



ACADEMIC PERFORMANCE OF PUPILS IN SAND WINNING AREAS: THE CASE OF SELECTED JUNIOR HIGH SCHOOLS IN THE AWUTU-SENYA WEST, GHANA

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Abstract:

This study investigated the effect of sand winning activities on academic performance of Junior High School pupils in the Awutu-Senya West District in the Central Region of Ghana. In order to achieve the purpose of the study, a convergent mixed method design was employed. The sample size for the quantitative study was 105, comprising 70 pupils and 35 parents. In the qualitative phase, a sample size of 8 comprising 4 pupils and 4 parents were employed. The researcher used questionnaire and interview guide as the primary tools for collecting both quantitative and qualitative data respectively. The quantitative data were analysed using the version 22 of the Statistical Product for Service Solution (SPSS) whereas the qualitative data were analysed using the thematic approach. Among the findings of the study, it was revealed that, sand winning activities contributed statistically significantly to pupils' poor academic performance in Social Studies. The study recommended that the Directorate of the Ghana Education Service at Awutu-Senya West District and traditional leaders should be in constant dialogue with members of the communities, especially parents, to appreciate the value of formal education in order to ensure that their children stay in school and study. It was suggested that further research be conducted in other basic schools in the country where sand winning activities are carried out to give the general overview regarding the influence of sand winning activities on academic performance of junior high school pupils and to come out with holistic approach in curbing the situation.

Keywords: sand winning, academic performance, school attendance, formal education, social studies

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1. Introduction

Globally, education has been recognised as a pillar around which a nation's socio-economic progress revolves. Progress in education is taken to be essential for sustainable development, environmental protection, improvement in maternal and child health and participation in democratic social and political processes. Throughout the world, people are looking to education to pave the way for a more just social order on the grounds that education instils in the young crucial humanitarian values such as equity, tolerance and peace (Gwaradzimba & Shumba, 2010). Raudenbush & Williams (1991), and Lockheed & Verspoor (1991) as cited in Osa-Edoh & Alutu (2012) argue that to increase the pace of economic and social development in developing countries, schools must teach most school age children the essential skills targeted by the primary school curriculum, which include literacy, numeracy, communication skills and problem-solving skills. Access to good-quality schooling is thus, of central importance to national development.

Ghana has shown commitment to the achievement of Universal Basic Education by implementing interventions such as the capitation grant, school feeding programme, free exercise books and uniforms to improve access to basic education (Education Sector Annual Report, 2013). As a result of these interventions, students' enrolment has increased in recent years (Education Sector Annual Report, 2013). However, studies like Hanushek & Wobmann (2009) have documented that it is not enrolment per se, but rather the quality of education and learning outcomes that is more strongly linked with a country's economic development. Intuitively, it could be concluded that increase in enrolment is necessary but an insufficient indicator of education success. In furtherance of this notion, Ankomah, Koomson, Bonsu & Oduro (2008) posit that the quality education of a country is not measured in the quantitative expansion in enrolment due to the implementation of interventional strategies but rather it is measured by the examination results of its students. Corroborating this assertion, Ampofo & Osei-Owusu (2015) postulate that academic achievement is one of the key defining indicators of student educational success. It could be inferred from the above views that students' academic achievement is a measure of quality education in a country. Empirical studies have catalogued several factors that predict the academic achievement of students. In their study, Tshabalala & Ncube (2013) observed that inadequate instructional materials, inappropriate teaching methods, teacher's self-motivation and lack of funds strongly affect the academic achievement of students. Consistent with this finding, Igwe & Ikatule (2011) and Nyarko (2011) unveil internal and external classroom factors to affect students' academic achievement. According to these scholars, internal factors such as teacher competency, class size, inadequate teaching and learning materials, and teacher motivation influences students' academic achievement. External classroom factors include factors such as socio-economic backgrounds of students, peer group influence, extracurricular activities, work and finance, and social problems.

On the Ghanaian scene, researchers like Oduro (2008) have investigated the causes of poor academic achievement of students in Ghana and found out that poor supervision

of teachers is a contributing factor. Besides, supervision of teachers is linked to their motivation (Kageha, 2008). Therefore, poor student achievement could be attributed to ineffective instructional supervision and demotivation of teachers. On their part, Etsey, Amedahe & Edjah (2005) in their study of some private and public schools in Ghana revealed that academic achievement is better in private schools due to more effective supervision of work. Thus, effective supervision improves the quality of teaching and learning in the classroom which lead to good academic achievement. Awanta & Asiedu-Addo (2009) contended that students from poor background just refused to learn or prepare adequately for examination. The discussion has shown that most of these factors are beyond the control of students.

