



Prevailing Status of Educational Process Factors in Junior High Schools in the Central Region of Ghana

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Authors' contributions

This work was carried out in collaboration among all authors. Author RMN conceptualised the idea. Authors FQ, FA and EET performed the analyses and author VRA wrote the methods. All authors read and approved the final manuscript.

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ABSTRACT

Globally, there is the quest to improve quality education as highlighted by the Sustainable Development Goal 4. One of the quintessential factors that could facilitate the attainment of this global goal is effective and adequate educational process factors. The study specifically sought to assess the state of educational process factors such as teacher use of instructional time, level of parental and community involvement, type of leadership, curriculum coverage among the urban, rural, public, and private junior high schools in the Central Region of Ghana. The descriptive survey design was used to carry out the study. Through stratified sampling technique, 1260 respondents comprising 126 head teachers, and 378 junior high school teachers were engaged in the study. Two sets of questionnaires were designed for the headteachers and teachers. Data gathered were analysed using frequencies, percentages, means, and standard deviations as well as chi-square test of association and independent samples t-test. It was found that educational

process factors were generally better in urban schools as well as private schools. For rural schools and public schools, the educational process factors were poor, particularly, the percentage of syllabus coverage was low for English, Mathematics, and Integrated Science. It was concluded that deficit in educational process factors posed threat to the quality of education. It was suggested that the Ministry of Education, together with teachers should strive to enhance process variables in schools.

Keywords: Process Factors; Junior High School; Rural Schools; Urban Schools; Private School; Public School.

1. INTRODUCTION

Access to education in Ghana is seen both as a fundamental human right and an essential element in the national development strategy to promote growth and ensure preparedness for a productive life. The concept of primary education for all children in Ghana (formerly Gold Coast) first took centre stage in the Accelerated Development Plan in 1951. This plan laid the foundation for six years of free and compulsory primary education and produced a massive increase in primary school enrolments [1]. The goals of basic education in Ghana were set in fulfillment of the mission of the Education Ministry by providing the following: (a) facilities to ensure that all citizens, irrespective of age, gender, tribe, religion, and political affiliation, are functionally literate and self-reliant; (b) basic education for all children; (c) opportunities for open education for all; (d) education and training for skill development with emphasis on science, technology, and creativity [2]. In the provision of these services, the MoE were guided by the following values: (1) quality of education provided, (2) efficient management of resources, (3) accountability and transparency, and (4) equity [3].

While the country has, over the years, improved upon access to basic education to the citizenry, there are concerns about the quality of the outcome. According to Ampiah [4], countries that are striving to guarantee all children the rights to education have their main focus on access and this often overshadows the issue of quality. Yet, quality determines how much and how well children learn and the extent to which their education translates into a range of personal, social, and developmental benefits. UNESCO [5] has indicated that most pupils may find themselves in school but due to poor education delivery and quality, their achievement may be low. Mishra [6] also indicated that quality education delivery becomes poor when there is poor management of the system. This is

evidenced by a national biennial representative measure of pupil competency in Mathematics and English language in Ghanaian basic school Grades 3 and 6 (BS 3 and BS 6) in the National Education Assessment (NEA).

The NEA has consistently revealed that children in both grades were finding it difficult to complete the English test and to perform grade-appropriate or simple mathematical operations. In the NEA, the minimum competency level is put at 35% of the total score while the proficiency level is established to be 55% performance. Table 1 indicates the results of the NEA as conducted in Ghana for lower and upper primary pupils in English Language and Mathematics between 2005 and 2011. From Table 1, the percentages for minimum competency and proficiency for primary 3 in English decreased by 0.4% (M-C) and (1.4%) in 2007, but increased progressively in 2011, however, in terms of Mathematics, percentages for both minimum competency and proficiency appear to be fluctuating over the years. In terms of primary 6, the percentage pass for minimum competency for English increased from 2005 to 2018. In the case of Mathematics, the percentage passes fluctuated over the years in terms of minimum competency and proficiency.

