arts’ potential as sources of creativity, innovation, and regional economic development.

Lee & Choi (2022) examined the Impact of Open-Ended Tasks creativity on Technological Problem-Solving. The Research Design is Randomized controlled trial. The Population of the study are Engineering students. The Sampling is simple random assignment of students to either an open-ended or closed-ended problem-solving task group (n=50 per group). The Data Collection is assessment of problem-solving solutions for creativity, originality, and effectiveness. The technique of Data Analysis is Independent-samples t-tests to compare creativity scores between groups. The study found that students who received open-ended problem-solving tasks generated more creative and original solutions compared to those who received closed-ended tasks.

Brown, & Green (2018) examined the gamification of learning: How video games can enhance creativity in art education The study adopted Quasi-experimental (single-group pre-test/post-test) research design. The Population of the study is High school art students. Cluster sampling of students enrolled in an art class (n=30) was used as sampling technique. The Data Collection are Pre-test and post-test measuring creative thinking skills (divergent thinking test), student self-reports on creativity and enjoyment. The technique of Data Analysis is paired-samples t-tests to compare pre-test and post-test scores on creativity measures. The study found a significant increase in student scores on the divergent thinking test after participating in a semester-long art program that incorporated video games. Students also reported feeling more creative and engaged in the learning process.

Wu et al. (2017) examined the Role of Digital Technologies in Enhancing Visitor Engagement in Art Museums. Research Design is Case study with mixed methods (surveys and interviews). The Population are Visitors to a large art museum using a mobile museum guide app. The Sampling Technique is Convenience sampling (visitors using the app). The method of Data Collection are Pre-visit and post-visit surveys on app usage and engagement, semi-structured interviews with app users. Findings show that museum guide app enhanced visitor engagement by facilitating focused exploration, providing additional information, and fostering social interaction.

Zhengya et al., (2023) focused on the relationship between culture and creativity. This study attempted to explore this relationship at the individual level in design processes from a phenomenological perspective, based on two design tasks carried out by 27 students at a university in China. The study utilized the Correlational research design. The sampling technique is Convenience sampling. The method of data collection was the On-site survey. The results showed a significant positive association between pleasure and long-term versus short-term orientation of individual cultural values in the two creative methods of 6-3-5 and collaborative sketching (C-sketch).

The previous studies have provided valuable insights into the realm of visitor creative engagement within museums, shedding light on how various stakeholders, including schools and families, contribute to fostering creativity in educational museum settings. These studies have emphasized the significance of creativity in educational museums, particularly in the Nigerian context, where the promotion and development of visitor creativity remain relatively underexplored. By examining the dynamics of engagement and creativity at different levels - encompassing family, school, and visitor perspectives - previous research has paved the way for a deeper understanding of the role that institutions like the National Gallery of Art play in nurturing creativity across arts, science, and technology domains in Nigeria. In line with this trajectory, the current study will examine the impact of the National Gallery of Art on promoting creativity in Arts, Science and Technology in Nigeria, offering comprehensive insights into the broader landscape of creative engagement within the Nigerian.

Methodology

This research employed a mixed-methods approach, combining quantitative data from a survey with qualitative insights from documentary analysis. The goal is to gain a comprehensive understanding of the National Gallery of Art's (NGA) effectiveness in promoting creativity in these fields. The Population of study was 313 consists of NGA officials, visual artists, and other participants in the NGA programmes in the ratio of 33%, 33% and 34% respectively.

The Simple Sampling Technique was used to select the participants for the study. These involve randomly selecting names from a list of programme participants or exhibition attendees. Self-administered questionnaire was developed to gather quantitative data on participants' and visitors' experiences with NGA's creativity-promoting initiatives. It includes questions such as; Perception of NGA's programs/exhibitions in fostering creativity, the impact of these initiatives on their own creative endeavors and suggestions for improvement. The documentary documents such as; NGA reports on creativity-focused programs and exhibitions, Educational materials used in these initiatives, Government reports on national creativity strategies.

Data Analysis Techniques such as ANOVA (Analysis of Variance) and Regression Analysis were used to test the hypotheses to show the relationship between specific NGA initiatives and reported increases in creativity. Thematic Analysis was used to identify recurring themes in the documents related to NGA's approach to promoting creativity.

Result and Discussion

Data Presentation

The data collected were presented in tables with frequency figures and the corresponding percentage.

The respondents were asked whether the National Gallery of Art has enhanced creativity in arts, science, and technology in Nigeria through its art exhibitions. 130 respondents, representing 41.5% of the total, strongly agreed that art exhibitions have enhanced creativity in arts, science, and technology in Nigeria, 56 respondents, representing 17.9% of the total, agreed with the statement, 57 respondents, representing 18.2% of the total, disagreed that art exhibitions have enhanced creativity in arts, science, and technology in Nigeria, 57 respondents, representing 18.2% of the total, strongly disagreed with the statement and 13 respondents, representing 4.2% of the total, were undecided about the impact of art exhibitions on creativity in arts, science, and technology in Nigeria. A significant portion of 186 respondents, representing 59.4% either strongly agreed or agreed that art exhibitions have enhanced creativity in arts, science, and technology in Nigeria. However, 114 respondents, representing 36.4% of the total figure of 313 either disagreed or strongly disagreed with this statement.

