

## An Assessment of Academic Optimism among Science Students in Public Senior Secondary Schools in Lagos State, Nigeria

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**Abstract.** This study assessed academic optimism among science students in Lagos state public senior secondary schools. The study is a descriptive survey type of research. The sample consisted of 1,450 Senior Secondary School (SSS) II and 795 SSS III science students randomly selected from thirty (30) public schools in Lagos state. Data was collected by means of an Academic Optimism Survey Questionnaire (AOSQ). Findings showed that responses towards Faculty Trust (FT) and Academic Emphasis (AE) were positive but negative for Collective Efficacy (CE) among the science students. Also, findings revealed a positive and significant relationship between: Collective Efficacy (CE) and Faculty Trust (FT) ( $r=0.492$ ,  $p<0.05$ ) on one hand, and Faculty Trust(FT) and Academic Emphasis(AE) ( $r=0.604$ ,  $p<0.05$ ) on the other hand. However, a positive and insignificant relationship was observed between Collective Efficacy (CE) and Academic Emphasis (AE) ( $r=0.348$ ,  $p>0.05$ ). In addition, (AE), (FT)and (CE) are significantly related among science students in public senior secondary schools in Lagos, The study recommended that to improve Collective Efficacy (CE) of science students, teachers should allow them to express themselves so they will be able to make their own decisions. Also, teachers should give regular feedback and appropriate remedial instructions to students that need it.

**Keywords:** Academic Optimism, Science Students, Collective Efficacy, Faculty Trust, Academic Emphasis, Senior Secondary Schools

### 1. Introduction and Background to the Study

Science is one of the most important subjects a child can learn because of its relevance to lives and its capacity to apply these vital life-skills to everyday activities. Science skills help students to generate

ideas, make decisions and to use evidence to understand and solve challenges of the society. The reality is that most benefits accrued from science and technology have not reached the majority of the people especially, the developing countries. Also, Science Technology, Engineering and Mathematics (STEM) has been one of the main forces in nation-building and development. This is evident with most of the developed countries advanced in modern technology with resultant effect on economic growth.

The theoretical knowledge in STEM is transformed into real-life applications in technology and engineering, thus providing solutions to current and future problems of the people (National Research Council [NRC], 2012; Next Generations Science Standards [NGGS], 2015). Developed countries, such as the United States and the United Kingdom, emphasized the significance of including STEM in the school curriculum and establishing science education on the engineering design since the basic knowledge on Engineering, Science and Mathematics can be applied in real life (Brunsell & Horejsi, 2011; Çavaş, Bulut, Holbrook & Rannikmae, 2013; Guzey, Tank, Wang, Roehrig & Moore, 2014; Sungur-Gül & Marulcu, 2014).

It is therefore important that teaching and learning of science should enhance scientific literacy as well as the ability to solve practical problems. The present dynamic world is where knowledge is increasing every second and changes are experienced in almost every sphere of life. The kind of learners being groomed in the schools must therefore, be those who can cope with and contribute to the existing body of knowledge to the advantage of the society. It is also important that they be scientifically literate, that is, they must be able to “acquire a mix of concepts, history and philosophy that help to understand the scientific issues of our time” (Robert, 2002).

Most countries aim to raise qualified manpower to be able to compete internationally, to follow the fast developments in science and technology more closely and to ensure economic growth and development. The countries that aim to raise qualified people are undoubtedly aware of the prominence of STEM disciplines as well as the level of learners' academic optimism. Optimism is a trait appearing to balance external events with a person's perception. People high in optimism tend to have better moods, be more persevering and successful and experience better physical health (Seligman & Csikszentmihalyi, 2014). Contending that optimism, as an aspect of success is just as important as talent or motivation, Seligman & Csikszentmihalyi, (2014) notes optimism has the added feature; it can be learned and enhanced. Learned optimism is a characteristic of a single individual in an organization; while academic optimism is characteristic of the entire organization (Dean, 2011).

