

African Educational Research Journal Vol. 11(1), pp. 49-55, February 2023 DOI: 10.30918/AERJ.111.23.003 ISSN: 2354-2160 Full Length Research Paper

Factors affecting teaching creativity in colleges of education in Ghana

Vida Adzo Amegbanu¹ and Kofi Nkonkonya Mpuangnan^{2*}

¹Mampong Technical College of Education, Ghana.

²University of Zululand, South Africa.

Accepted 7 February, 2023

ABSTRACT

This study investigated factors affecting the teaching of creativity in Colleges of Education (CoE) in Ghana. A descriptive survey design was used by developing a questionnaire containing closed and open-ended questions to collect the data. The data were collected from 188 participants. The participants were selected by using a multistage sampling technique. The sample involved fashion design instructors (18) and principals (5) students (165) from five CoEs. Descriptive statistics like frequencies and percentages were used to analyze the data collected. The results revealed some challenges such as time and large class sizes, inability to cover the curriculum, lack of resources, acquisition of objectives, heavy workload and staff inadequacy and lack of in-service training. Based on the findings, the researcher made recommendations to improve the teaching and learning of creativity in colleges.

Keywords: Ghana, creativity, College of Education, teaching.

*Corresponding author. E-mail: nkonkonya@gmail.com.

INTRODUCTION

Successive governments, organizations, and educational institutions all over the world support the growth of creativity as a general economic and societal good (Mpuangnan et al., 2021; European University Association, 2007). Creative skills are appreciated for their ability to support economic growth and help individuals and organizations better prepare for and adapt to a world that is changing quickly (Kammur, 2017). Teaching creative skills in the College of Education (CoE) in Ghana is a concern of the government. Through the National Council for Tertiary Education (NCTE), the CoE in Ghana was upgraded to tertiary status by introducing a Bachelor of Education (B.Ed.) curriculum (Ministry of Education, 2018). This was an effort made to equip student teachers with 21st-century skills to be effective in the classroom. As a new transformation, perhaps, some challenges need to be addressed to make the programme a success. This is a reason that draws the researchers' attention to undertake this study.

Along with global advancements and alterations in technology, science, economy, politics, culture, and society, a focus on creativity has evolved (Adu, 2019;

Araya and Peters, 2010). The ability to be creative is considered a catalyst for change, a coping mechanism, and a way of improving society's and the creative economy's knowledge (Florida, 2002). Despite increased interest in creativity, it is unclear from B.Ed. curriculum how CoE in Ghana might develop this skill through creative teaching within disciplines and equipping student teachers with creative ideas (Nantwi, et al., 2019), especially in fashion and design to be productive. Researchers argued that creativity was long regarded as a skill for bright people (Williams and Askland, 2012; Herbert, 2010). According to McWilliam and Dawson (2007), creativity in the small "c" or "second generation" (p. 663), should be encouraged, and be the main focus of university instructors.

Given the significance of creativity and innovation in the creative economy as well as its importance for individuals and society, it is worthwhile to investigate factors affecting the successful delivery of lessons on fashion design in colleges of education in Ghana. As research studies have found contextual elements that influence the growth of creativity are attributable to teacher

pedagogical practices (Acquah and Mensah, 2021; Robinson, 2011), appropriate suggestions may be sought for improvement. For a teacher to effectively deliver a lesson in Fashion Design, skills such as integrated, innovative pedagogical practices, and education's technology-enhanced learning (TEL) are critical (Adu, et al., 2017; Goodyear and Retalis, 2010). Here, the question that comes to mind is to what extent are the Fashion Design tutors in Colleges of Education in Ghana equipped with the skill to be effective in the classroom? The answer to this guestion is relevant to this study.

Relevance of learning resources in supporting skill acquisition

Learning resources in vocational education support skills acquisition (Adu et al., 2017). A resource such as textbooks are central to training or teaching and has therefore been described as instructional per excellence (Smith, 2001). A classroom that is deprived of textbooks promotes little skill acquisition and students are obliged to rote learning, recitation, copying from the blackboard and taking lecture notes (Florida 2014). In many cases, the lack and inadequacy of instructional materials seriously hamper teaching and learning (Seymour, 2006). The lack of resources makes the viability and sustainability of programmes difficult (Adu et al., 2017). For example, if a trainee has to effectively acquire fashion design skills he/she has to be provided with a sewing machine, threads, tapes, a bobbin, a bobbin case and fabrics. This indicates that vocational education and training require adequate instructional resources for the effective delivery of lessons. The adequacy of the resources gives the trainers an easy time explaining facts. Learners can grasp better explanations if instructors demonstrate lessons to them. In many developing countries, the financial and human resources devoted to vocational education and training in fashion design are inadequate (Fusheini and Bukari 2017; Maclure, 2007). It is finances that enable the heads of vocational institutions to purchase learning resources that are adequate in supporting skills acquisition, particularly in fashion design.