The remaining 13 in number, representing 4.2% were undecided.

Variables	Frequency	Percentage
Strongly Agreed	130	41.5%
Agreed	56	17.9%
Disagreed	57	18.2%
Strongly Disagreed	57	18.2%
Undecided	13	4.2%
Total	313	100%

Source: field survey data, January 2025

Respondents were asked whether the National Gallery of Art has enhanced creativity in arts, science, and technology through its art competitions. 103 persons representing 32.9% of respondents strongly believe that Art competition has enhanced creativity in arts, science, and technology in Nigeria, 57, 18.2% of respondents agree that Art competition has enhanced creativity in arts, science, and technology in Nigeria. 67, representing 21.4% of respondents disagree that Art competition has enhanced creativity in arts, science, and technology in Nigeria. 81, representing 25.9% of respondents strongly disagree that Art competition has enhanced creativity in arts, science, and technology in Nigeria and 5, representing 1.6% of respondents are undecided on whether Art competition has enhanced creativity in arts, science, and technology in Nigeria.

Variables	Frequency	Percentage
Strongly Agreed	103	32.9%
Agreed	57	18.2%
Disagreed	67	21.4%
Strongly Disagreed	81	25.9%
Undecided	5	1.6%
Total	313	100%

Source: Field survey data, January 2025

Respondents were asked whether Art research and training workshops enhance creativity in arts, science, and technology in Nigeria; 74 respondents represent 23.6% strongly agreed that art research and training workshops enhance creativity in arts, science, and technology in Nigeria, 59 respondents accounts for 18.8% of the total respondents agreed with the statement. 77 respondents constitute 24.6% disagreed with the statement, 92 respondents represent 29.4% of the total respondents strongly disagreed with the statement.

Variables	Frequency	Percentage
Strongly Agreed	74	23.6%
Agreed	59	18.8%
Disagreed	77	24.6%
Strongly Disagreed	92	29.4%
Undecided	11	3.5%
Total	313	100%

Source: Field survey data, January 2025

Test of Hypothesis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.645 ^a	.416	.410	.92144

a. Predictors: (Constant), Art research and training workshops, Art Exhibitions, Art Competition

The model summary indicates a multiple regression analysis where the independent variables are "Art research and training workshops" "Art Exhibitions" and "Art Competition" The dependent variable, enhancement of creativity in arts, science, and technology in Nigeria. The R value of .645 suggests a moderate to strong linear relationship between the independent variables and the dependent variable. The R Square value of .416 indicates that approximately 41.6% of the variance in the dependent variable can be explained by the independent variables. The Adjusted R Square of .410 adjusts this figure for the number of predictors in the model, suggesting that after accounting for the number of variables, the independent variables still explain about 41% of the variance. The Standard Error of the Estimate of .92144 indicates the average distance that the observed values fall from the regression line. Given the context, these statistics suggest that art research, training workshops, art exhibitions, and art competition collectively have a significant impact on enhancing creativity in arts, science, and technology in Nigeria, with a moderate to strong effect size and a reasonable proportion of variance explained in the dependent variable.

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	186.978	3	62.326	73.407	.000 ^b
	Residual	262.357	309	.849		
	Total	449.335	312			

a. Dependent Variable: National Gallery of Art has Promoted Creativity in Arts, Science and Technology in Nigeria
b. Predictors: (Constant), Art research and training, Art Exhibitions and Art Competition

The ANOVA results indicate a significant relationship between the predictors (art research and training, art exhibitions, and art competitions) and the promotion of creativity in arts, science, and technology in Nigeria by the National Gallery of Art. The regression model's Sum of Squares (186.978) with 3 degrees of freedom and a Mean Square of 62.326, alongside an F-statistic of 73.407 and a significance level of .000, strongly suggest that the model predictors collectively have a significant impact on the dependent variable. The Residual Sum of Squares (262.357) with 309 degrees of freedom, resulting in a Mean Square of .849, indicates the variance in the dependent variable not explained by the model. The Total Sum of Squares (449.335) with 312 degrees of freedom encapsulates the total variance in the dependent variable. This analysis underscores the significant role of art research and training, art exhibitions, and technological integration in enhancing creativity within the context of Nigeria's National Gallery of Art's efforts.

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.246	.191		6.524	.000
	Art Exhibitions has enhanced creativity in arts, science, and technology in Nigeria	.621	.043	.639	14.521	.000
	Art Competition has enhanced creativity in arts, science, and technology in Nigeria	.070	.043	.070	.983	.002
	Art research and training workshops enhance creativity in arts, science, and technology in Nigeria	-.011	.041	-.012	-.266	.790
a. Dependent Variable: Promoting Creativity in Arts, Science and Technology in Nigeria						

The coefficients from the regression model indicate the unique impact of each predictor on the dependent variable, which in this case is the promotion of creativity in arts, science, and technology in Nigeria. The constant term (1.246)

with a significant t-value (6.524) and a significance level of .000 suggests a baseline level of creativity promotion when all predictors are at zero. The coefficient for art exhibitions (.621) with a high standardized beta (.639) and a significant t-value (14.521) indicates a strong positive effect on creativity promotion, suggesting that art exhibitions significantly enhance creativity in arts, science, and technology in Nigeria. Art competition shows a statistically significant coefficient (.070), with a t-value (.983) and a low p-value (.002), indicating that its impact on creativity promotion is statistically significant. Contrary, art research and training workshops have a negative coefficient (-.011) with a t-value (-.266) and a high p-value (.790), suggesting that they do not significantly impact the promotion of creativity. This analysis highlights the importance of art exhibitions and art competitions in promoting creativity in Nigeria while art research and training workshops do not show a significant impact.