Academic optimism is made up of three components: academic emphasis, collective efficacy, and faculty trust. These collectively work together to gear, motivate and ensure achievement of all students in the school. Academic emphasis centers on the schools' goal towards ensuring that the teachers teach well and the learners work very hard towards achieving academic success. Hoy, et al (2010) defined academic emphasis as a general perspective of the importance of academics held by administrators, teachers, and students themselves in a school. Academic emphasis is a shared belief among the school community as a cardinal goal for everyone (school administrators, teachers and students). Tschannen-Moran et.al. (2013) regarded academic emphasis as a quest for academic excellence which includes high goals, an orderly achievement environment, motivated students, and an appreciation for students' achievement. It is more than a quest for excellence. It is the placement of academics as the primary focus of the administration, teachers, students, and parents.

Another important component of academic optimism is collective efficacy which means every member of the school community is committed to the goal of academic success and everyone is determined to achieve academic excellence. Collective efficacy is defined as the perceptions of teachers in a specific school that the faculty as a whole can execute courses of action required to positively affect students' achievement (Hoy, smith & Sweetland, 2002).

In the same vein, faculty trust is necessary to bring about success in every arm of the school

organizational goal. Hoy, et al (2002) defined trust as an individual's or group's willingness to be vulnerable to another party based on the confidence that the latter party is benevolent, reliable, competent, honest, and open. In the end, everyone member of the school community can work collectively together for the achievement of schools goals. Hoy and Tschannen-Moran (2000) stated that faculty trust as applied to schools is tied to seven similarities or facets. These include vulnerability; confidence; benevolence; reliability; competence; honesty and openness. Faculty trust is crucial to efficiency and effectiveness of work and achievement of the school, for everyone to be able to relate well and work together to achieve the optimism belief of the school geared towards academic success and achievement. At all levels in education, students' achievement is the number one goal. Even though Nigeria has expressed a commitment to education as stated in the National Policy on Education (Federal Republic of Nigeria, 2014) "as an instrument par excellence for effecting national development" several challenges have impacted negatively on the educational sector in Nigeria.

Despite all the considerable efforts made by stakeholders at various levels, very little improvement in students' achievement in sciences has been recorded. Available data from the two public examination bodies, the West African Examination Council (WAEC) and National Examination Council (NECO), in their appraisal report on SSCE indicate that there was a downward trend in performance in Nigeria. Available records show that from 2008 to 2018, there was a negative trend in the performances of students in the three science subjects with the average performances of 56.01% in Physics, 46.30% in Chemistry and 37.27% in Biology. This is in addition to an increasing failure rate in Biology and Chemistry (Sakiyo and Badau, 2015). While in 2018, 49.9% of the candidates obtained credit passes in five subjects including English Language and Mathematics at the General Certificate of Education (GCE), 2019, 1st series, 26.08% obtained credit passes in English Language and Mathematics (WAEC,2019). If performance and quality remain poor at the secondary level of education, the effect will certainly impact the quality of higher education. It was generally observed that performance in Science of candidates in WASSCE in Nigeria for the period reviewed was not quite impressive. This calls for concern as these are core subjects for admission into tertiary institutions and also, the national economy needs more engineers and skilled workers in Science, Technology, and Mathematics (STEM) fields who also possess

competencies in critical thinking, communication, and collaboration – also known as 21st-century skills. It is therefore vital to investigate science students' academic optimism in secondary as this may have a direct effect on their academic success in STEM. Against this backdrop, the study examines the academic optimism among science students in Senior Secondary Schools in Lagos State.

## 2. Objective of the study

This study assessed academic optimism among science students in Lagos state public senior secondary schools. Specifically, the study:

- assessed academic emphasis among senior secondary school science students in Lagos state
- assessed faculty trust among senior secondary school science students in Lagos state
- highlighted the collective efficacy among senior secondary school science students in Lagos state

## 3. Research questions:

The following questions were posed and answered in this study:

- What is the response to Academic Emphasis (AE) among the science students in public senior secondary schools in Lagos state?
- What is the response to the Faculty Trust (FT) among science students in public senior secondary schools in Lagos state?
- What is the response to Collective Efficacy (CE) among science students in public senior secondary schools in Lagos state?

