

The Validity of Pre-Service Teachers' WASSCE Results in Predicting Academic Performance at the Presbyterian College of Education

William Agyei Brantuo¹, Vivian Maanu², Theophilus Kwasi Klu³, Seth Amoako Atta⁴

¹Department of Mathematics, Akrpong College of Education, Ghana

²Mathematics Department, Akrokerri College of Education, Ghana

³Mathematics Department, Abetifi College of Education, Ghana

⁴Department of Mathematics Education, AAMUSTED, Kumasi Ghana

Article Info

Article history:

Received 2023-10-19

Revised 2023-12-21

Accepted 2024-01-05

Keywords:

Examination Malpractice
International Best Practices
Pedagogical Thinking Skills

ABSTRACT

In line with international best practices, countries across the globe are intensifying their teacher education institutions to train world-class teachers to feed their schools. Against this background, this research work tried to determine how robust the admission process at the Presbyterian College of Education, Akrpong, is. This is because admitting students into the College of Education is the first step in ensuring a sound teacher training program. The study was quantitative and used secondary data; that is, students' West Africa Senior High School Certificate Examination (WASSCE) entry results against their Final GPA at the College of Education were used for the data analysis. The analysis proved that those who entered the College of Education with good grades from the Senior High School exited with good GPAs, and the inverse was true. The researcher recommends that the college move beyond the regular training and put in measures to ensure that most students can improve their performance to be at par with the current demands of a world-class teacher.

This is an open-access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



Corresponding Author:

William Agyei Brantuo

Department of Mathematics, Akrpong College of Education, Ghana

Email: williamagyei2002@yahoo.com

1. INTRODUCTION

Colleges of Education in Ghana have abandoned the use of entrance examinations and interviews for admitting pre-service teachers into the Colleges of Education since 2012. Previously, entrance into the then-teacher training colleges was, to a more significant extent, based on a student's performance at the entrance exams monitored by the West African Examination Council (WAEC) across the country [1]. Principals of the institutions chose students based on their performance in the admission exams and interviews, not only

on their academic achievement at the West Africa Secondary School Certificate Examination (WASSCE)/Senior Secondary School Certificate Examination (SSSCE). This tradition led to interviews at individual institutions when the colleges were promoted to Diploma status in 2005. Currently, students are admitted directly into the Colleges of Education based on their WASSCE performance because the Colleges of Education are affiliated with the five public universities in Ghana and now follow the admission procedure for admitting undergraduate students to the various public universities.

Critics of this direct (open access) admission approach believe that as a teaching institution, it is appropriate to investigate and be confident in the knowledge base of the students who offer themselves to be educated as teachers [2]. This is because following the publication of the 2018/2019 results from the WASSCE, several School Administrators, parents, and failed applicants questioned the legitimacy and independence of the results. Julius Konton, reporting in 2019, indicated that over 12,000 applicants representing roughly forty-two schools across the nation failed in all subjects. Parents and other cooperating groups, such as Africa Education Watch, stated that the credibility of the WASSCE is tarnished. Some senior high schools or candidates navigate their way through to achieve better WASSCE results [3].

A study by Ashiagbor [4] on examination misconduct in Ghana found that examination malpractice has become prevalent. Ashiagbor [4] remarked that every examination season shows the rise of new and inventive means of cheating. According to a study by the IFAEC Report, as referenced in Ashiagbor [4], the yearly distribution of applicants implicated in examination misconduct is disturbing. Several researchers have bemoaned the prevalence rate of examination malpractice at the WASSCE, citing reasons such as the pressure of keeping up with high parental expectations of good performance, examination anxiety, lack of educational facilities such as the furnished library and equipped laboratory for practical work, inadequate dormitories, and hostels especially in some schools, stiff competition among students and schools, societal preference for paper qualification, poor preparations on all major stakeholders as well as poor invigilation of the examinations [5].

A report by Enoch Darfur Frimpong in the Daily Graphic in 2013 stated that examination malpractices had assumed an alarming trend mainly due to candidates' fear of failing, lack of confidence, laziness, inadequate preparation, and inability to apply themselves to their studies. For instance, Abreh et al. [6] stated that examination misconduct in the WASSCE at senior high schools had become an annual routine of considerable worry to WAEC, the government, schools, parents, and the Ghanaian community. Even though the Test Development Division (TDD), Test Administration Division (TAD), and Information and Communication Technology Division (ICTD) of the WAEC are attempting different methods to control the problem, figures available suggest that the occurrence grows annually [4]. Ampofo [7] believes that the occurrence of examination malpractices at both Junior and Senior High schools might affect the credibility of examinations by the WAEC. This cannot be a simple claim as WAEC, the entity mandated to administer the WASSCE, has been punishing schools and candidates caught in the web of examination malpractices.