Challenges facing teachers and students in teaching and learning creatively

Research studies have acknowledged challenges in the teaching and learning of creative skills in schools (Mpuangnan et al., 2021; Snyder et al., 2019). In the contemporary psychology of learning, ideas and concepts about creativity play a critical role in the students' learning (Sternberg, 2015). It allows learners to focus on their creativity as it emphasizes their analytical and thinking skills thereby enhancing their metacognitive skills

(Niemi, 2002). The learner needs to develop a sense of their own identity and be in a comfortable and safe learning setting (Garibay, 2015). Also, students' abilities, learning beliefs, lack of motivation, and lack of training facilities are some of the challenges hindering creative teaching and learning among students in the college of education (Akyeampong, 2017; Ampeh, 2011). Day and Sammons (2004) measured the impact of teachers' skills and creativity on the level of student achievement and scientific excellence. The study used a questionnaire that consisted of 17 exercises. The study findings revealed that teachers' creativity was significantly associated with students' creativity and educational attainment and influenced the building of students' concepts and the ability to control actions outside and inside the colleges.

Attitudes towards vocational skill acquisition

Attitude refers to how one feels or thinks about an act toward objectives and ideas. Finn (2002) defines attitude as positive or negative feelings that an individual holds about objects, persons or ideas. Trainers who join technical or vocational centres for training already have formed some culturally biased opinions (Antwi and Adi-Dako, 2014). Opinions towards technically industryrelated work can be found in some cultural beliefs and practices among communities. It is believed that some communities accord low status to craft and vocational education (Paris and Alim, 2017). For example, many communities despise vocations like masonry, tailoring. carpentry, driving, dressmaking and metalwork. One of the hindrances to the development of a technological culture is found in some cultural beliefs and practices among several communities. In this light, Amedome (2013) opines that educationists have a role to play in liberating young people from prejudicing vocational and technical education. This is because some educationists take part in designing curricula. Therefore, educationists are expected to propose a universal system that is suited for all children who decide to join a vocation. For this Osei-Poku and Gyekye-Ampofo reason. (2017)recommended that education should be designed to play a deliberate role in demystifying the negative attitude towards work and locally manufactured goods. Trainers can build positive attitudes in students to ensure good performance. Uwaifo (2010) found that a positive attitude is an ingredient in achieving desirable performance in other subjects like mathematics. Kuofi (2015) pointed out that one of the most important factors that influence the academic outcome is a positive attitudinal approach to pupils' performance rather than a negative attitudinal imposition of punishment for a poor result. When trainers reward the good performance of their students, they continue to do well. However, the punishment imposed on learners because of poor performance is a sign of a negative attitude and exposes learners to continue

performing poorly.

Research question

This study was guided by the following research questions:

- 1. What challenges are confronting Fashion Design tutors in teaching creatively?
- 2. What appropriate pedagogical strategies can be adapted to promote creativity in fashion design?

METHOD

The current study anticipates using a descriptive survey design, which allowed large quantities of data amassed within a diminutive period. A descriptive survey seeks to describe particular characteristics of chosen entity group or individual cases. Both qualitative and quantitative data were gathered by the researcher in the current study. The quantitative data methods were used to enable the researcher to gain positive feedback on the demographic data of the study participants. The researcher's reasoning for gathering quantitative and qualitative data is to sustain the fort and improve the flaws of the two designs (Creswell, 2014).

Sample and sampling technique

A multistage sampling technique was followed to select a sample for the study. In the first stage, a stratified random sampling technique was used to select the six districts in the Ashanti Region, namely; Offinso Municipality, Adansi West District, Kumasi Metropolitan, Mampong Municipality, Asante Akin North District and Sekyere South District. Hence the Ashanti Region was divided into five groups, namely the north, south, east, west and central. This was followed by the random selection of a specified number of cases from every district (population sub-group). In line with this, five colleges of education were selected randomly from the west, south, east, north and central of the six strata. This ensures every part of the region was covered. In the next stage, the purposive sampling technique was employed to select the fashion design instructors (18) and principals (5) in the five colleges, because of their position as principals, it was thought they would be capable of providing appropriate data. In the final stage, simple random sampling was adopted by the researchers in selecting the students (165) in the five selected CoEs.