Though there is limited literature on sand winning and academic performance, extant researches have consistently established that pupils' abstinence from engagement in sand winning is one of the major strategies to ensure good academic achievement. (Kariuki, 2002; Carroll, 2010; Mohai, Kweon, Lee & Ard, 2011). According to Mohai et al., (2011), the pollution from sand winning is associated with absenteeism, fatigue and attention problems. Higher pollution exacerbates respiratory problems and generates negative effects on academic performance. According to Mohai et al. (2011), sand winning affects education negatively as it leads to pupils dropping out in academic performance. It leads to pupils dropping out of school and lack class concentration due to noise made by lorries. According to the authors, sand winning makes pupils prone to illness and accounts for failure of pupils to do homework, pupils sleeping in class. According to Carroll (2010), absenteeism has been associated with sand winning with negative effects on school attainment and academic performance. Sand winning poses a challenge to school participation of boys and girls which affect their learning and academic performance (Kariuki, 2002). The issue is will pupils' engagement in sand winning predict academic performance?

Sand winning involves indiscriminate collection of sand by unlicensed groups of people on commercial basis for construction purposes. It constitutes the primary raw materials for construction of roads, bridges, houses, factories, schools, markets and offices (Adu, 1999; Mehta et al., 2007; Berry, 2009; Asante et al., 2014). Small-scale sand winning may be legal (registered) or illegal (not registered). Where they are registered there is some level of supervision, hence moderate consideration for environmental concerns (Iddirisu & Tsikata, 1998). Nevertheless, much destruction is done to the environment in the sense that activities done here are more vigorous and relatively higher. According to Annan (2015), many children of school going age have abandoned classrooms and are now into full-scale sand winning activities, in view of the monetary benefits that come with these activities, despite the associated risks.

The study used the concept of sustainable livelihoods to discuss how people draw on different assets and undertake different activities to respond to variations in their livelihoods due to the incidence of sand winning. Hilson & Potter (2003) defined a livelihood system as comprising the capabilities, assets (including both material and social resources), and activities required for a means of living. A livelihood system or

strategy encompasses not only activities that generate income but many other kinds of elements, including cultural and social choices (Ellis, 2000). For Ellis (2000), sustainability is achieved when a livelihood “*can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.*” In the context of sand winning, the stresses and shocks refer to the changes that occur at the selected communities as a result of sand winning related activities. Most often sand winning communities encounter displacements from farmlands and this has consequences for livelihoods and level of vulnerability, especially those who are unable to cope or adapt to the changes brought in by sand winning. The outcomes in terms of vulnerability would have consequences for the level of needs and development especially academic performance of students.

In Ghana, students’ academic achievement is a vital determinant for selection and placement into higher education and programmes. With the Computerized School Selection and Placement System (CSSPS) which is a competitive selection into Senior High Schools and programmes based on students’ achievement in the Basic Education Certificate Examination (BECE), academic achievement has been of great concern for all stakeholders. Thus, contrary to the view that the school should adopt more holistic approach to focus on a much wider range of desired outcomes such as cognitive processing skills, emotional and social awareness, and moral character development (Huitt, 2006), there is consensus among practitioners that the primary focus of schools should be academic preparation for students (Tienken & Wilson, 2001). The Ministry of Education (2013) has observed that Ghana has witnessed increased poor teacher and student achievements in recent times. In the Awutu Senya West district, academic performance of students in Basic Education Certificate Examination (BECE) for Bonsuako D/A, Senya D/A & Krobonasi Alhamadiya D/A has not been encouraging as presented in Table 1.

Table 1: BECE Performance of Selected Public JHS in Awutu-Senya West District for 2016-2018

Name of School	2016		2017		2018	
	Pass (%)	Fail %	Pass (%)	Fail (%)	Pass (%)	Fail (%)
Bonsuako D/A	44.6	55.4	42.3	57.7	40.5	59.5
Senya D/A	45.3	54.7	41.7	58.3	40.8	59.2
Krobonasi Alhamadiya D/A	42.8	57.2	41.3	58.7	41.0	59.0

Source: Awuru-Senya West District Examination Unit of Ghana Education Service (2016-2018)

It could be seen from the data in Table 1 that in Bonsuako D/A, 44.6 %, 42.3 % and 40.5 % passed the BECE against 55.4%, 57.7% and 59.5% failure rates in 2016, 2017 and 2018 respectively. In the case of Senya D/A, 45.3 %, 41.7 % and 40.8% passed against 54.7 %, 58.3% and 59.2 % between 2016-2018 respectively. Similarly, Krobonasi Alhamadiya registered a pass rate of 42.8%, 41.3% and 41.0% against failure rate of 57.2%, 58.7% and 59.0% within the same period (2016-2018) respectively. The data reveal poor academic performance of pupils in BECE over the periods 2016-2018 as the failure rate in each year was higher than the pass rate.

Researchers have investigated the causes of poor academic performance of students, and active engagement of students in sand winning emerged as a contributing factor (Kariuki, 2002; Carroll, 2010; Mohai, Kweon, Lee & Ard, 2011). Deductively, the problem of poor academic achievement mostly results from the students' engagement in sand winning. Having established that students' abstinence in sand winning is directly linked with improved students' academic achievement (Kariuki, 2002; Mohai, Kweon, Lee & Ard, 2011), this study hypothesizes that the student poor academic performance in the Awutu Senya West district could be attributed to active engagement in sand winning practiced by the students. However, research into the sand winning in the study area is rare.