Discussion of Findings

The research findings indicate a significant impact of various initiatives on the promotion of creativity within the arts, science, and technology sectors in Nigeria. Art exhibitions have been identified as having a strong and significant impact on creativity, suggesting that these events not only showcase creative works but also stimulate creative thinking and innovation among participants and attendees. This positive effect underscores the importance of visual and experiential engagement in fostering creative ideas and collaborations across disciplines. The findings highlight the significant impact that art exhibitions have on fostering creativity in the realms of arts, science, and technology within Nigeria. Through the dissemination of artistic expressions and innovative ideas, art exhibitions serve as a catalyst for pushing the boundaries of creativity and inspiring cross-disciplinary collaboration.

Similarly, the study revealed the influence of art competitions on enhancing creativity across various fields in Nigeria. By harnessing the power of technology, individuals are able to explore new possibilities, experiment with cutting-edge tools, and engage in collaborative ventures that bridge the gap between art, science, and technology. These findings are in line with the study conducted by Etzkowitz, Kehl, & Schofield, (2022); Lee & Choi (2022) and Huang et al., (2020) whose studies also revealed that the significance of creativity in the realms of arts, science, and technology.

Contrastingly, the research findings suggested that art research and training workshops organized by the National Gallery of Art in Nigeria do not exhibit a significant impact on creativity in the same manner as art exhibitions and art competitions do. This calls for a reevaluation of the strategies employed in art research and training workshops to better align them with the dynamic landscape of creativity and innovation in the country.

Conclusion and Recommendations

The analysis of the effect of the National Gallery of Art on creativity in Nigeria reveals that through its programmes, projects and collaborations, the NGA boosts artistic education, encourages creativity in arts and science, improves the economy, employment generation, transforms public spaces, and technology integration. This research underscores the importance of leveraging art exhibitions, competitions and technological integration to cultivate creativity and foster growth in arts, science, and technology within Nigeria. It also emphasizes the need for a recalibration of approaches in art research and training workshops to ensure their effectiveness in driving creative endeavors.

The research findings underscore the importance of strategically and effectively harnessing and utilizing the power, potential, and immense benefits that art exhibitions, competitions, art research and training have to promote the cultivation, nurturing, and fostering of creativity, ingenuity, innovation, breakthroughs, and advancements in the dynamic and interconnected fields of arts, science, and technology within the great nation of Nigeria.

The implications of these findings are clear: by judiciously and astutely capitalizing on the unique convergence and fusion of artistic expression, scientific exploration, and technological advancements, Nigeria can undoubtedly position herself as a formidable and trailblazing force in the global arena of creative excellence and pioneering endeavors.

Furthermore, the research underscores the compelling and urgent need for a vital and indispensable recalibration, reevaluation, and reexamination of the existing approaches, methodologies, and frameworks that currently underpin and shape art research and training workshops. These essential transformative changes and adjustments are crucial and imperative, as they hold the key to ensuring and guaranteeing the continued relevance, efficiency, efficacy, and effectiveness of these fundamental and crucial educational initiatives and platforms aimed at propelling, and driving, forward creative endeavors, aspirations, and ambitions. In essence, it is evident that Nigeria stands at a distinct and pivotal crossroads, while making the well-informed and conscientious choice to wholeheartedly embrace the invaluable and irreplaceable fusion and interplay of art, science, and technology as crucial and instrumental elements in embracing the boundless and limitless possibilities, opportunities, and potentials that lay before it. By harnessing and capitalizing on this symbiotic and synergistic relationship, Nigeria has the unprecedented chance and unique privilege to catapult itself to the forefront of groundbreaking and transformative creative innovation, revolution, and brilliance.

The NGA should initiate constructive and fruitful partnership to support the acquisition of skills and new ideas through trainings and workshops that would

boosts commercial art works, including an extensive literary art tourist markets. This technology integration can transform creative art into an economic hub like the cultural documentation for the Commission for Museums and Monuments. This will also transform youths by engaging in different art activities and an inclusive portfolio of art projects with an accent of cultural centers.

The NGA liaise with the industrial sector to create brokering arrangements for the purchase and lease of high- end equipment for use by artists and art organizations/institutions. Pro-bono arrangement with manufacturers and suppliers of equipment also can be arranged.

The NGA fight for the establishment of a technology loan facility to be used by artists and art departments through matched funding by banks or specialized funding institutions. This would help to alleviate the high cost of technology that many artworks require for their production and/or presentation.

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