In 2013, few items were added to the test, specifically, to help assess children's basic reading and Mathematics competency. For basic six Mathematics, approximately 11% of the pupils reached the proficiency level. In English, the results were relatively, with 28% of the pupils reaching proficiency at basic three and 39% at basic six. In Ghana, Both basic three and six, approximately 40% of the pupils failed to achieve the minimum competency in Mathematics and English. It must be noted that, in 2016, primary 4 pupils were assessed instead of primary 3 pupils in previous years. The 2016 NEA confirmed these findings with 30 percent and 50 percent of P4 pupils below the minimum proficiency for English and Mathematics, respectively; at the P6

level, these figures were approximately 30 percent for both subjects. Between 2016 and 2018, NEA test scores remained essentially the same. Even though the performance remained the same, the results are not comparable with NEA in previous years, as the methodology changed in 2016, with enhancements in the test content to adapt it to the new curriculum. This was the first year pupils were administered the test in P4 (P3 was included in the test in previous years). The aforementioned results signalled poor performance and this has serious implications for the management of learning in the next decade. This poor performance performance flows upward through the system, creating weak performance at higher levels in education.

Another evidence of relatively poor teaching effectiveness at the basic level is shown in terms of students' BECE performance from 2014 to 2018 (see Table 2). It can be observed that though most of the candidates of the BECE passed, quite a substantial proportion did not qualify to attend SHS, and this does not communicate a good output considering the nation's quest to improve performance and quality education.

The government, as a stakeholder, has come out with measures (such as capitation, free

education, school feeding, etc) to improve access, equity, quality and excellent outcomes in education [8] yet some schools still achieve zero percent in the BECE. Generally, educational outcomes in Ghana, more especially, at the basic level, has witnessed a downward trend in terms of academic performance and proficiencies [9]. According to available records, the last decade alone saw over 3,669,138 Basic Education Certificate Examination (BECE) candidates sitting for that examination, with about 1,562,270 (43%) of them failing to obtain the required grades (i.e., those who had aggregates 30 and above are considered as failed candidates) for progression to any secondary, technical or vocational [9]. This poor performance in BECE have been attributed to a number of factors regarding the availability of input factors [10]. Nugba, for example, found that the input factors in schools in Ghana were generally not encouraging. Particularly, class sizes and pupil-textbook ratio did not meet the recommended standards by Ghana Education Service [GES]. Also, the rate of availability and/or accessibility of input factors in urban schools was better than in rural schools. Attram [9] also mentioned that due to the inadequate supply of textbooks, and the non-existence of supplementary readers, children essentially go home without any reading materials to read in the evening.

Table 1. Overall Distribution of Minimum-Competency and Proficiency NEA 2005, 2007, 2009, 2011, 2013, 2016, and 2018

Year	Primary 3				Primary 6			
	English		Mathematics		English		Mathematics	
	M-C	Profic	M-C	Profic	M-C	Profic	M-C	Profic
2005	50.6	16.4	47.2	18.6	63.9	23.6	47.2	9.8
2007	50.2	15.0	42.6	14.6	69.7	26.1	46.2	10.8
2009	57.6	20.0	61.2	25.2	76.9	35.6	61.9	13.8
2011	66.3	24.2	52.6	18.2	78.9	35.3	56.9	16.1
2013	29.7	28.4	35.0	22.1	29.8	39.0	50.0	10.9
2016*	33.5	37.2	32.8	22.0	45.9	24.9	33.7	37.9
2018	32.0	25.0	33.0	19.0	28.0	25.0	44.0	22.0

Source: USAID (2021) ***M-C level fixed at 35% and Proficiency level at 55%; 2016*: In 2016, primary 4 pupils were assessed as compared to primary 3 in previous years
M-C: Minimum Competency, Profic: Proficiency

Table 2. Regional Results of the BECE from 2014 to 2018

Year	N	Qaulified (%)	Not qualified (%)
2014	2,583	1,936(71.49)	647(28.51)
2015	2,652	1,812(61.17)	840(38.83)
2016	2,594	1,676(62.44)	914(37.56)
2017	2,561	1,784(67.50)	777(32.50)
2018	2,655	1,966(70.49)	689(29.51)