The study's findings would provide contextual data to shed more light on the effects of sand winning on academic performance, thereby expand the frontier of knowledge in the field. Practically, the researcher hopes that the findings would be significant to education stakeholders to determine how students' engagement in sand winning affects their academic performance. This would help them to refrain from engagement in sand winning for better academic performance. This study was therefore conducted to fill this gap. The study was guided by the research question below:

What is the effect of sand winning activities on the academic performance of junior high school pupils in Awutu-Senya West District in the Central Region of Ghana?

The study also tested the hypothesis below:

Ho1: Junior High School pupils' academic performance is not influenced by the sand winning activities in Awutu-Senya West District in the Central Region of Ghana.

Ha1: Junior High School pupils' academic performance is influenced by the sand winning activities in Awutu-Senya West District in the Central Region of Ghana.

2. Methodology

The study is located basically in the pragmatic paradigm. The approach according to Creswell (2012) involved combining or integration of qualitative and quantitative research data in a research study. The mixed method approach was employed in the study because researching the area of sand winning is complex and as Creswell (2009) suggests, one approach alone cannot adequately supply all the answers. Accordingly, the variety of data collection instruments will provide rich, in-depth qualitative as well as large objective quantitative data so as to shed light on the sand winning and its effects on students' academic performance. The study employed convergent mixed method design. Convergent mixed method design collects both quantitative and qualitative data, analyses them separately, and then compares the results to see if the findings confirm or disconfirm each other (Creswell, 2012). The key assumption of this approach is that both quantitative and qualitative data provide different types of information, often detailed views of participants qualitatively and scores on instruments quantitatively, and together they yield results that should be the same.

The target population consisted of all junior high school pupils, in the Awutu-Senya West District. The accessible population of this study was all the pupils at Bonsuako D/A, Senya D/A, and Krobonsi Alhamadiya D/A Junior High Schools in the Awutu-Senya West District. The population distribution of pupils in the three selected schools were explored and the details are illustrated in Table 2.

Table 2: Population Distribution of pupils in the three selected schools in Awutu-Senya East District

School	Male	Female	Total
Bonsuako D/A	106	81	187
Senya D/A	84	46	130
Krobonsi Alhamadiya D/A	39	38	77
Total	229	165	394

Source: District Education Directorate (2018).

From Table 2, the data show that, the population distribution of pupils in Bonsuako D /A JHS was one hundred and eighty-seven (187), comprising of one hundred and six (106) males and eighty-one (81) females. Senya D/A JHS had a population distribution of eighty-four (84) males, and forty-six (46) females, making a total of one hundred and thirty (130) pupils. The population distribution of pupils' in Krobonsi Ahmadiyya D/A JHS was seventy-seven (77), comprising of thirty-nine (39) males, whereas thirty-eight (38) were females. These pupils were considered appropriate for the study because they are preparing to write Basic Education Certificate Examination (BECE) and therefore their engagement in sand winning has implications for their academic performance in BECE. In this study, a sample size of 105 comprising 70 pupils and 35 parents were used in the quantitative phase. According to Asamoah-Gyimah and Duodu (2007), a sample of 10% to 30% to the accessible size is desirable in quantitative study. Hence, 27% (n = 105) of the accessible population was deemed appropriate for the study. In the qualitative phase, a sample size of 8 comprising 4 pupils and 4 parents were employed. Yin (2014) proposed eight sources of evidences in qualitative study, therefore, 8 participants are deemed appropriate.

Extreme or deviant case sampling was used to select three junior high schools namely: Bonsuako D/A, Senya D/A, and Krobonsi Alhamadiya D/A out of sixty-nine junior high schools in the district. These schools were located at the sand winning communities and that; they receive the immediate impact of the sand winning activities in the Awutu-Senya West District. These schools were specifically chosen because they consistently failed their BECE. According to Creswell (2008), a researcher includes individuals in a study because they represent an exceptional case. Pupil participants were selected using snowballing approach due to the sensitive nature of sand winning business. Few pupils who were engaged in sand winning activities were used to reach out to the masses. Convenience sampling was employed to select 8 participants (4 pupils and 4 parents) for the interviews. Convenience sampling relies on available participants

who agree to participate in the study. Scholars like Polit and Beck (2010) argue that for qualitative studies samples are typically small and are based on information needs.