In 2019, WAEC published names of candidates involved in examination malpractices in the newspapers. Seventeen Heads of SHS, supervisors, and invigilators were sanctioned for various roles performed, leading to examination malpractices.

The current admission requirement for a student to be admitted at the College of Education in Ghana is to obtain (grades A1 to C6) for WASSCE or grades A to D for SSSCE in six subjects, including English, Mathematics, and Integrated Science / Social Studies. A pass in Mathematics and English is mandatory for all applicants. Applicants who apply to pursue a non-science-related program are considered for admission based on the better of either Social Studies or Integrated Science. Applicants with more than one examination sitting are also considered for admission based on their best six subjects, irrespective of the period in which a subject grade is better. However, the rejection rate is very high due to the competitive nature of selection. This places many students from the less endowed schools at a severe disadvantage because of their performance at the WASSCE. If care is not taken, students may find different means of getting good grades at the WASSCE to increase their chances of gaining admission into higher education [7], [8].

Countries like the United States, United Kingdom, and Australia, with trusted systems to conduct credible high school final examinations, do not rely only on the scores to admit students into higher education [9]. This is premised on the fact that the final examination is not the best assessment of an individual's academic success. A couple of factors can influence a candidate's performance either positively or negatively. These factors may include but are not limited to sickness, tension, a coalition in the examination room, and compromised invigilation. A thirteen-year rigorous investigation by Richardson et al. [10] indicated a significant association between high school Grade Point Average (GPA) and success at the university. However, other factors such as the Scholastic Assessment Test (SAT) / American College Testing (ACT), grade goals, and performance self-efficacies are all determinants of a student's performance at the tertiary. The article states that irrespective of the high school scores, a student's performance at the tertiary level depends on factors such as personality traits, motivational factors, self-regulatory learning strategies, approaches to learning, and psychosocial contextual influences. Australia, for instance, has a robust system of admitting students into tertiary education known as the Australian Tertiary Admissions Rank (ATAR). The ATAR is a direct access method; however, there is an alternate entry point for mature and Technical students who might not achieve the ATAR requirement. This one is known as (mature age or Technical and Further Education (TAFE) [11].

On the issue of teacher education, a high premium is put on the teaching profession's admission, preparation, and development. Countries such as Canada, Australia, Finland, and Singapore have well-developed systems for teacher development. According to Stacey et al. [12], proper measures are implemented for teacher recruitment, preparation, induction, and professional development through teacher education policies and practices. Finland, for instance, leapt from a relatively poorly educated nation to a twenty-first-century powerhouse within one generation, the paper noted. This has manifested in their high rankings in all areas on the PISA assessments. Any country serious about developing its education system must start with teacher education. As OECD

posited [13], 'the quality of an education system cannot exceed the quality of its teachers and principals.

Admission into teacher education institutions has been based on high-grade point averages, interviews, and the like. According to Dousay [14], in Finland, some students volunteer in teacher education institutions where they intend to enrol to increase their chances of gaining admission. This is a result of the competitive nature of the admission process. This is because universities need people committed to teaching to enrol and be trained. Modern teacher training and preparation focus more on invigorating the pre-service teacher with pedagogical thinking skills that enable them to manage the teaching process in a diagnostic manner. The USA has the Interstate New Teacher Assessment and Support Consortium (InTASC), which is responsible for teacher licensing and preparation, according to Dousay [14].

Ghana is a member of the United Nations organization and, therefore, a signatory to the SDGs. Therefore, providing inclusive quality education for all is a non-negotiable goal. The Ministry of Education has outlined several objectives for the promotion of the socio-economic development of the country. Ghana's philosophy of teacher education is to enhance teacher education institutions to groom versatile teachers fortified with professional skills, attitudes, and values in addition to content knowledge. Teachers are change agents and need the spirit of research, invention, and creativity. This will help them to adjust to changing situations. The UN's agenda for life-long learning requires teachers to use inclusive strategies. In practice, the Ghanaian professional teacher is expected to display dedication, commitment, and leadership in the school community and the larger community. Teachers are, therefore, seen as role models and act in loco parentis [15]–[17].