Instruments

The researcher collected the needed data from the

participants by using a questionnaire. The questionnaire was therefore having both close-ended and open-ended questions designed to cover three sections. Section 'A' focused on factors that affect creative teaching, section 'B' was about pedagogical strategies and section 'C' entails suggestions for improvement. In sections 'A' and 'B', the respondents were asked to rate the questionnaire items by using a 5-point Likert scale; strongly agree (SA), agree (A), neutral (N), disagree (D) and strongly disagree (SD). The questionnaire was given to three experts in Fashion Design who were the same time tutors in CoE for face validity and content validity. For the face validity, the experts were asked to check grammar and language clarity while content validity was encompassed checking whether the questionnaire items were appropriately guided by the research objectives.

RESULTS AND DISCUSSION

Teachers' challenges of teaching creativity in fashion design

The study delved into the teachers' challenges in the teaching of creativity in fashion design in the colleges of Education. The teachers were given six statements of challenges related to teaching creativity in fashion design using a 5-point Likert scale; strongly agree (SA), agree (A), neutral (N), disagree (D) and strongly disagree (SD) as responses.

Table 1 reveals that most of the teachers 7 (38.9%) disagreed that time and large classes do not negatively impact teaching and learning creativity. However, a few of the teachers 2 (11.1%) shared different views (strongly agreed) of this assertion. These findings imply that time and large classes do have an impact on teaching and learning creativity. Niemi (2002) stated that for students to develop creative skills, they need to be given opportunities to do analytical skills through their active involvement in the lessons. This is not possible where class sizes are large.

Table 1 also shows that most of the respondents 8 (44.4%) strongly agreed that the coverage of the curriculum on time does not influence creative teaching and learning whilst 2 (11.1%) did not have an opinion about this claim. This suggests that skill acquisition may not depend on how much syllabus has been covered by the teacher. As it was further revealed that lack of resources could hinder teaching and learning of creativity 5 (27.6%), if the teacher teaches all the syllabus according to time without using appropriate teaching and learning materials, the objectives would not be achieved. Therefore, Day and Sammons (2014) concluded that the need for teaching learning material to promote teachers' creativity is significant to students' creativity which influences the building of students' concepts and motivation in their achievement. This is consistent with the finding of Adu et al. (2017) and Florida (2014).

Table 1. Teachers' challenges of teaching creativity in fashion design.

Statement	N=18	SA	Α	N	D	SD
Time and large classes do not negatively impact teaching creatively and teaching creativity	F	2	4	3	7	2
	%	11.1	22.2	16.7	38.9	11.1
Coverage of curriculum on time does not influence creative teaching and teaching creativity	F	3	8	2	4	1
	%	16.7	44.4	11.1	22.2	5.6
Lack of resources does not hinder creative teaching	F	1	5	5	5	2
	%	5.6	27.8	27.8	27.8	11.1
Acquisition of school objectives and expectations does not influence the quality of teaching and teaching style	F	2	7	2	6	1
	%	11.1	38.9	11.1	33.3	5.6
Heavy workload and staff inadequacy do not influence quality teaching and teaching to transform.	F	2	3	4	6	3
	%	11.1	16.7	22.2	33.3	16.7
Lack of in-service training to teach creativity in fashion design.	F	2	3	4	6	3
	%	11.1	16.7	22.2	33.3	16.7

Table 1 shows that most of the teachers 6 (33.3%) disagreed that heavy workload and staff inadequacy do not influence quality teaching and teaching to transform. Perhaps, the teachers thought that workload in colleges could be reduced by adopting other strategies like inservice training to improve efficiency and effectiveness. As such a few of the available teachers would be equipped with the needed knowledge and skills to achieve the goal. However, data 6 (33.3%) revealed that a lack of in-service training has affected teaching creativity in fashion design. Garibay (2015) reiterated that learning beliefs, lack of motivation, and lack of training facilities are challenges that do not promote creative teaching and learning among the students in the Colleges of Education.