The study employed questionnaire to collect the quantitative data. The use of questionnaire provided an excellent means of measuring attitudes in a large population which can therefore, be generalized to a larger population (Babbie, 2002). The researcher piloted the study among a group of ten pupils in two Junior High Schools and five of their parents in Awutu- Senya East District. The sample size for the pilot study represented 14% of the actual sample for the study. The researcher chose these schools in the same district because it has similar characteristics to the setting of the study, such as teaching time-table, teaching and learning resources. The questionnaire consisted of four sections: A, B, C and D. Section A comprised demographic items such as age range, sex and education level. Sections B, C, and D comprised items that used a 4-point Likert scale (labeled strongly disagree, disagree, agree, strongly agree) that related to influence of sand winning on academic performance of pupils. The internal reliability of the questionnaire was determined using Cronbach alpha with the aid of the version 20 of Statistical Product for Service Solution (SPSS). According to Tavakol and Dennik (2011), Cronbach's alpha is an important and most common means of evaluating the internal consistency of a research statistical instrument. Kothari (2004) offered the following guidelines regarding interpretation of Cronbach's alpha scores: ≥ 0.9 is excellent, ≥ 0.8 is good, and ≥ 0.7 is acceptable, ≥ 0.6 is questionable, ≥ 0.5 is poor, and ≤ 0.5 is unacceptable. Using this guide of the Cronbach's alpha score, the reliability test results of the research instrument yielded 0.72 which is acceptable.

The semi-structured interview was one-on-one and allowed the researcher to focus on the research questions, yet open up new avenues for further probing to unearth important issues (Ary, Jacobs, Razavieh & Scrensen, 2006). A rationale for the appropriateness of an interview in this study is put forward by Creswell (2003) when he maintains that it allows exploration of variables under investigation in greater detail, and so complements a survey. The conversations were audio-taped to pave way for more accurate data representation during transcription and analysis with the permission from the participants.

The study also dwelled on secondary sources of data, mainly data that already existed. The researcher reviewed documents on pupils' academic performance. Pupils' scores in Mathematics, English language, Integrated Science and Social Studies performance in Social Studies were reviewed to capture their academic performance. These are core subjects taken by all the pupils and are therefore crucial in determining pupils' grades at BECE. Kusi (2012) described document as a good place to search for answers, which also provides an effective means of checking primary data gathered through interviews. The use of these documents helps to augment other data sources and enabled me to crosscheck details of pupils' academic performance obtained in the questionnaire and interviews as a form of triangulation.

The questionnaire was administered to the pupils in the respective schools personally by the researcher for the pupils to respond to them. This was after permission

had been sought and granted by the District Directorate of Education. Upon reaching the schools, the researcher went to the headteachers to introduce himself and sought permission by handing over the letter of authorization from the District Education Office before administering the questionnaire. The researcher visited the schools that were involved in the study to administer the instrument to the pupil respondents concerned. Parent participants were however visited at their homes for the collection of data as agreed upon. In order to ensure that the instruments were well completed, enough time was given to the pupils so that they could have time to complete them well. The return rate for the instrument was 100% since its administration was personally done by the researcher.

With the aid of Statistical Product for Service Solution (SPSS) software, descriptive statistics such as frequency counts, percentages and the mean and standard deviation were employed to analyse the questionnaire. The researcher also used thematic analysis to analyse the qualitative data collected using the interview guide. The generated themes were effect on academic performance due to school attendance, school dropout, pregnancy and desire for money. Quantitative data from the questionnaire were analysed using descriptive statistics with the aid of version 20 of SPSS. It was used to summarize and transform quantitative data into frequencies, percentages, means and standard deviations for answering of the research questions. The use of descriptive statistics according to Denscombe (2010), do not only allow researchers to use numbers but also provide them with data that create room for inferences on the population and directions for answering research questions. An item-by-item analysis of data was conducted. The percentage of the total respondents responding to each question was stated with their means and standard deviations calculated. The questionnaire had its scales of measurement reduced from 4-point Likert scale to 2-point Likert scale for easy analysis of the data. For instance, the researcher combined “Strongly Disagree” and “Disagree” to Disagree and “Strongly Agree” and “Agree” to Agree. The study also used thematic analysis to analyse the qualitative data collected using the interview guide.

3. Results and Discussion

3.1 Demographic Characteristics of Participants

The demographic compositions of the respondents were examined, and the results are presented in Table 3.

Table 3: Demographic Characteristics of Participants

Variables	Category	Frequency	Percentage
Participants	Parents	35	33.3
	Pupils	70	66.7
	Total	105	100
Sex of Pupils	Male	48	69
	Female	22	31
	Total	70	100.0

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Age of Pupils	10-13	22	31
	14-17	45	64
	18 and above	3	4
	Total	70	100.0
Sex of Parents	Male	10	29
	Female	25	71
	Total	35	100.0
Age of Parents	31-40	8	23
	41-50	26	74
	50 and above	1	3
	Total	35	100.0
Parents Educational Background	Formal Education	7	20
	Non-formal Education	28	80
	Total	35	100

As indicated in Table 3, more pupils (n=70, 66.7%) than parents (n=35, 33.3%) were involved in the study. The information further revealed that more male pupils (n=48, 69%) than female pupils (n=22, 31%) were involved in the study. The information further revealed that more than half of the pupils were between 14-17years (n=45, 64%) than those who fell between 10-13years (n=22, 31%) while the rest were those who were 18years and above (n=3, 4%). Concerning sex of the parents, the findings showed that most of the parents who participated in the study were females (n=25, 71%) than males (n=10, 29%). The age distribution of the parents disclosed that, parents between the 41-50 years (n=26, 74%) were more than those between 31-40 (n=8, 23%) as well as those who were 50 years and above (n=1, 3%). The distribution of the parents on their educational background revealed that majority of the parents (n=28, 80%) had no education than those with formal education (n=7, 20%). The demographic distributions of the respondents were crucial to the study because they showed that data were collected from respondents with diverse backgrounds, thereby making the data rich and devoid of bias. In this way, the authenticity of the data and their findings were enhanced.