## 4. Theoretical Perspective

### 4.1 Self-Efficacy Theory

According to self-efficacy theory of Bandura, both children and adults develop certain beliefs about their ability to accomplish specific tasks (Grusec, et al, 1994). An individual's beliefs influences how much he or she will try to achieve in a certain task over time. These beliefs, in return, influence their behavior in present and future situations. Erdem and Demirel (2007), assert that self-efficacy beliefs provide the foundation for human motivation, well-being, and personal accomplishment because unless people believe that their actions can produce the outcomes they desire, they have little incentive to act or to persevere when they face obstacles. It is not simply a

matter of how capable one is, but of how capable one believes oneself to be.

Collective efficacy is a group application of the concept of self- efficacy. Bandura (1997) defined self- efficacy as a person's belief that he/she could perform appropriate tasks that would result in the attainment of desired goal.

## 4.2 Academic Optimism

Academic Optimism was conceptualized within the framework of organizational theory arising from quantitative studies, Hoy et al. (2006) assert that three organizational properties; collective teacher efficacy, faculty trust in parents and teachers, and academic emphasis make significant contributions to students' achievement and that the three are interconnected to support each other. They further consider these to be key factors that enable schools overcome the disadvantage of students' low socio economic status. The three dimensions identified the cognitive, affective, and behavioral traits of schools as a collective measure that impact students' performance.

Tarter, and Hoy (2006a) view Academic Optimism "as an appropriate overarching construct to unite efficacy, trust, and academic emphasis because each concept contains a sense of the possible. The triadic, causal relationship among the dimensions of academic optimism posited that when faculty trusted in parents and students, the perceived, collective efficacy was strengthened, which encouraged the bidirectional trust relationship between the faculty and the families (Hoy et al., 2006).

## 4.3 Collective Teacher Efficacy:

Collective teacher efficacy is "perception of teachers in a specific school that the faculty as a whole can execute courses of action required to positively affect students' achievement" (Goddard et al., 2000). It is an organizational level construct. It is the belief that teachers in a school have the ability to do what is necessary in order to improve students' achievement. The basis of collective efficacy is personal self-efficacy.

## 4.4 Faculty Trust:

Faculty trust in students and parents is a collective school property, which is the willingness on the part of teachers to be vulnerable to the clients (students and parents) of a school because the latter party is benevolent, reliable, competent, honest, and open (Hoy & Tschannen-Moran, 2003). Bryk and

Schneider (2002) suggested that trust was an essential factor for school improvement. There are five facets of trust: benevolence, reliability, competence, honesty, and openness (Tschannen-Moran, & Hoy, 2000). Goddard, Tschannen-Moran, and Hoy (2001) asserted trust creates a better learning environment for students by facilitating and empowering positive connections between families and schools. Faculty trust has been positively linked to student achievement (Goddard et al., 2001; Hoy, Tarter, & Bliss, 1990; Tarter, Bliss, & Hoy, 1989; Tschannen-Moran & Hoy, 2000).

**4.5 Academic Emphasis:**

Academic emphasis also known as academic press is the third component of academic optimism. Academic emphasis is the high expectations that are communicated by teachers to students in terms of their academic effort (Malloy 2012, McGuigan and Hoy 2006). Academic emphasis is evident when schools make academic achievement their primary or central purpose and when teachers believe that students are capable of academic success regardless of their needs and learning styles . Thus, according to Hoy et al.,(2006) academic optimism is seen as the high levels of bidirectional trust engendered family support for increased rigor and academic focus. This correlated with improved students’ outcomes further reinforcing perceived teacher and administrator ability or collective efficacy as seen in Fig.1.