Teachers' pedagogical strategies to promote creativity in fashion design

The data concerning pedagogical strategies to promote creativity in fashion design are presented in Table 2.

Table 2 indicated that the majority of the teachers 6 (33.3%) disagreed with the statement "giving the students emotional support through classroom interaction sections does not assist them to be interested in creativity". This means students need emotional support from their teachers to build on their creative skills. This implies that teachers should be willing to motivate their students both intrinsically and extrinsically to develop them. Such motivation could be directed to urging students to develop the habit of surfing the internet for fair knowledge and ideas skills. For this reason, the study revealed that outsourcing resources and information from the internet

will give students more ideas to connect to creativity. As the teachers continue to help students to search for information on the internet, new teaching methods would emerge and thereby promote creativity among the students. This finding of the study supports the work of Akyeampong (2017) and Salver and Perini (2010). The work of Sternberg (2015) revealed that educators who adopt varied teaching strategies would have motivated well-behaved students leading to higher achievements in creative skills.

On the issue of pedagogical approaches such as experiments and project-based inquiry, the majority of the teachers 9 (50%) believed the pedagogical approach was appropriate for equipping students with creative skills. This indicated that if teachers adapt experiments and project-based methods in teaching, students would have the opportunity to make an inquiry from their teachers and colleagues and hence, develop their creativity in fashion design. This outcome of the study is consistent with the finding of Nold (2017). It can be established that experiments are important for developing the creativity of both teachers and students. According to Fusheini and Bukhari (2017), experiments develop students' skills such as critical thinking, strong motivation and developing meaningful content which goes beyond theories allowing students and teachers to hypothesize and come up with new ideas.

Table 2 also showed that the majority of the teachers, 12 (66.7%), strongly agreed that teachers come up with sessions to promote the imaginative processing of information and are allowed to brainstorm new ideas to improve their creative skills. This is student-centred instruction which is believed to be an effective method of improving creative learning and teaching. Another

Table 2. Teachers' pedagogical strategies to promote creativity among their students in fashion design.

Statement	N=18	SA	Α	N	D	SD
Outsourcing resources and information from the internet will give students more ideas to connect creatively	F	11	6	0	1	0
	%	61.1	33.3	0	5.6	0
Pedagogical approaches such as experiments and project-based inquiry where students are left alone to undertake a project but allow to inquire by their teachers help students to acquire creativity in fashion design.	F	6	9	1	1	1
	%	33.3	50	5.6	5.6	5.6
Coming up with sessions to promote imaginative processing of information where students are allowed to brainstorm and bring out new ideas in creativity.	F	6	11	0	0	1
	%	33.3	61.1	0	0	5.6
Promoting convergent thinking through hands-on activities and problem-solving skills assists students in creativity.	F	12	5	0	1	0
	%	66.7	27.8	0	5.6	
Giving the students emotional support through classroom interactions sections do not assist them to be interested in creativity.	F	2	6	3	6	1
	%	11.1	33.3	16.7	33.3	5.6
Demonstration methods often use during fashion design practical lessons promote creativity.	F	5	12	0	1	0
	%	27.8	66.7	0	5.6	0

research study, Osei-Poku and Gyekye-Ampofo (2017), shared a similar view. The use of hands-on activities method of teaching was found as one of the methods of students-centred instruction. This is evidenced by the data and agrees with Qutoshi and Poudel (2014) who indicated that student-centred instructional strategies are encouraged in fashion design as it improves creativity among students. Thus, the teachers' use of convergent thinking through hands-on activities is meant to promote creativity among the students in fashion design.

Table 2 further reveals that giving the students emotional support through classroom interaction sections assists the students in being interested in creativity. This result is another student-centred method of teaching and supports the research work of Krista Kaput (2018). The research work that was done established that the impression of student practices in the classroom (interactions) emphasizes students developing learning expectations in the classroom. The teachers giving the students emotional support means that there is communication between the teachers and students and helps the students to gain knowledge from the teachers.

The data showed that the teachers' use of demonstration methods during fashion design practical lessons promotes creativity among the students 12 (66.7%). The use of the demonstration method is an effective vocational training and skills management among the students thereby giving the students direction according to their behaviour, creativity development and learning expectations. This teaching method allows the teacher to serve as a facilitator in the classroom. The results in Table 1 thus, indicated that the teachers' use of materials, experimental approach, project-based inquiry,

student-centred method of teaching, hands-on activities, supporting students' emotions and use of the demonstration method promote new ideas and creativity among the students during fashion design.