Research Question: What is the effect of sand winning activities on the academic performance of junior high school pupils in Awutu-Senya West District in the Central Region of Ghana?

In relation to the research question, the study aimed at gathering data on how sand winning activities contributed to pupils' poor academic performance in junior high schools using questionnaire. Table 4 details the results as follows:

Table 4: Descriptive Statistics of the Effects of Sand winning Activities on Pupils' Academic Performance

Items	Pupils						Parents					
	D		A		M	SD	D		A		M	SD
	No.	%	No.	%			No.	%	No.	%		
1. The time pupils spend in engaging sand winning activities affects their academic studies.	18	26	52	74	1.74	0.48	2	6	33	94	1.94	0.51
2. The work of children at the sand winning site has adverse effect on academic performance.	5	7	65	93	1.93	0.51	12	34	23	66	1.66	0.50
3. Pupils are unable to complete assignment due to their engagement in sand winning activities	15	21	55	79	1.79	0.50	10	29	25	71	1.71	0.50
4. Academic performance has been enhanced partly due to the fact that pupils are able to buy some basic necessities from the monies they acquire from sand winning operation.	34	49	36	51	1.51	0.42	4	11	31	89	1.89	0.33
5. Pupils cannot comprehend lessons taught in class due to tiredness emanated from their engagement in sand winning activities.	6	9	64	91	1.91	0.45	9	26	26	74	1.74	0.45
Key: f = Frequency, % = Percentage, M = Mean, SD = Standard Deviation, D = Disagree, A = Agree												

Source: Field data (2019).

Data from Table 4 shows that pupils' mean scores ranged from 1.51 to 1.93 and standard deviation from 0.42 to 0.51. This means that, most of the pupils on average admitted that sand winning activities have contributed to their academic performance. For example, 52 (74%) of the pupil participants conceded to the statement that 'the time pupils spend in engaging sand winning activities affects their academic studies.' while 18 (26%) of them disagreed to the statement with a mean score of 1.74 and standard deviation of 0.48. This indicates that, the time pupils spend in engaging sand winning activities affects their academic studies as admitted by majority of pupil participants. Moreover, 55 (79%) of the pupil participants agreed to the statement that 'pupils are unable to complete assignment due to their engagement in sand winning activities.' whereas 15 (21%) of them declined to the statement with a mean score of 1.79 and a standard deviation score of 0.50. The indication is that, most of the pupils acknowledge that they are unable to complete assignment due to their engagement in sand winning activities.

In the case of the parent participants, the mean scores ranged from 1.66 to 1.94 and standard deviation from 0.33 to 0.51. This means that, majority of parents on average conceded that sand winning activities have contributed to pupils' academic performance.

From Table 3 for instance, 33 (94%) of the parent participants conceded to the statement that ‘the time pupils spend in engaging sand winning activities affects their academic studies.’ whereas 2 (6%) of them disagreed to the statement with a mean score of 1.94 and standard deviation of 0.50. This means that, most of the parent participants hold the view that the time pupils spend in engaging sand winning activities affects their academic studies. Also, 25 (71%) of the parent participants admitted that pupils are unable to complete assignment due to their engagement in mining activities whereas 10 (29%) of them declined to the statement with a mean score of 1.71 and standard deviation of 0.50. This means that, most of the parent participants believe that there are pupils are unable to complete assignment due to their engagement in sand winning activities.

H₀₁: There is no statistically significant difference between sand winning activities and pupils’ academic performance in Awutu-Senya East District in the Central Region

In testing this hypothesis, multiple regression was used and the results are shown in Table 5.

Table 5: Multiple Regression and ANOVA Results
for Sand Winning and Pupils Academic Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tol.	VIF
1	(Constant)	41.90	11.14		3.76	0.000		
	Sand Winning	0.81	0.090	0.72	6.92	0.000	0.890	1.080
R	0.78							
R ²	0.75							
Adj. R ²	0.65							
F	3.22							
P	0.00							
a. Dependent Variable: Academic Achievement b. Predictors: (Constant), Sand winning Activities								

Source: Field work data (2019).

The multiple regression results as in Table 5 revealed that sand winning activities collectively accounted for 75% in variance to pupil’s academic performance which was assessed to be statistically significant [F (1, 69) =3.22, p=0.000]. This result implied that other factors not included in this study could contribute 25% to pupils’ academic performance. Based on these results, it could be concluded that together, sand winning activities are good predictors of pupils’ academic performance. Hence, an increase in sand winning activities stifles pupils’ academic performance.