Statement of the Problem

Over the years, Ghana has spent a lot on the Education Sector via numerous educational policy changes. The objective is to increase the country's education quality, most notably at the pre-tertiary level. Consequently, the teacher education institutes in the nation have been raised from certificate-granting to degree-awarding. However, the influence on the pupils' performance is yet to be felt. Ghana's performance in the eyes of the entire globe has never improved since the last disastrous performance in the TIMSS [18], [19].

Meanwhile, Akropong College of Education (CoE) and the other CoEs in the country admit pre-service teachers based on high performance at the senior high school without recourse to interviews or entrance examinations. A cursory look at the student's performance from 2016 to 2019 graduates for the Diploma in Basic Education Program revealed an average attrition rate of over 6% based on poor academic performance, with most students graduating with a Pass or Third Class. Meanwhile, many studies have not been done to find the correlation between the WASSCE performance and GPA at the College of Education, hence the need for this study.

Objectives of the Study

The study's objective was to determine whether there is a relationship between students' performance at West Africa Secondary School Certificate Examination results and cumulative Grade Point Average (GPA) at the College of Education.

Empirical Review

Education at a Glance [13] has taken a retrospective look at countries' educational investments and the outcomes these investments have yielded. The report is based on SDG Goal 4, encompassing access to education, participation, and progression. It focuses on the entire education system from early childhood to tertiary education, with particular attention to Teacher education. Teachers are change managers, so they must assess the factors that impede or enhance their activities. The factors include school learning environment and organization, instructional time, teachers' working time, and salaries. These indicators represent policy levers that can be manipulated and provide contexts for instruction quality and individual learners' outcomes. The OECD monitors and reports on the pathways youth can take throughout their journey in life through education. The transition from High school to higher levels of education, and their progression through higher levels of education, and from education into the labour market [12], [20], [21]. The UN believes that only education can propel individuals to acquire the skills needed to contribute meaningfully to society [22].

Concerns with Initial Teacher Education Curriculum

The numerous reforms in the teacher education system in Ghana in recent decades have had little impact on children's learning outcomes. This is because the teacher education curriculum has not adequately responded to the lack of improvement in learning outcomes at the primary school level. The curriculum for teacher education is weighted heavily towards subject-content knowledge to the detriment of curriculum space for developing an understanding of pedagogy and practical classroom teaching skills [23]. More so, a lack of connection exists between the initial teacher education curriculum and the Primary, JHS, and SHS curricula [24]. Mathematics, English, and Science courses focus far more significantly on the content not required to be taught at primary, JHS, and SHS levels. Again, the concerns and needs of today, that is, of the 21st century, are not reflected in the teacher education curriculum, making it outmoded and old-fashioned [3].

Although teacher education provides structures and expectations of mentor support and practicum placement, mentoring, visits by subject specialists, and pre- and post-supervisory conferences rarely occur as intended. The initial teacher education curriculum assessment system was too information-oriented, extremely quantitative, and lacked comprehensiveness. It is also summative, with 60% assessment by examination and 40% continuous assessment, consisting of quizzes and assignments. The student's progression depends on success in the examinations. This makes the curriculum both theory- and examination-focused, preventing students from developing appropriate pedagogical skills. The education programs lacked the impetus to develop teachers' attitudes, values, dispositions, habits, and interests [25] since the curriculum did not assess the abovementioned areas.

Rationale for the New Curriculum for Teacher Education

There have been constant and consistent recommendations by the international communities [26] for encouraging the development of transversal skills such as problem-solving, critical thinking, creativity, collaboration, communication, innovation, entrepreneurship, and digital literacy, among others [27], [28]. The need for these mechanisms to be embedded in the ITE to enhance productivity in the twenty-first century contributed to developing a new curriculum [1]. The coming into force of the National Teachers' Standards and the Pre-tertiary Teacher Development and Management (PTPDM) policies further deepened the call for change in the teacher education program in the country. The National Teachers' Standards (NTS) set out the minimum levels of practice that all trained teachers must reach by the end of their pre-service teacher education course to play a critical role in inspiring and challenging all pupils to achieve their potential. There was also the need for all initial teacher education to allow student teachers to meet all the NTS standards fully. This and many other pressing issues demanded a new Curriculum Framework for Initial Teacher Education (ITE) in the country. Thus, preparing competent, qualified, and dedicated teachers is important to handle the country's pre-tertiary education [17], [29]. Hence, the Teacher Education Curricula's introduction gave birth to the 4-year Bachelor of Education (B.Ed) program. This new curriculum is presented in terms of the four pillars and the cross-cutting issues explicitly designed to prepare compelling, engaging, and inspirational teachers. The four pillars espoused in the National Teacher Education Curriculum Framework by the Ministry of Education, co-sponsored by the T-TEL (Transforming Teacher Education and Learning), are Subject and Curriculum Knowledge, Literacy Studies, Pedagogic Knowledge, and Supported Teaching in Schools [23].