Source: Nugba et al. (2021)
N= Number of people who sat for the examination

Other studies have also stressed the role of educational process factors in explaining the deteriorating performance of students [11]. In their research on the coverage of syllabus at the basic school level in Ghana by Mereku et al. [11], 30% of teachers indicated covered only half of the English syllabus, 20% completed the English syllabus but the majority of teachers were not able to cover 80% content of the English syllabus. It also came to light that 31% of teachers covered only half of the mathematics syllabus content while only 21% of the teachers indicated that they covered all contents in the syllabus [12]. Mereku et al. further reported that the majority of the teachers were not able to cover 80% of the content of the mathematics syllabus. In addition, Dennis et al.'s [13] study showed that 38% of the mathematics curriculum materials were not completed among teachers in the Agona West Municipality of Ghana. This was also supported by Attram who stressed that due to the deficit syndrome, the syllabi are not completed before the transition of students from one level to another. Further, about 71.1% of teachers at the junior high school (JHS) level in both public and private schools were trained with 28.9% untrained [13]. The percentage of trained teachers in public JHS schools stood at 89.6% while that of the private JHSs was 10.4. However, the private school pupils tended to perform better than the public schools in the BECE over the years. These issues are worrying in Ghana's quest to promote quality education.

Discussing further on the issue of educational process factors, Duorinaah and Alhassan [14] revealed that headteachers in Northern Ghana adopted participatory leadership styles and were less consultative in their day-to-day duties. Dogenereba [15] found that headteachers in Asuogyaman in the Eastern Region of Ghana adopted structural leadership, which is characterised by stakeholder involvement. In a related study, the findings showed that the overwhelming majority of head teachers employed a democratic leadership style in Chimoio cluster primary schools in Mozambique [16]. Ankoma-Sey [17], however, revealed that head teachers in urban schools showed excellent administrative task performance as compared to those in rural schools. Fuller [18] climaxed the discussion on leadership by indicating that schools become effective in improving performance if issues of head teachers' leadership styles are given much priority.

Other educational process factors have been mentioned in the literature. For example, Butakor and Boatey [19] in their study found that most students and teachers were regular to classes in schools in the Eastern Region of Ghana. This improved the teaching and learning climate of the schools. Parental involvement [20] and head teacher supervision [21] which are examples one of process factors, have also been noted to play a role in the performance of students and improvement in quality of education.

The purpose of this study was to assess the state of educational process factors in JHS in the Central Region of Ghana. This became necessary because the majority of previous studies focused on distinct aspects of the educational process factors. For example, scholars like Mereku et al. limited themselves to syllabi coverage. This study expands on the literature by emphasizing a wide-range of process variables, namely, teacher use of instructional time, level of parental and community involvement, type of leadership, and curriculum coverage. Further, comparisons were made on these variables with respect to school location as well as school type. School location was conceptualised as rural and urban, whereas school type was operationalised as private and public.

2. MATERIALS AND METHODS

2.1 Study Design

The descriptive survey design was used to carry out the study. According to Aggarwal [22] descriptive design is devoted to the gathering of information about prevailing conditions or situations for the purpose of description and interpretation. Since the present study is undertaken to describe the state of educational process factors in junior secondary school education in the Central Region of Ghana, the descriptive survey research design was deemed the most appropriate.

2.2 Population, Sample, and Sampling Procedure

The target population for this study was made up of public and private JHSs in all the 20 Metropolitan/Municipal/District Assemblies in the Central Region. There are 1,871 JHS in the 20 Metropolitan, Municipal, and Districts in the Central Region, constituting 1,190 (63.60%)

public and 681(36.40%) private schools [23]. The accessible population was made up of six (6) districts (30%) out of the 20 districts in the Central Region. Two (2) of the districts were selected from the top, middle, and bottom purposively making the six districts for the accessible population. This was done based on the ranking of districts according to their academic achievement level in the 2015/2016 BECE core subjects (Mathematics, English, and Integrated Science) by the Ghana Education Service. By implication, six districts with a total of 420 JHSs were selected.