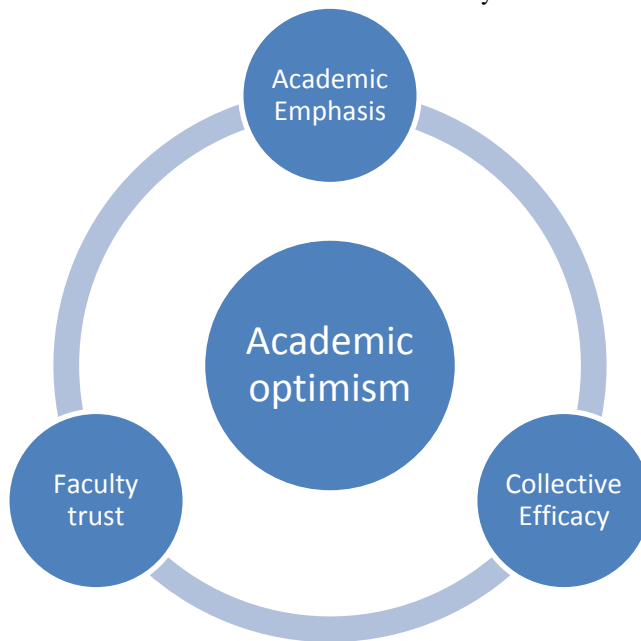


Fig. 1. Reciprocal causal relationship among the three dimensions of academic optimism in Hoy, (2000)

**5. Methodology**

This study was a descriptive survey type of research. The target population for the study consisted of all public Senior Secondary Schools (SSS) in Lagos state. Multi-stage sampling techniques were adopted to select eighteen schools from six educational district of Lagos state. In the first stage, a proportional stratified random sampling technique was used to select five schools each from six education districts making a total of thirty schools. In the second stage, random sampling was used in selecting five schools from each of the educational district. In the third stage, random sampling was used in selecting students in SSS II and SSS III science classes in the selected schools. A total of 2,245 students consisting of 1,450 SSS II and 795 SSS III science students selected from thirty (30) schools in Lagos state, made up the sample for this study. One instrument, Academic Optimism Survey Questionnaire (AOSQ) adapted from Hoy et al. (2006) was used for data collection. The AOSQ measures academic optimism with the sub-constructs of collective efficacy (CE), faculty trust (FT) and academic emphasis (AE). The AOSQ comprises of 30 items on a 6-point Likert scale. Items 1-12 measured CE; items 13-22 measured FT, while items 23-30 measured AE. Cronbach coefficient alpha ( $\alpha$ ), a measure of the reliability of the instrument for the sub-scales yielded: CE (12 items,  $\alpha=0.71$ ); FT (10 items,  $\alpha = 0.75$ ) and AE (8items,  $\alpha = 0.80$ ). The overall coefficient for the scale (30items,  $\alpha = 0.75$ ), indicating a very good internal consistency reliability.

6. Results

Research question 1: What is the response to Academic Emphasis (AE) among the science students in public senior secondary schools in Lagos state?

**Table 1:** Responses to Academic Emphasis (AE) among senior secondary school science students in Lagos state.

	District						Aggregate	Remark	
	1	2	3	4	5	6			
	Mean/SD	Mean/ SD	Mean/ SD	Mean/ SD	Mean/ SD	Mean/ SD	Mean/ SD		
1	Teachers able to get through to the most difficult students.	5.02±1.08	4.6±1.67	4.6±1.14	2.6±1.19	4.6±1.67	3.8±1.56	3.86±1.38	Agreed
2	Teachers confident and able to motivate their students.	4.2±1.48	3.6±1.14	4.4±0.55	3.2±1.79	4.6±1.45	3.8±1.92	3.97±1.45	Agreed
3	If a child doesn't want to learn, teachers here give up.	2.2±1.64	4±1.58	1.8±0.45	1.6±0.89	2.6±1.82	2±1.13	2.16±1.12	Disagreed
4	Teachers here don't have the skills needed	1.8±1.0.79	4.6±1.67	2±1.02	2.6±1.14	2.4±1.95	2.2±1.03	2.36±1.50	Disagreed
5	Teachers in this school believe that every child can learn.	5.0±1.22	3.8±1.30	4.8±1.30	2.8±1.79	4.6±1.95	4±1.41	4.17±1.71	Agreed
6	These students come to school ready to learn.	4.4±1.14	4±1.22	3.6±1.52	4.6±0.89	4.6±1.67	4.2±1.30	4.24±1.25	Agreed
7	Home life provides advantages to learn.	4±1.58	4.2±1.10	4±1.58	4.2±1.30	4.6±1.67	4.4±1.34	4.23±1.33	Agreed
8	Students here just aren't motivated to learn.	2.8±1.92	4.6±0.55	2.2±1.10	3.8±1.30	2.4±1.66	3.2±1.48	3.17±1.53	Disagreed
9	Teachers do not have the skills to relate with students	1.6±1.34	4.4±0.55	2.2±1.30	3.6±1.52	2.2±1.79	3.6±1.34	2.93±1.60	Disagreed
10	Opportunities are in community to help students learn	4.2±1.48	4.2±1.10	4.8±0.84	4.2±1.64	5±1.23	4±1.22	4.40±1.19	Agreed
11	Learning is more difficult at this school	4.8±0.84	4.2±1.30	3.4±1.95	4.02±1.41	4.2±1.33	2.8±1.48	3.90±1.56	Agreed
12	Drug and alcohol abuse make learning difficult for students	4.0±1.58	3.8±0.45	3.4±1.52	3.8±1.30	4±1.38	5±1.34	4.03±1.31	Agreed