CONCLUSION

Over the years, Ghana has made some efforts in developing skills in fashion design among student teachers. However, there was still more room for improvement in the areas of material and human resources. Since the transition of CoE into tertiary status in 2018, the government of Ghana through NCTE has expanded facilities in the colleges to facilitate teaching and learning. But it is evident from this study that the facilities were not adequate and appropriate to develop the creative skills of students. Interactive materials, time and large class sizes would be appropriate to effectively teach fashion design.

Changing the narrative of teaching creativity in CoE in Ghana is challenging. This is because tutors need to overcome the old traditional teaching method and adapt to the modern way of teaching. Since infrastructure is a challenge, innovation by improvisation could be the next option. Establishing an instructional framework and mounting in-service training programmes is another to achieve success. In-service programmes involve engaging fashion design tutors on periodic in-service training programmes in the respective CoE to update their knowledge and skills. As a sense of creative skill is needed in almost all the courses, course tutors, administrators, and policymakers need creative

skill development programmes to enhance, implement, and sustain creative arts curricula.

RECOMMENDATIONS

Based on the finding above, the following recommendations could be made:

- 1. The Ministry of Education should build more classrooms and employ more tutors in the CoEs to reduce class size and workload for effective teaching.
- 2. Creativity resources room with adequate facilities are essential. Therefore, the management of every CoE should furnish resource rooms with resources to facilitate the teaching of creativity.
- 3. Management should provide in-service training for tutors who teach creativity to update themselves with new knowledge and skills.
- 4. Creativity tutors should be encouraged to use technology in teaching. Technology will promote effectiveness and efficiency.
- 5. Tutors should adopt varied teaching methods by focusing on the local materials in the immediate environment to teach creativity.

Areas for further research

Based on the above results, further research can be taken up in the following areas:

- 1. Factors affecting the learning of creativity in CoEs in Ghana
- Using technology to teach creativity in CoEs
- 3. Essential skills for the teaching of creativity.

REFERENCES

- Acquah, E. O., and Mensah, I. K. (2021). The nature of Ghanaian music and dance syllabus and the challenges of teaching its contents in Tamale International School. British Journal of Contemporary Education, 1(1): 40-51.
- **Adu**, J., Amos, P. M., and Antwi, T. (**2017**). The use of instructional materials at the kindergarten level to help children own their knowledge. Journal of Advances in Social Science and Humanities, 3(1).
- Adu, M. (2019). Preparation of pre-service teachers in music and dance. [M.Phil. Thesis, University of Education, Winneba]. Institutional Repository. https://ir.uew.edu.gh.
- **Akyeampong**, K. (**2017**). Teacher educators' practice and vision of good teaching in teacher education reform context in Ghana. Educational Researcher, 46(4): 194-203.
- **Amedome**, S. K. (2013). Challenges facing technical and vocational education in Ghana. International Journal of Scientific and Technology, 2(6): 253-255.
- Ampeh, G. K. (2011). Developing Effective Strategies for Teaching Creative Arts in the Lower Primary Schools: A Case Study in Agona Swedru District Administration 'B' School. [M. A. Thesis, Kwame Nkrumah University of Science and Technology]. Institutional Repository. ir.knust.edu.gh.