We used proportionate stratified random sampling to ensure that the proportion of each stratification variable (private urban, private rural, public urban, and public rural) in the sample reflects their proportion in the wider population. To determine the number of schools in the study, 30% ($n=126$) of the total number of schools (i.e., 420) was taken to make up the sample. To select the schools for the study, we used two main stratification variables, namely type of location (i.e., urban and rural) and type of school (public and private). Respondents for the study were made up of 126 head teachers, and 378 JHS three (3) teachers (thus, those who were teaching English language, Mathematics, and Integrated Science) were randomly selected per school. In all, the participants for the study were 504. On the part of teachers, 325 out 378 JHS teachers participated with a response rate of 86%. One hundred and eleven (111) representing 88.1% out of the 126 head teachers participated in the study. The overall return rate is 86.5%.

2.3 Data Collection Instruments

Two forms of questionnaires were used for data collection- one for head teachers and another for teachers. The questionnaires were developed by the authors and validated through exploratory and confirmatory factor analyses. The factor loadings of the items used in the final version were above .50. Those items with loadings below .50 were not included in the final data collection. The internal consistency of the various dimensions of the questionnaire ranged from .81 to .90.

2.4 Data Collection

The data were obtained on-site at the various schools. Prior to the main data collection, there had been earlier visit to the schools by the

authors. For each school, the selected teachers all met at the head teacher's office, they were briefed about the details of the work before the questionnaires were administered to them. No translations and third-party interpretations were made; that is, all the respondents could read and write, and were in a position to understand and respond to the items on the questionnaire.

2.5 Data Analysis

The data collected were coded and inputted using the Statistical Package for Service Solutions (SPSS) software version 25.0. Data gathered were analysed using frequencies, percentages, means, and standard deviations as well as chi-square test of association and independent samples t-test. The mean scores for the responses were used for the analysis. The responses of the Likert-type items were scored as 1, 2, 3, and 4 for strongly disagree, disagree, agree, and strongly agree, respectively. The mean scores computed ranged from 1.0 to 4.0. A criterion mean of 2.5 was used, where items with mean scores 2.5 or above depict agreement, whereas items with mean scores below 2.5 depict disagreement.

3. RESULTS

The description of the state of educational process factors in schools was the focus of this study. Specific issues discussed include teacher use of instructional time, level of parental and community involvement, type of leadership, and syllabi coverage in JHS in the Central Region of Ghana. The responses of the respondents based on the research question are presented in Tables 3 to 8.

The data in Table 3 reveal that most of the teachers reported that they had a good relationship with other staff, students, parents/guardians, and community members/leaders ($M = 3.45$, $SD = .63$), the teachers also indicated that they found it easy to approach their head teachers ($M = 3.41$, $SD = .82$) and that their head-teachers responded to expressed feelings by staff and students ($M = 3.29$, $SD = .68$). They also indicated that their head-teachers delegated management responsibilities to staff members ($M = 3.21$, $SD = .74$). It was, however, evident in Table 3 that the teachers did not agree to some items regarding the availability of school-related process factors and how effective these factors were.

Table 3. Teachers' responses on school-related process factors

Factors	All		Location				Sch. Type			
	M	SD	Rural		Urban		Private		Public	
			M	SD	M	SD	M	SD	M	SD
My students are regular to school.	3.04	.64	2.98	.614	3.11	.65	3.24	.65	2.96	.615
My students are punctual to school.	2.84	.69	2.83	.61	2.85	.76	2.97	.76	2.79	.65
I find it easy to approach the head-teacher.	3.41	.82	3.34	.85	3.48	.78	3.39	.85	3.42	.81
I have a good relationship with other staff, students, parents/guardians, and community members/leaders.	3.45	.63	3.48	.57	3.42	.70	3.49	.60	3.43	.65
On school issues, decision making is done by committees.	3.02	.79	3.01	.77	3.03	.81	3.26	.69	2.92	.80
My head-teacher delegates management responsibilities to staff members.	3.21	.74	3.34	.65	3.06	.80	3.15	.78	3.23	.72
My head-teacher responds to expressed feelings by staff and students.	3.29	.68	3.38	.66	3.20	.70	3.29	.67	3.29	.69