Table 1 above showed the responses to Academic Emphasis (AE) was positive among the science students in public senior secondary schools in Lagos state. The respondents agreed to most of the items. The response rating with mean scores of 3.50 was the benchmark for the acceptance of a statement in the six-point Likert scale and respondents agreed to most of the items. As reported, most of the respondents agreed that their teachers were able to get through to the most difficult students ( $\bar{x} = 3.86 > 3.50$ ), teachers in the schools are confident they will be able to motivate their students ( $\bar{x} = 3.97 > 3.50$ ), teachers believe that every child can learn ( $\bar{x} = 4.17 > 3.50$ ), the students come to school ready to learn ( $\bar{x} = 4.24 > 3.50$ ) and that Home life provides so many advantages that students are bound to learn ( $\bar{x} = 4.23 > 3.50$ ). Also, many of the students agreed that the opportunities in the school help ensure that students will learn ( $\bar{x} = 4.40 > 3.50$ ), learning is more difficult at the school because students are worried about their safety ( $\bar{x} = 3.90 > 3.50$ ) and that drug and alcohol abuse in the community make learning difficult for students ( $\bar{x} = 4.03 > 3.50$ ). On the other hand, many of the students disagreed that if a child doesn't want to learn, teachers give up ( $\bar{x} = 2.16 < 3.50$ ), teachers here don't have the skills needed to produce meaningful results ( $\bar{x} = 2.36 < 3.50$ ), students just aren't motivated to learn ( $\bar{x} = 3.17 < 3.50$ ) and that teachers in the schools do not have the skills to deal with students' disciplinary problems ( $\bar{x} = 2.93 < 3.50$ )

Research question 2: What is the response to the Faculty Trust (FT) among science students in public senior secondary schools in Lagos state?

**Table 2:** Responses to Faculty Trust (FT) among senior secondary school Science students in Lagos State.

S/N		District						Aggregate	Remark
		1	2	3	4	5	6		
		Mean/Stdev	Mean/Stdev	Mean/Stdev	Mean/Stdev	Mean/Stdev	Mean/Stdev		
1	Teachers in the school trust their students.	3.8±1.49	3.8±0.84	4.4±0.89	4.4±1.34	4.6±1.14	4.2±1.30	4.2±1.12	Agreed
2	Teachers in the school trust the parents.	4.2±1.92	4±1.41	4.2±1.09	3.6±1.52	4.12±0.89	3.6±1.83	4.3±1.52	Agreed
3	Students in the school care about each other.	4.4±1.95	4.6±1.41	4.6±0.89	4.6±0.89	5.6±0.56	4.4±2.07	4.7±1.29	Agreed
4	Parents in this school are reliable	3.8±2.18	4±1.03	3.6±1.83	4.2±1.30	5.4±0.56	5±0.71	4.33±1.42	Agreed
5	Students can be counted upon to do their work.	4.2±1.09	3.8±1.09	3.8±1.79	5±0.71	4.2±1.92	4.4±0.89	4.23±1.28	Agreed
6	Teachers can count upon parental support.	3.8±1.49	3.8±0.83	4±1.23	3.8±1.32	4.8±1.31	4.6±0.91	4.13±1.17	Agreed
7	Teachers believe that students are competent learners	4.2±1.09	3.6±0.89	4±1.42	4±1.87	5.4±0.89	3.4±0.94	4.15±1.30	Agreed
8	Teachers think most of the parents do a good job.	4±1.59	3.20±1.09	3.8±1.48	4.6±1.14	4.4±2.08	3.6±1.34	3.93±1.44	Agreed
9	Teachers can believe what parents tell them.	4±1.74	3.2±0.44	4.4±0.89	4.4±1.35	4±2.12	3.2±1.93	3.87±1.46	Agreed
10	Students here are secretive.	4±1.41	3.6±0.89	4±1.43	3.8±2.17	4±1.88	3.2±2.04	3.77±1.57	Agreed