The researcher through the interview also explored on the influence of sand winning activities on pupils’ academic performance. Judging from the responses given by pupils in the interview, it was revealed that sand winning activities has negatively influenced school attendance and academic performance among pupils. This is depicted by the comments made by some pupil participants that:

"Attendance has reduced and academic performance has become poor since sand winning was started in the community. Most of us don't respect our parents and teachers anymore" (S1)

"It has caused school dropout as most of us wish to get quick money. In the case of girls, many have dropped out due to the incidence of teenage pregnancy." (S3)

The quotes from pupil participants show the attendance of pupils and dropout make it extremely difficult for pupils to study eventually reflecting in their academic performance.

From the accounts of parent participants, it was revealed that sand winning activities have caused pupils to be irregular in school and consequently resulted in their poor academic performance. This is captured in the following excerpt:

"They are not regular in school and that has led to poor academic performance. Even, some dropout from school due to pregnancy." (P2)

Another parent respondent similarly recounted:

"Pupils don't go to school regularly, and due to that they fail in their examination. Others get impregnated by the boys and dropout of school." (P3)

The quotes above from parents' perspective support the view earlier made by pupils that irregular attendance and dropout enacting from sand winning operations led to poor academic performance.

Again, the study explored participants' views on whether the advent of sand winning activity in the community has helped education in the district. From the analysis of the interview results, it was revealed among pupils that sand winning activity in the area has not helped in improving education due to its adverse effects such as poor school attendance, school dropout and poor academic performance. One of the pupils shared his/her experience in the following excerpt:

"It has not really helped education because, since the advent of sand winning activities, most children do not attend school but, they are always seen at places where sand winning practices are carried out" (S1)

Similarly, another respondent also recounted:

"Not at all. Because we spend more time looking for money at the site than to study and that has reduced attendance and performance in school. Some girls even get impregnated and they dropout from school." (S4)

The quotes from above show that sand winning activities have adversely affected the education in the district due to the lack of financial support at home, school dropout, irregular attendance and teenage pregnancy.

From the account of parent participants, it was revealed that pupils do not have time to study due to their involvement in sand winning activities in the area and that has not helped education at all. This is illustrated in the following excerpts:

"The pupils don't learn nowadays due to sand winning and we can also see most of them dropout from school due to poverty." (P1)

"It is not helping at all. Because the pupils are always at the site in search of money. They don't even have time for studies." (P3)

The above quotes from the parent participants support the view that sand winning activities have adversely affected education in the district due to pupils search for quick monies which they obtain in through sand winning activities.

Pupils' academic performance has been defined as the outcome of education and the degree to which a pupil has attained the objectives of his/her institution (Agarana & Ehigbochie, 2015). In the literature, a lot of analyses have been carried out on how different factors affect pupils' academic performance. Among these are socio-economic and environmental factors such as sand winning. As evident from the present study findings, sand winning activities contributed statistically significantly to pupils' poor academic performance. The concern here is that, this adverse effect of sand winning can spread through to other related subjects of study and to the entire education system at large.

Asiedu-Addo (2009) & Howard (1994) in a study proposed several reasons for children's low performance among which are medical problems, below average intelligence, specific learning disability, emotional problems and environmental causes. They believe that to solve this multi-varied and cross-linked problem, the focus should move from the class to the family, to the environment and to the social world of pupils. From the study, it was revealed that sand winning activities has caused pupils to be irregular in school and consequently resulted in their poor academic performance. Pupils in the current study through the interview disclosed that, sometimes their parents had to invite them to come and help them at the sand winning site because that is what they depend on for survival.

These pupils become tired and therefore are unable to make time for studies as a result of their engagement in sand winning related activities as revealed by the interview. This negatively affects their academic performance in school and quality education in general. This is supported by Adu-Gyamfi's (2014) findings which revealed that sand winning activities undertaken by pupils do have negative effect on school attendance and academic performance and it was established that pupils who come to school regularly perform tremendously while the absentee pupils perform poorly. It is therefore

recommended that parents must educate their wards and be aware that it is their responsibility to bear the cost of their children's needs.

4. Conclusion and Implication for Practice

There is no doubt that sand winning provides employment and a means of livelihood for some people in the communities of Awutu-Senya West District and similar places in Ghana where unemployment rate is high. Moreover, due to the lucrative nature of sand winning, people especially young adults are more inclined to partake in sand winning activities as it was revealed in the study findings. This study considered the influence of sand winning on academic performance of junior high school pupils in the Awutu-Senya West District of the Central Region. After a careful assessment of sand winning activities among children under school-going age in the Awutu-Senya West District, the researcher came to the conclusion that sand winning is a major contributor to the poor academic performance of junior high school pupils in Social Studies. The study established that despite the efforts made by government to enforce the enrolment of all children under school going age in Free Compulsory Universal Basic Education (FCUBE) policy, the worrying issue, however, is that the adverse effects of sand winning on education have not yielded the results as we expected since the sand winning menace continues to plague many spheres of our educational sector. The time has come for more decisive actions to be taken by all to confront the issue of sand winning among the citizenry especially young children head-on.