As presented in Table 3, teachers indicated that head-teachers in the urban settings ($M = 3.48$, $SD = .78$) were more approachable than head teachers in the rural settings ($M = 3.34$, $SD = .85$). On school issues, schools from the urban settings ($M = 3.03$, $SD = .81$) engage committees better than schools from the rural settings ($M = 3.01$, $SD = .77$). In terms of school type, the relationship among staff, students, parents/guardians, and community members/leaders in private schools ($M = 3.49$, $SD = .60$) was better than in public schools ($M = 3.43$, $SD = .65$). Again, students in private schools were punctual ($M = 2.97$, $SD = .76$) to school than students in public schools ($M = 2.79$, $SD = .65$). Similarly, students in the private school were regular to school ($M = 3.24$, $SD = .65$) than students in the public schools ($M = 2.96$, $SD = .62$).

Regarding the results in Table 4, the head teachers agreed to all the statements about the availability of school-related process factors and how effective these factors were. They reported that teachers were regular to school ($M = 3.38$, $SD = .61$), expressed feelings by staff and students ($M = 3.37$, $SD = .76$), indicated that they delegated management responsibilities to staff members ($M = 3.32$, $SD = .79$), and agreed to the statement that decision making on school issues were done by committees ($M = 3.21$, $SD =$

$.79$). As shown in Table 4, the head teachers also agreed to the following statements with reference to school-related process factors and how effective these factors were: teachers were punctual to school ($M = 3.25$, $SD = .75$), students were regular to school ($M = 3.14$, $SD = .68$), students were punctual to school ($M = 3.07$, $SD = .59$), teachers found it difficult to complete the respective syllabi on time for Mathematics ($M = 2.96$, $SD = .60$), teachers found it difficult to complete the respective syllabi on time for English Language ($M = 2.87$, $SD = .65$) and teachers found it difficult to complete the respective syllabus on time for Integrated Science ($M = 2.86$, $SD = .72$).

In terms of school types, head teachers reported that teachers in the private school ($M = 3.42$, $SD = .81$) were punctual at school compared to their counterparts in the public schools ($M = 3.19$, $SD = .73$). Head teachers further indicated that teachers in the rural settings ($M = 3.27$, $SD = .92$) found it easier to approach their head teachers as compared to teachers in the urban settings ($M = 3.10$, $SD = 1.04$). Head teachers however reported that teachers in the private school ($M = 3.30$, $SD = .91$) found it easier to approach their head teachers than their fellow teachers in the public school $M = 3.17$, $SD = .99$).

Aside the aforementioned school-related process factors, respondents (teachers and head teachers) also responded to educational process factors relating to the percentage of syllabus coverage in Form 3. The responses of the respondents are presented in Tables 5 and 6.

As shown in Table 5, more teachers in rural settings (4.8%) than urban settings (2.1%) covered 50 – 60% of the English Language syllabus. Similarly, 60.3% of teachers from rural settings and 52.1% of teachers from urban settings covered 70 – 80% of the English Language syllabus. However, more teachers in urban settings (43.8%) than the rural settings (30.2%) covered above 90% of the English Language syllabus. In all, it can be said that teachers in urban settings covered more of the syllabus than those in rural settings. In terms of school type, while 59.5% of teachers in the public schools covered 70–80% of the English

Language syllabus, 48.1% of teachers in private schools covered an equal amount of the English Language syllabus. Table 6 presents teachers' responses on Mathematics coverage.

From Table 6, a vast majority (70.7%) of teachers in the urban settings covered more than 90% of the Mathematics syllabus compared to 21.3% of teachers in the rural settings. In addition, 85.7% of teachers in private schools covered more than 90% of the Mathematics syllabus. On the contrary, 13.6% of teachers in public schools indicated they covered above 90% of the syllabus. In all, it can be said that teachers in urban schools compared to rural schools ($\chi^2=192.33, p<.001$) and those from private schools compared to public schools ($\chi^2=86.27, p=.004$) significantly covered a greater portion of the Mathematics syllabus.