The driving force for this innovation is to produce teachers who can inspire learners and encourage critical thinking, problem-solving, and creativity rather than simply focusing on factual recall and computational algorithms to pass examinations [17]. The B.Ed program has been designed to ensure that it produces a cadre of skilled, knowledgeable, and motivated Ghanaian teachers to meet the standards of the NTS. All 46 CoEs in Ghana have been resourced to deliver this mandate [23]. To ensure smooth implementation and sustainability, the CoEs have been affiliated with six public universities in the country. No wonder the team of international assessors of the B.Ed. Program in Ghana described it as "World Class."

2. METHOD

This study was purely quantitative, and it employed the use of secondary data. The data were the examination results that students used to gain admission into the college and the final results they obtained. The West African Examination Council (WAEC) conducted the entry examination, while the University of Education Cape Coast conducted the college examinations. Formal letters were written to the Principal of Akropong College of Education and the Institute of Education University of Cape to request students' results, which served as the data for the study. The study targeted all students who applied to the college and were given admission, studied, and passed all the required examinations

conducted by the Institute of Education, University of Cape Coast. They were issued the Diploma in Basic Education certificate at the end of their studies. That is the Presbyterian College of Education, Akropong students who were admitted in 2013, 2014, 2015, and 2016 and completed all the required courses and examinations in 2016, 2017, 2018, and 2019, respectively, with the Diploma in Basic Education certificate awarded by the University of Cape Coast. A total of 2,097 students' examination records were obtained for the study. To ensure validity and reliability, the data obtained from the institution and the college were not tempered with and kept confidential since it was used for only the intended purpose.

In analyzing the data collected, each student's WASSCE and CGPA results were coded with a numerical value and keyed into the data view of the Statistical Package for the Social Sciences (SPSS version 22.0) computer software. A Pearson Product Moment Correlation Coefficient (r) was computed to ascertain the relationship between students' performance at the West African Senior School Certificate Examination (WASSCE) and their Cumulative Grade Point Average (CGPA) Results at the College of Education. The relationship between WASSCE results and CPGA was investigated using the Pearson product-moment correlation. A preliminary analysis was performed to ensure no violation of the assumptions of normality, linearity, homoscedasticity, and demographic characteristics of the students, particularly gender.

WASSCE and SSSCE results are graded using labels and values, whereas CGPA is graded using values. A WASSCE grade of "A," which indicates the highest performance, has a value of "1." For the CGPA, a more significant number indicates a better performance. The highest value for an excellent graduating grade is 4.0; for the WASSCE, the highest performance value indicator is 1. Therefore, a higher nominal total value of WASSCE/SSSCE indicates better performance, while a lower value of CGPA indicates worse performance. A positive correlation means a higher performance at WASSCE leads to a lower CGPA, and a negative correlation means the lower the WASSCE total results, the higher the CGPA.

3. RESULTS AND DISCUSSION

3.1.1. Set 1: 2013 – 2016 Gender of students

Table 1 shows that 359 (63.5 %) males were admitted, while 206 (36.5 %) were females. Five hundred sixty-five students were admitted in 2013; the exact number graduated in 2016.

Table 1. Total Number of Male and Female Students Admitted in 2013

	Number	Percentage (%)
Male	359	63.5
Female	206	36.5

Source: Akropong Presbyterian College of Education, Akropong.

Table 2. Mean and standard deviation of WASSCE and CGPA

	Mean	St. Deviation	N
CGPA	2.714	0.4137	565
WASSCE	20.726	5.4744	565

From Table 2, the mean WASSCE entry score for admission into the Presbyterian College of Education in 2013 was 21, with the corresponding mean graduating CGPA of 2.714 in 2016.

Table 3. Correlation between Performance at WASSCE and CGPA results at the College of Education for students admitted in 2013 and graduated in 2016

		CGPA	WASSCE
CGPA	Pearson Correlation	1	-0.397**
	Sig. (2-tailed)		
	N	565	565

***Correlation is significant at the 0.01 level (2-tailed). Note: N = 565, $p < 0.05$

The Pearson Product Correlation between the students' performance at WASSCE and their CGPA results was found to be -0.397 , implying a medium relationship between their WASSCE performance and CGPA results. Value $r(565) = -0.397$, $p = 0.000$ $P < .05$ infers a significant relationship between the two variables. This indicates that for an increase in students' performance at WASSCE, there is an increase in their CGPA results at the College of Education and vice versa. The two variables are related. The effect size is medium since the value of $r = -0.397$ falls between the absolute value of $0.3 - 0.49$.