5. Recommendations

Based on the study findings, the researcher made some recommendations that are directed at helping reduce sand winning activities and its associated education effects: As evident from the findings, sand winning activities contributed statistically significantly to pupils' academic performance in Social Studies. There must be an intense public education and sensitization about the dangers of sand winning operations on pupils' academic performance. To make this effective, the Directorate of Ghana Education Service at Awutu-Senya West District and traditional leaders must be in constant dialogue with members of the communities especially parents to appreciate the value of formal education in order to ensure that their children stay in school and study. This is because parental involvement in children's education is key for their future successes.

Conflict of Interest Statement

The author declares no conflicts of interests.

About the Author

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References

- Adjei, A. (2017). *The impact of illegal mining (galamsey) on cocoa production and livelihood: A case study of Amansie West District*. Unpublished MBA thesis, University of Education, Winneba.
- Adu, J. (1999). *Social Studies for Senior Secondary Schools*, Accra: Horizon Publications
- Adu-Gyamfi, E. (2014). The effect of illegal mining on school attendance and academic performance of junior high school pupils in Upper Denkyira West District of Ghana. *Journal of Education & Human Development*, 3(1), 523-545.
- Agarana, M. C., & Ehigbochie, A. I. (2015). Optimization of student's academic performance in a world-class university using operational research technique. *International Journal of Mathematics and Computer Applications Research* 5(1), 43-50.
- Alhassan, S. (2006). *Modern approaches to research in education administration for research students*. Payless Publication Ltd.
- Ankomah, Y. A., Koomson, J. A., Bonsu, R. S., & Oduro, G. K. T. (2005). A review on the concept of quality in education: Perspective from Ghana, EdQqual working Paper No.1
- Ankutse, B. (2015). *Assessing the effects of mining on the educational life of children in the Asutifi District in the Brong Ahafo Region of Ghana*. Unpublished master's thesis, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana.
- Annan, D. A. (2015). *Effects of galamsey on education in mining communities*. Retrieved from <https://www.newsghana.com.gh/effects-of-galamsey-on-education-in-mining-communities/> on 06/09/2018.
- Anney, V. N. (2014). Ensuring the quality of findings of qualitative research: Looking at trustworthiness criteria. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)*, 5(2), 272-281
- Asamoah-Gyimah, K., & Duodu, F. (2007). *Introduction to research methods in education* University of Education, Institute for Educational Development and Extension (IEDE).
- Asante, F., Kabila, A. & Afriyie, K. (2014). Stone Quarrying and Livelihood Transformation in Peri-urban Kumasi. *Journal of Research in Humanities and Social Sciences*, 4(13), 93-197
- Asiedu-Addo, S. (2009). Why many pupils in Central Region fail in the BECE? Daily Graphic, Saturday, October 10, 2009.
- Awanta, E. K., & Asiadu-Addo, S. K. (2008). *Essential statistical research for universities, colleges and research institutions*. Salt and Light Publishers.

- Berry, S. (2009). Building for future? Investment, land reform and the contingencies of ownership in contemporary Ghana. *World Development* 37:1370-1378
- Carroll, T. (2010). The Effect of pupil absenteeism on literacy and numeracy in the primary school. *School Psychology International*, 31(2), 115-130
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education*. Routledge/Falmer.
- Creswell, J. W. (2008). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (3rd ed.) Pearson Education
- Creswell, J. W. (2012). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (4th ed.). Pearson.
- Crossman, A. (2017). *Pilot Study*. Retrieved from What Pilot Studies Are and Why They Matter – ThoughtCo. Retrieved from <https://www.thought.co> on 20/09/2018
- Department of Education and Skills (2013). Education sector annual report. Retrieved from <https://www.education.ie/en/Publications/Corporate-Reports/Annual-Report/Department-of-Education-and-Skills-Annual-Report-2013.pdf> on 12/10/2017.
- Denscombe, M. (2010). *Research guide for small-scale social research projects* (4th ed.). Open University Press.
- Denueme, K. (2016). *Teacher motivation factors and their effect on the job performance of basic school mathematics teachers in the Awutu Senya West District of the Central Region of Ghana*. University of Education, Winneba, Ghana.
- Diaz, A. L. (2003). Personal, family and academic factors affecting low achievement in secondary school. *Electronic journal of research in educational psychology and psychology* 1(1), 43-66.
- Eiselen, R. J., & Uys, T. (2005). *Questionnaire design*. Johannesburg: University of Johannesburg
- Ellis, F. (2000). *Rural livelihoods and diversity in developing countries*. Oxford University Press.
- Etsey, Y. K. A., Amedahe, F. K. & Edjah, K. (2005). Do private primary schools perform better than public schools in Ghana? (Unpublished paper, Department of Educational Foundations, University of Cape Coast, Cape Coast).
- Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction* (8th ed.). Allyn & Bacon
- Ghana Education Service (GES) (2013). The development of Education, Regional Report of Ghana. (PAP). UNESCO-1BE.P.2 Retrieved 13 The 2018.
- Gwaradzimba, E. & Shumba, A (2010). The nature, extent and in-pact of the brain drain in Zimbabwe and South Africa: *Acta Academica*, 24(1), 209-241
- Hanushek, E. A., & Woessmann, L. (2011). The economics of international differences in educational achievement. In E. A. Hanushek, S. Machin, & L. Woessmann (Eds.), *Handbook of the Economics of Education*, Vol. 3 (pp. 89–200). Amsterdam: North Holland.