Table 4. Head teachers' Responses on School-related Process Factors

Factors	All		Location				Sch. Type			
			Rural		Urban		Private		Public	
	M	SD	M	SD	M	SD	M	SD	M	SD
Students are regular to school.	3.14	.68	3.02	.63	3.29	.71	3.33	.73	3.08	.65
Students are punctual to school.	3.07	.59	2.95	.63	3.23	.52	3.19	.48	3.04	.63
Teachers are regular to school.	3.38	.61	3.31	.65	3.48	.55	3.41	.69	3.38	.58
Teachers are punctual to school.	3.25	.75	3.17	.75	3.34	.80	3.42	.81	3.19	.73
Teachers find it easy to approach me as the head-teacher.	3.20	.97	3.27	.92	3.10	1.04	3.30	.91	3.17	.99
On school issues, decision making is done by committees.	3.21	.79	3.10	.86	3.38	.67	3.26	1.02	3.20	.71
As a head-teacher, I delegate management responsibilities to my staff members.	3.32	.79	3.22	.75	3.44	.82	3.22	.89	3.35	.75
As a head-teacher, I respond to expressed feelings by staff and students.	3.37	.76	3.44	.67	3.27	.87	3.22	.85	3.42	.73

Table 5. Teachers' Responses on the Rate of Syllabi Coverage in English Language

Percentage coverage	Location				School Type			
	Rural		Urban		Private		Public	
	F	%	F	%	F	%	F	%
Below 50%	-	-	-	-	-	-	-	-
Between 50 – 60%	3	4.8	1	2.1	3	11.1	1	1.2
Between 70 – 80%	38	60.3	25	52.1	13	48.1	50	59.5
Above 90%	19	30.2	21	43.8	10	37.0	30	35.7
N/A	3	4.8	1	2.1	1	1.2	3	3.6
Total	63	100	48	100.0	27	100.0	84	100.0

Chi-square test for Location & Syllabi coverage: $\chi^2=217.43, p=.038$, Chi-square test for School Type & Syllabi coverage: $\chi^2=96.11, p=.017$

N//A–No response, F= Frequency, % = Percentage

Table 6. Teachers’ Responses on the rate of syllabi coverage in mathematics

Percentage coverage	Location				Sch. Type			
	Rural		Urban		Private		Public	
	F	%	F	%	F	%	F	%
Below 50%	13	21.3	-	-	-	-	12	14.8
Between 50 – 60%	16	26.2	3	7.3	1	4.7	21	25.9
Between 70 – 80%	19	31.1	9	22.0	2	9.5	37	45.7
Above 90%	13	21.3	29	70.7	18	85.7	11	13.6
Total	61	100	41	100.0	21	100.0	81	100.0

Chi-square test for Location & Syllabi coverage: $\chi^2=192.33, p<.001$, Chi-square test for School Type & Syllabi coverage: $\chi^2=86.27, p=.004$

N//A – No response F= Frequency, % = Percentage

Table 7. Teachers’ Responses on the Rate of Syllabi Coverage in Integrated Science

Percentage coverage	Location				Sch. Type			
	Rural		Urban		Private		Public	
	F	%	F	%	F	%	F	%
Below 50%	9	14.3	-	-	1	3.7	14	16.5
Between 50 – 60%	17	27.0	6	12.2	2	7.4	22	25.9
Between 70 – 80%	27	42.9	13	26.5	5	18.5	36	42.4
Above 90%	10	15.9	30	61.2	19	70.4	13	15.3
Total	63	100	49	100.0	27	100.0	85	100.0

Chi-square test for Location & Syllabi coverage: $\chi^2=65.07, p<.001$, Chi-square test for School Type & Syllabi coverage: $\chi^2=78.41, p<.001$

N//A – No response F= Frequency, % = Percentage

As shown in Table 7, comparatively, 61.2% and 15.9% of teachers in the urban and rural settings respectively covered above 90% of the Integrated Science syllabus. In a similar vein, 70.4% of teachers in private schools whereas 15.3% of teachers in public schools completed more than 90% of the Integrated Science syllabus. In all, the results saw more teachers in urban than rural settings ($\chi^2=65.07, p<.001$), and private than public schools ($\chi^2=78.41, p<.001$) significantly completing a greater chunk of the syllabi for English Language, Mathematics, and Integrated Science.