- **Antwi**, E., and **Adi-Dako**, M. (**2014**). Painting: Is it Indigenous to Ghanaian Culture? Journal of Arts and Humanities, 3(9): 44-49.
- Araya, D., and Peters, M. A. (Eds.). (2010). Education in the creative economy: Knowledge and learning in the age of innovation. New York, NY: Peter Lang Publishing.
- **Creswell**, J. W. (**2014**). Research Design. Qualitative, Quantitative and Mixed Methods Approaches (4th Ed.) Lincoln: Sage Publications
- Day, C., and Sammons, P. (2014). Successful School Leadership. Reading, Education Development.
- European University Association (2007). Creativity in education: Report on the EUA creativity project 2006-2007. Retrieved on 16th September, 2020 from http://www.eua.be/fileadmin/user_upload/files/Publications/Creativity_in_hi gher_education.pdf.
- Finn, J. D. (2002). Expectations and the educational environment. Review of Educational Research, 42: 387-410.
- Florida, R. (2014). The rise of the creative class—revisited, revised and expanded. Basic Books. Florida, R. (2002). The rise of the creative class and how it's transforming work, leisure, community and everyday life. New York: Basic Books.
- Fusheini, M. Z., and Bukari, M. (2017). Materials and methods for producing basic instructional support resources for teaching creative arts in Zohe Evangelical Presbyterian Primary School, Yendi-Ghana. Journal of Education and Practice, 8(34): 83-96.
- Garibay, C. J. (2015). Creating a Positive Classroom Climate for Diversity. UCLA Diversity and Faculty Development. Retrieved from https://equity.ucla.edu/wp
 - content/uploads/2016/06/Creating a Positive Class room Climate Web-2.pdf.
- Goodyear, P., and Retalis, S. (2010). Learning, technology and design. In P. Goodyear & S. Retalis (Eds.), Technology-enhanced learning: Design patterns and pattern languages (pp. 1-27). Rotterdam, Netherlands: Sense Publishers.
- Herbert, A. (2010). The pedagogy of creativity. London, UK: Routledge. Kammur, A. A. (2017). The quality of educational services and its effect on students satisfaction an empirical study on students of Alrifaq Private University in Libya. Global Journal of Commerce and Management Perspective, 6(1): 1–10.
- Kuofi, T. (2015). The professional background of males in the fashion industry in the Cape Coast metropolis. Cape Coast, Ghana: University of Education, Winneba.
- Maclure, R. (2007). Overlooked and undervalued. Central Africa: US Agency.
- **McWilliam**, É., and **Dawson**, S. (2007). Understanding creativity: A survey of "creative" academic teachers. Canberra, ACT: Carrick Institute of Teaching and Learning.
- **Ministry of Education (2018)**. Ghana Education Reforms. Available at https://moe.gov.gh/index.php/education-reform/.
- **Mpuangnan**, N. K., Amegbanu, V. A., and Padhan, S. (**2021**). Analysing the methods and approaches for transacting diploma in basic education curriculum in Ghana. International Journal of Curriculum and Instruction, 13(2): 1006-1023.
- **Nantwi**, W. K., Afful, P., and Asare-Ababio, P. (**2019**). Pedagogical practices in creative arts: using the right approach for effective delivery. European Journal of Education Studies, *5*(9): 241-252.
- Niemi, H. (2002). Active learning: A cultural change needed in teacher education and schools. Teaching and Teacher Education, 18: 763-780.
- **NoId**, H. (**2017**). Using critical thinking teaching methods to increase student success: An action research project. International Journal of Teaching and Learning in Higher Education, 29(1): 17-32.
- Osei-Poku, P., and Gyekye-Ampofo, M. (2017). Curriculum Delivery in Early Childhood Education: Evidence from Selected Public Kindergartens in Ashanti Region, Ghana. British Journal of Education, 5(5): 72-82.
- Paris, D., and Alim, H. S. (Eds.). (2017). Culturally sustaining pedagogies: Teaching and learning for justice in a changing world. Teachers College Press.
- **Robinson**, K. (2011). Out of our minds: Learning to be creative. Oxford, UK: Capstone.
- Seymour, D. W. (2006). Industrial skills. London: Pitman Publishing. Smith, S. J. (2001). Vocational education and the world of work.

- Boston: Allen and Baco Inc.
- Snyder, H. T., Hammond, J. A., Grohman, M. G., and Katz-Buonincontro, J. (2019). Creativity measurement in undergraduate students from 1984–2013: A systematic review. Psychology of Aesthetics, Creativity, and the Arts, 13(2): 133–143.
- Aesthetics, Creativity, and the Arts, 13(2): 133–143.

 Sternberg, R. J. (2015). Teaching for creativity: The sounds of silence. Psychology of Aesthetics. Creativity, and the Arts, 9(2): 115–117.
- Psychology of Aesthetics, Creativity, and the Arts, 9(2): 115–117. **Uwaifo**, V. O. (**2010**). Technical education and its challenges in Nigeria in the 21st century. International NGO Journal, 5(2): 40-44.
- Williams, A., and Askland, H. (2012). Assessing creativity: Strategies and tools to support teaching and learning in architecture and design. Final report. Newcastle, NSW: University of Newcastle.

Citation: Amegbanu, V. A., and Mpuangnan, K. N. (2023). Factors affecting teaching creativity in colleges of education in Ghana. African Educational Research Journal, 11(1): 49-55.