- Hilson, G., & Potter, C. (2003). Why is illegal gold mining activity so ubiquitous throughout rural Ghana? *African Development Revue* 15(2), 237–270.
- Howard, P. (1994). *An owner's manual for the brain*. Leornian Press.
- Huitt, W. (2006). *Becoming a brilliant star: A framework for discussing formative holistic education*. Paper presented at the International Networking for Educational Transformation (iNet) Conference, Augusta, GA. Retrieved in 15th September 2018 from <http://www.edpsycinteractive.org/brilstar/brilstarintro-s.pdf>.
- Iddirisu, A. Y., & Tsikata, F. S. (1998). *Mining sector development and environment project. Regulatory framework study to assist small-scale miners*. Study prepared for the Minerals Commission. Minerals Commission.
- Igwe, A. U. & Ikatule, O. R. (2011). *Effects of computer tutorial and drill (CTD) on senior secondary school students' achievement in basic electronics in Lagos State*. *Proceedings of Nigerian Association of Teachers of Technology*, Umunze, 108 -119.
- Jackson, P. L., Meltzoff, A. N., & Decety, J. (2004). *Perceiving others in painful situations activates the affective pain neural network*. *Proceedings of the Cognitive Neuroscience Society*, A57, April 18-20, 2004, San Francisco.
- Kariuki, D. K. (2002) National Resources-Minerals. A Report of the civil society Review of the implementation of AGENDA 21 in KENYA. Kenya NGO Earth Summit 2002 Forum.
- Kothari, R. C. (2004). *Research methodology: Methods and techniques*. Wiley Eastern Limited.
- Kusi, H. (2012). *Doing qualitative research, a guide for researchers*. Emmpong Press.
- Maslow, A. (1971). *The farther reaches of human nature*. The Viking Press.
- Lockheed, M. E., & Verspoor, A. (1991). *Improving primary education in developing countries*. Washington, D.C: Published for the World Bank, Oxford University Press.
- McMillan, J. H., & Schumacher, S. (2010). *Research in education: Evidence-based inquiry* (7th ed.). Pearson.
- Mehta, K., Sharma, R., Chawla, K., Josh, P & Yaduranshi, N. (2007). Sand winning or No mining in Agricultural fields in Hayana, Karmal: Cemtral Soil Salinity Research Institute, 1-28
- Mensah, J. (2009). Assessment of Sociological and Ecological impacts of sand and Gravel mining: A Case Study of East Gonja District (Ghana) and Gunnarsholt (Iceland). Final Report, Land Restoration Training Programme, Keldnaholt, Iceland.
- Mohai, P., Kweon, B., Lee, S., & Ard, K. (2011). Air pollution around schools is linked to poorer student health and academic performance' 30(5): 852-862 *PIK Environment & health staff*
- Nyarko, K. (2011). Parental school involvement: The case of Ghana. *Journal of Emerging Trends in Educational Research and Policy Studies*, 2(5), 378-381.
- Oduro, G. (2008). Promoting Learning in Ghanaian Primary Schools: The Context of Leadership and Gender Role Stereotype. In J. MacBeath and Y.C. Cheng (Eds.) *Leadership: International Perspectives*. Rotterdam: Sense Publications

- Owusu, E. E., & Dwomoh, G. (2012). The impact of illegal mining on the Ghanaian youth: Evidence from Kwaebibirem District in Ghana. *Research on Humanities and Social Sciences*, 2(6), 86-92.
- Peprah, K. (2013). Sand winning and land degradation: Perspective of indigenous sand winners of Wa, *Ghana Journal of Environment and Earth Science*, 3(14), 185-195
- Raudenbush, S. W., & Williams, J. D. (1991). Pupils, classrooms and schools. *International and Behavioral Statistics*, 20, 307-335.
- Scoones, I. (2009). Livelihood perspectives and Local rural development. *Journal of Peasant Studies*, 36(1), 171-196
- Tavakol, M., & Dennik, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53-55.
- Tienken, C. & Wilson, M. (2001). Using state standards and tests to improve instruction. *Practical Assessment, Research & Evaluation*, 7(13).
- Tshabalala, T. & Ncube, A. C. (2013). Causes of Poor Performance of Ordinary Level Pupils in Mathematics in Rural Secondary Schools in Nkayi District: Learner's Attritions
- Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Sage.

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