Parent/guardians-related process factors were measured using a semantic differential scale that ranged from 1-4; where 1 = “Not at all” and 4 = “Very much.” “Not at all” depicts a situation where stakeholders do not involve themselves in school activities and “very much” depicts a situation where stakeholders involve themselves in school activities and contribute to school developmental projects. Mean scores were computed. Mean scores of 2.5 depict a situation where stakeholders fairly involved themselves in school activities. A mean score greater than 2.5 depicts a situation where stakeholders involved themselves in school activities and contributed to school developmental projects. Respondents (head teachers) were asked to respond to series of questions about parent/guardians-related

process factors and their responses are presented in Table 8.

Regarding the results in Table 8, the head teachers indicated that a good working relationship existed between the staff and parents/guardians of students ($M = 3.20, SD = .82$). The head teachers also reported that on the issue of instilling discipline in students, parents/guardians and community members engaged with the school to come out with rules which guide the conduct of students ($M = 2.73, SD = .87$). The head teacher, however, reported that apart from school fees, parents/guardians and community members, and leaders did not contribute financially to support school extra expenses ($M = 2.3, SD = .94$). It was also evident in the reports of the head teachers that parents/guardians and community members did not contribute their quota in building classrooms to assist the schools ($M = 2.27, SD = .91$). Generally, schools in urban areas ($M=2.75, SD=.80$) as compared to those in the rural areas ($M=2.50, SD=.90$) reported better process factors in terms of parent, community members/leaders, and school collaboration, $t=11.37, p=.038$. Also, private schools ($M=2.60$, as compared to public schools ($M=2.52, SD=.86$) reported better process factors in terms of parent, community members/leaders, and school collaboration, $t=18.92, p=.009$.

Table 8. Parents/guardians-related Process Factors (Head teachers)

Factors	ALL		Location				Sch. Type			
			Rural		Urban		Private		Public	
	M	SD	M	SD	M	SD	M	SD	M	SD
Parents/guardians and community members are involved in building classrooms to assist the school	2.27	.91	2.04	.92	2.44	.88	2.22	.85	2.29	.94
In my school, there is good staff, parents/guardians (PTA) working relationship	3.20	.82	3.15	.85	3.24	.80	3.19	1.04	3.20	.74
Parents/guardians and community members involved in instilling discipline by engaging with the school to come out with rules that bind the conduct of students	2.73	.87	2.69	.90	2.76	.86	2.78	.97	2.71	.84
Apart from school fees, parents/guardians and community members and leaders contribute financially for school extra expenses	2.36	.94	2.10	.93	2.56	.91	2.19	1.00	2.42	.92
Mean of Means	--	--	2.50**	.90	2.75**	.86	2.60*	.97	2.52*	.86

**t*-test for School Type: $t=18.92, p=.009$; ** *t*-test for School Location: $t=11.37, p=.038$

4. DISCUSSION

The findings of this study showed that process factors were better in urban schools as well as private schools. For rural schools and public schools. For example, it was discovered that the percentage of syllabus coverage was high in schools in urban schools and private schools. Similar trends were found for English, Mathematics, and Integrated Science. Considering the use of instructional time as a process factor, it appears that supervision is more effective in urban and private schools as against supervision in public and rural schools. Similarly, the findings of the study could suggest that parents' involvement in their ward's education is more effective in private and urban schools compared to rural and public schools. The findings of this study agree with the findings of Kim [24] who stated that the utilisation of process indicators is a way to understand "what's going-on in schools". The dynamic, integrated use of a wide variety of school indicators can provide rich information on the quality of resources, people and activities that shape children's day-to-day experiences [25].