3.1.2 Set 2: 2014 – 2017 Gender of students

Five hundred-eight students were admitted in 2014, and 508 graduated in 2017. 312 (61.4 %) were males, representing the majority, and 196 (38.6 %) were females.

Table 4. Total Number of Male and Female Students Admitted in 2014

	Number	Percentage (%)
Male	312	61.4
Female	196	38.6

Source: Akropong Presbyterian College of Education, Akropong.

Table 5. Mean and standard deviation of WASSCE and CGPA

	Mean	St. Deviation	N
CGPA	2.717	0.482	508
WASSCE	22.34	4.805	508

From Table 5, the mean WASSCE entry score for admission into the Presbyterian College of Education in 2014 was 22, with the corresponding mean graduating CGPA of 2.714 in 2017. The Pearson correlation coefficient was computed to ascertain the relationship between the total aggregate and the CGPA; the result is presented in Table 6.

From Table 6, the Pearson Product Correlation between the students' performance at WASSCE and their CGPA results was found to be -0.363 which implies that there is a medium relationship between their WASSCE performance and CGPA results, $r(508) = -0.363$, $p = 0.000$ $P < .05$ which also shows that there is a significant relationship between the two variables. This shows that for an increase in students' performance at WASSCE, there is an increase in their CGPA results at the College of Education. These two variables,

therefore, relate. The effect size of this model is medium because the correlation coefficient $r = -0.363$ is between the absolute value of 0.3 – 0.49.

Table 6. Correlation between Performance at WASSCE and CGPA results at the College of Education for students admitted in 2014 and graduated in 2017

		CGPA	WASSCE
CGPA	Pearson Correlation	1	-0.363**
	Sig. (2-tailed)		0.000
	N	508	508

***Correlation is significant at the 0.01 level (2-tailed). Note: N = 508, $p < 0.05$

3.1.3 Set 3: 2015 – 2018 Gender of students

Four hundred seventy-seven students were admitted, and the same number graduated. Two hundred ninety-eight (62.5 %) were males, representing the majority, and 179 (37.5 %) were females.

Table 7. Total Number of Male and Female Students Admitted in 2015

	Number	Percentage (%)
Male	298	62.5
Female	179	37.5

Source: Akropong Presbyterian College of Education, Akropong.

Table 8. Mean and standard deviation of WASSCE and CGPA for 2015-2018 set

	Mean	St. Deviation	N
CGPA	2.763	0.541	477
WASSCE	23.45	5.210	477

From Table 8, the mean WASSCE entry score for admission into the Presbyterian College of Education in 2015 was 23, with the corresponding mean graduating CGPA of 2.763 in 2018.

Table 9. Correlation between Performance at WASSCE and CGPA results at the College of Education for students admitted in 2015 and graduated in 2018

		CGPA	WASSCE
CGPA	Pearson Correlation	1	-0.232***
	Sig. (2-tailed)		0.000
	N	477	477

***Correlation is significant at the 0.01 level (2-tailed). Note: N = 477, $p < 0.05$

From Table 9, the Pearson Product Correlation between the students' performance at WASSCE and their CGPA results was found to be -0.232 which implies that there is a slight relationship between their WASSCE performance and CGPA results, $r(508) = -.232$, $p = 0.000$ $P < .05$ which also shows that there is a significant relationship between the two variables. This shows that for an increase in students' performance at WASSCE, there is a corresponding increase in their CGPA results at the College of Education at the end of the Diploma in Education program. There is, therefore, a relationship between the WASSCE

results and the CGPA at the Presbyterian College of Education. The effect size is negligible since the correlation coefficient $r = -0.232$ ranges between 0.1 – 0.29.

3.1.4 Set 4: 2016 – 2019 Gender of students

Five hundred forty-seven students were admitted, and 547 were completed. 290 (53.0 %) were males and 257 (47.0 %) were females.

Table 10: Total Number of Male and Female Students Admitted in 2016

	Number	Percentage (%)
Male	290	53.0
Female	570	47.0

Source: Akropong Presbyterian College of Education, Akropong

Table 11. Mean and standard deviation of WASSCE and CGPA for 2016-2019

	Mean	St. Deviation	N
CGPA	2.797	0.487	547
WASSCE	23.90	5.756	547

From Table 11, the mean WASSCE entry score for admission into the Presbyterian College of Education in 2016 was 24, with the corresponding mean graduating CGPA of 2.797 in 2019.

In order to determine the kind of relationship between the CGPA of 2019 graduating students and their corresponding 2016 entry WASSCE/SSSCE grades, the Pearson correlation coefficient was computed, and the result is presented in the table below;

Table 12. Correlation between Performance at WASSCE and CGPA results at the College of Education for students admitted in 2016 and graduated in 2019

		CGPA	WASSCE
CGPA	Pearson Correlation	1	-0.206***
	Sig. (2-tailed)		0.000
	N	547	547

***Correlation is significant at the 0.01 level (2-tailed). Note: N = 547, $p < 0.05$

From Table 12, the Pearson Product Correlation between the students' performance at WASSCE and their CGPA results was found to be -0.206 which indicates that there is a relatively medium relationship between graduates' WASSCE performance and their CGPA results at the end of the diploma in basic education. Value $r(547) = -0.206$, $p = 0.000$ $P < .05$ also shows a significant relationship between the two variables. This shows that for an increase in students' performance at WASSCE, there is an increase in their CGPA results at the College of Education. These two variables are related. The effect size of the Pearson correlation coefficient $r = -0.206$ is small since it falls within the range of the absolute value of 0.1 – 0.29.

Table 13. Summary of results from four dataset

Dataset	Number of students	WASSSCE/SSSCE		CGPA		Pearson Correlation coefficient
		Mean	STDV	Mean	STDV	
2013 – 2016	565	20.7257	5.4744	2.7143	0.4137	-0.397
2014 – 2017	508	22.3400	4.8050	2.7171	0.4816	-0.363
2015 – 2018	477	23.4600	5.2100	2.7632	0.5414	-0.232
2016 – 2019	547	23.9000	5.7650	2.7966	0.4872	-0.206

From the table above, the 2013 – 2016 dataset showed the highest number of students, 565, who were admitted and graduated with a diploma in basic education from the Presbyterian College of Education. This was followed by the 2016 – 2019 dataset, which recorded 547 students. This was 18 students less than those admitted and graduated in the 2013 -2016 dataset. The lowest number of admitted and graduated students was recorded in the 2015 – 2018 dataset. A total number of 477 who were admitted in 2015 graduated in 2018.

The best mean for the WSSCE/SSSCE total aggregate for admission into the Presbyterian College of Education for the four years under discussion occurred in 2013, with a mean value of about 21. The worst mean for WASSCE/SSSCE total aggregate for the same period happened in 2016, with a mean aggregate of about 24. The standard deviation for the 2013 admission year was smaller than that of the 2016 admission year. While the standard deviation for the 2013 admission year was 5.4744, it was 5.7650 in 2016. This means students admitted in the 2013 admission year had better WASSCE/SSSCE grades than the 2016 students. However, a standard deviation of 4.8050, the smallest among the four years of admission, was recorded in the 2014 admission year. This indicates that candidates admitted in that year had results relatively clustered around the mean admission entry grades of about 22.

The table shows the highest mean CGPA of 2.7966 for the 2019 graduating students, with a corresponding standard deviation of 0.4872. Even though candidates who graduated with this mean CGPA were admitted with the worst mean WASSCE/SSSCE in 2016, they produced the best mean CPGA in the four years. Ironically, the 2016 graduating students were admitted with the best WASSCE/SSCE aggregate but recorded the worst mean CGPA of 2.7143. This indicates a better performance for the 2019 graduating candidates. Further studies can be conducted to determine what may have accounted for the disparities between the performances of these two groups since one would have expected that students with better mean admission entry grades would have graduated with a corresponding best mean CGPA.

4. CONCLUSION

The results have revealed that there is nothing wrong with the process of admitting students into the college of education to pursue the Diploma in Basic Education program. This is because students who entered with high scores at the WASSCE could come out with commendable CGPAs. This put to rest the credibility issues of the WASSCE. However, it is not clear whether the training given to students was able to have any impact on the students. Since the results seem to suggest a “garbage in, garbage out” kind of

system. Despite the gender disparities, the gap between males and females in the WASSCE/SSSCE neither widened nor closed per the analysis results. The students coming out of the three-year training must be reformed enough and fortified with the pedagogical content knowledge and skills for teaching. This is the only way these teachers can inspire learning at the basic schools. Therefore, colleges must look into their training programs (content) and the mode of assessment to ensure that the pre-service teachers are up to the task. Moreover, the National Teaching Council (NTC) and the Ghana Education Service should monitor and ensure that the colleges have the requisite tools to deliver their mandate.