Findings of the study showed that headteachers had a good relationship with their staff students, parents/ guardians, and community members/ leaders. This suggests that the learning environment of the schools used in this study are friendly and conducive since headteachers and the other stakeholders have a good relationship. Within the school setting when there is peaceful coexistence among the various stakeholders, the environment becomes lovely and promotes good working habits among all that are involved. The findings of this study are in agreement with several [14-16]. Duorinaah and Alhassan, for example, found that headteachers in Northern Ghana adopted different forms of participatory leadership styles and were less consultative in their day-to-day duties. The findings of the current study further revealed that teachers in the Central Region of Ghana predominantly complete 70 – 80% of their syllabi in English Language, Mathematics, and Integrated Science. This agrees with the findings of Dennis et al. that showed that only 62% of the mathematics curriculum materials were implemented among teachers in the Agona West Municipality, Ghana.

5. CONCLUSION AND RECOMMENDATIONS

It can be concluded that process factors such as headteachers' leadership styles; relationships among teachers, staff, students, parents/ guardians, and community members/leaders; and teachers' and students' regularity and punctuality to school though were available, more need to be done by the schools in the Central Region. Generally, syllabi coverage for English language, mathematics, and science still appears not too good, since there were deficits in the aforementioned, and this is detrimental to the quality of education. This situation happens to be better for schools in the urban centres, and private schools. Therefore, the poor performance of pupils in rural schools can be attributed to the fact that process factors in these schools are not adequate and accessible in some cases. Generally, the government should not only be interested in providing input factors but also make sure that process factors exist since adequate input factors will need sufficient educational process factors to improve academic performance. Irrespective of the availability and adequacy of input factors, performance will continue to be poor if educational process factors are inadequate. Based on the findings of the study, the following recommendations were proposed:

1. Head teachers should put in place strategies to ensure that teachers complete the syllabi on time. This can be done by regular supervision of the activities of the teachers.
2. During Parents Teachers Association meetings, parents/guardians should be sensitised on the need to play a part in instilling discipline among pupils. Doing so would help improve the issue of truancy and punctuality among students and teachers.
3. Ghana Education Service and heads of school should not only focus on providing input factors but also educational process factors in schools to improve academic performance. This is because even when input factors are present without excellent educational process factors, the output will definitely be low.

4. The Ministry of Education, Ghana should give special attention to rural schools when providing educational input and process factors to schools. This is because the effect of the absence of these educational input and process factors on output is large for rural schools.

6. STRENGTHS, LIMITATIONS AND FUTURE DIRECTION

This research highlights the essential role of educational process factors in promoting teaching and learning activities in JHS. Over the years, much attention has been given to the role of educational inputs factors in the school system and this has led to scholars stressing on input factors with less attention on educational process factors (Attram, 2014; Nugba, 2021). This research opens up the discussion on the need to have superior process factors to manage and improvise with the scarce resources in schools. For example, having a head teacher who is “on top of the game” can help raise funds from external sources to supplement government’s provision of input resources. Again, teachers who are competent in what they teach can improvise when there are no teaching and learning materials. This study is also one of the few studies which focused on exploring the status of several educational process factors. Previous studies instead focused on specific aspects of the educational process factors. Dennis et al. (2018), for example, in their study focused on syllabi completion rate among teachers.

Despite these strengths, the study has some limitations. First, students were not involved in the study, although information about them were obtained from their teachers and headteachers. For example, the teachers and head teachers reported on whether students were regular and punctual to school. Perhaps, students might have provided more accurate information about their punctuality and regularity to school. Based on this, we suggest for further studies to include students when carrying out a similar study of this nature. Secondly, the study relied on self-report information from teachers and head teachers which is susceptible to distortion. However, all efforts were made to ensure that the participants provided accurate information. Lastly, the study was carried out in only JHS in Central Region of Ghana. Hence, the generalisation of the findings to other regions in Ghana should be done with caution.

CONSENT

As per international standard or university standard, respondents’ written consent has been collected and preserved by the authors.

Ethical issues such as confidentiality, anonymity, informed consent (signing a consent form), volition, and privacy, among others, were strictly observed in the conduct of this study.

ETHICAL APPROVAL

Ethical approval was obtained from the Institutional Review Board (IRB) of the University of Cape Coast, with review number: CES-ERB/UCC.EDU/V3/19-14.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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