5. RECOMMENDATIONS

Based on the findings, the study recommends the following;

1. The admission requirements must be maintained. However, the ratio of males to females admitted must be considered since it affects the student's academic performance.
2. The college training content must be relooked to ensure students admitted exit with the same dose of pedagogical knowledge and skills irrespective of their entry grades.
3. Special attention must be paid to gender issues to bring females in line with their male counterparts in academic achievement.

6. RECOMMENDATIONS FOR FUTURE RESEARCH

There must be a study to look at the nature of training given to college students in contrast to international standards and best practices. Studies must be conducted to determine why the admission grades for college colleges have declined for the past four years at the Presbyterian College of Education. This can be done in other colleges to determine if the same observation exists.

REFERENCES

- [1] K. Adu-Gyamfi and C. D. Otami, "In Search of an Effective Teacher: Ghana's Move towards Achieving Sustainable Education through Teacher Education Reforms," *Int. J. High. Educ.*, vol. 9, no. 4, p. 216, Jun. 2020, doi: 10.5430/ijhe.v9n4p216.
- [2] C. Y. Kwaah and G. Essilfie, "Stress and Coping Strategies among Distance Education Students at the University of Cape Coast, Ghana," *Turkish Online J. Distance Educ.*, pp. 120–120, Jul. 2017, doi: 10.17718/tojde.328942.
- [3] C. Adu-Yeboah and C. Y. Kwaah, "Preparing Teacher Trainees for Field Experience: Lessons From the On-Campus Practical Experience in Colleges of Education in Ghana," *SAGE Open*, vol. 8, no. 4, p. 215824401880761, Oct. 2018, doi: 10.1177/2158244018807619.
- [4] K. K. Ashiagbor, "Examination Malpractice at Wassce In Ghana: The Challenges of Utilising Information and Communication Technology," 2019.
- [5] S. R. Adekunmisi, "Curbing Examination Malpractices through Information Literacy Programmes," *AGOGO J. Humanit.*, vol. 4, pp. 50–60, Feb. 2021, doi: 10.46881/ajh.v4i0.223.
- [6] M. K. Abreh, K. A. Owusu, and F. K. Amedahe, "Trends in Performance of WASSCE Candidates in the Science and Mathematics in Ghana: Perceived Contributing Factors and the Way Forward," *J. Educ.*, vol. 198, no. 1, pp. 113–123, Jan. 2018, doi: 10.1177/0022057418800950.
- [7] J. A. Ampofo, "Causes and Effects of Examination Malpractices Among Junior High School Students in New Edubiase," *Int. J. Manag. Entrep. Res.*, vol. 2, no. 7, pp. 492–511, Jan. 2021, doi: 10.51594/ijmer.v2i7.192.
- [8] T. T. Addi, "Academic performance of deaf students in West African Secondary School Certificate Examination, perception of teachers and students at St. John's integrated Senior High, Technical

- school for the deaf, Navrongo, Ghana,” University of Education, Winneba, 2017.
- [9] R. M. I. T, B. I, S. C, W. D, and G. J, “Trends in International Mathematics and Science Study (TIMSS),” 2019.
- [10] M. Richardson, C. Abraham, and R. Bond, “Psychological correlates of university students’ academic performance: A systematic review and meta-analysis,” *Psychol. Bull.*, vol. 138, no. 2, pp. 353–387, 2012, doi: 10.1037/a0026838.
- [11] C. Blackmore, K. Hird, and R. S. Anderton, “An Investigation of Secondary School STEM Subjects as Predictors of Academic Performance in Tertiary Level Health Sciences Programs,” *Int. J. High. Educ.*, vol. 10, no. 1, p. 76, Sep. 2020, doi: 10.5430/ijhe.v10n1p76.
- [12] G. Stacey *et al.*, “The implementation of resilience based clinical supervision to support transition to practice in newly qualified healthcare professionals,” *Nurse Educ. Today*, vol. 94, p. 104564, Nov. 2020, doi: 10.1016/j.nedt.2020.104564.
- [13] Y. Zou, “OECD and Educational Policy in China,” 2019, pp. 155–173.
- [14] T. A. Dousay, “An integrated map of the ISTE Standards for Educators, Danielson Framework for Teaching, and Interstate Teacher Assessment and Support Consortium (InTASC) Standards,” in *Proceedings of Society for Information Technology & Teacher Education International Conference*, 2020, pp. 992–996, [Online]. Available: <https://www.learntechlib.org/primary/p/215851/>.
- [15] J. K. Annan, “Preparing Globally Competent Teachers: A Paradigm Shift for Teacher Education in Ghana,” *Educ. Res. Int.*, vol. 2020, pp. 1–9, Sep. 2020, doi: 10.1155/2020/8841653.
- [16] C. S. Borna *et al.*, “Professional Development of Mathematics Teachers: Its Impact on Their Classroom Delivery in Ghana,” *East African J. Educ. Stud.*, vol. 6, no. 1, pp. 320–337, Mar. 2023, doi: 10.37284/eajes.6.1.1152.
- [17] S. K. Ntim, “Transforming Teaching and Learning for Quality Teacher Education in Ghana: Perspectives from Selected Teacher Trainees and Stakeholders in Teacher Education,” *Int. J. Educ.*, vol. 9, no. 3, p. 149, Sep. 2017, doi: 10.5296/ije.v9i3.11686.
- [18] J. Anamuah-Mensah and D. Mereku, “Ghanaian JSS2 students’ abysmal mathematics achievement in TIMSS-2003: a consequence of the basic school mathematics curriculum,” *Math. Connect.*, vol. 5, no. 1, Apr. 2006, doi: 10.4314/mc.v5i1.21489.
- [19] P. Butakor and M. Dziwornu, “Teachers’ Perceived Causes of Poor Performance in Mathematics by Students in Basic Schools from Ningo Prampram, Ghana,” *J. Soc. Sci. Res.*, no. 12, Dec. 2018, doi: 10.32861/jssr.412.423.431.
- [20] W.-C. Chang and K. M. Viesca, “Preparing Teachers for Culturally Responsive/Relevant Pedagogy (CRP): A Critical Review of Research,” *Teach. Coll. Rec. Voice Scholarsh. Educ.*, vol. 124, no. 2, pp. 197–224, Feb. 2022, doi: 10.1177/01614681221086676.
- [21] S. Chan, S. Maneewan, and R. Koul, “Cooperative learning in teacher education: its effects on EFL pre-service teachers’ content knowledge and teaching self-efficacy,” *J. Educ. Teach.*, vol. 47, no. 5, pp. 654–667, Oct. 2021, doi: 10.1080/02607476.2021.1931060.
- [22] Ö. E. Erkarşlan and Y. Akgün, “Incorporating United Nations 2030 Sustainable Future Agenda into the Architectural Studio: A Graduation Studio Case,” *Int. J. Art Des. Educ.*, vol. 41, no. 4, pp. 603–620, Nov. 2022, doi: 10.1111/jade.12435.
- [23] K. B. Asare and S. K. Nti, “Teacher Education in Ghana,” *SAGE Open*, vol. 4, no. 2, p. 215824401452978, Jan. 2014, doi: 10.1177/2158244014529781.
- [24] D. K. Mereku, “Sixty years of teacher education in Ghana: Successes, challenges and the way forward,” *African J. Educ. Stud. Math. Sci.*, vol. 15, no. 2, pp. 69–74, Dec. 2019, doi: 10.4314/ajesms.v15i2.6.
- [25] W. Nketsia, M. P. Opoku, T. Saloviita, and D. Tracey, “Teacher Educators’ and Teacher Trainees’ Perspective on Teacher Training for Sustainable Development,” *J. Teach. Educ. Sustain.*, vol. 22, no. 1, pp. 49–65, Jun. 2020, doi: 10.2478/jtes-2020-0005.
- [26] P. Foy, B. Fishbein, M. von Davier, and L. Yin, “Implementing the TIMSS 2019 scaling methodology,” 2019.
- [27] N. Larraz, S. Vázquez, and M. Liesa, “Transversal skills development through cooperative learning. Training teachers for the future,” *Horiz.*, vol. 25, no. 2, pp. 85–95, May 2017, doi: 10.1108/OTH-02-2016-0004.
- [28] A. Tam and B. Trzmiel, “Transversal Skills as a Missing Link Between School and Work: Experiences from the Asia-Pacific Region,” 2018, pp. 35–49.
- [29] B. Arnold, C. Manton, S. Schutt, and T. Seddon, “TEMAG Reforms, Teacher Education and the Respatialising Effects of Global-Local Knowledge Politics,” in *Teacher Education in Globalised Times*, Singapore: Springer Singapore, 2020, pp. 367–385.
-