As observed in Table 2, the responses to the Faculty Trust (FT) was positive among the science students in public senior secondary schools in Lagos state. In the opinion of the majority of the science students, teachers in the school trust their students ( $\bar{x} = 4.21 > 3.50$ ), trust the parents ( $\bar{x} = 4.30 > 3.50$ ), students in the school care about each other ( $\bar{x} = 4.70 > 3.50$ ), parents in the school are reliable ( $\bar{x} = 4.33 > 3.50$ ) and that students can be counted upon to do their work ( $\bar{x} = 4.23 > 3.50$ ). Also, many of the students agreed that teachers can count upon parental support ( $\bar{x} = 4.13 > 3.50$ ), teachers here believe that students are competent learners ( $\bar{x} = 4.15 > 3.50$ ), teachers think most of the parents do a good job ( $\bar{x} = 3.93 > 3.50$ ), teachers can believe what parents tell them ( $\bar{x} = 3.87 > 3.50$ ) and that students are secretive ( $\bar{x} = 3.77 > 3.50$ )

Research question 3: What is the response to Collective Efficacy (CE) among science students in public senior secondary schools in Lagos state?

**Table 3:** Response to Collective Efficacy (CE) among the science students in public senior secondary schools in Lagos state.

	S/N	District						Aggregate	Remark
		1	2	3	4	5	6		
		Mean/Stdev	Mean/Stdev	Mean/Stdev	Mean/Stdev	Mean/Stdev	Mean/Stdev		
1	The school sets high standards for performance.	3.2±0.83	2.2±1.30	2.8±0.84	2.4±1.34	3.4±0.88	2±1.41	2.67±1.15	Disagreed
2	Students respect others who get good grades.	3.4±0.89	2.6±1.14	3±0.67	3.6±0.54	4±0.88	2.6±1.14	3.2±0.96	Disagreed
3	Students seek extra work so they can get good grades.	3.6±0.99	3.6±0.45	3.7±1.30	2.6±0.89	2.6±0.89	2.6±1.34	2.63±0.97	Agreed
4	Academic achievement	3±0.70	2.6±0.88	3±1.22	3.7±0.44	3.7±0.83	3.7±0.89	3.7±0.82	Agreed

	recognized and acknowledged.								
5	Students try hard to improve on previous work.	3.2±0.84	3.2±0.56	2.2±1.30	2.6±1.34	3.2±0.78	2.4±1.140	2.8±1.03	Disagreed
6	The learning environment is orderly.	3.0±0.70	2.8±0.81	2.8±0.84	3±0.70	3.4±0.89	3±1.02	3.03±0.78	Disagreed
7	The students can achieve the goals that have been set for them.	2.8±1.02	3.2±0.65	2.4±1.14	2.8±0.83	3.4±0.73	2.8±1.31	2.9±0.99	Disagreed
8	Teachers believe that students have the ability to achieve academically.	3.75±0.92	3.2±0.56	3.67±0.71	3.8±0.44	3.6±0.54	3.8±1.09	3.76±0.75	Agreed

Evidence from Table 3 indicate Response to Collective Efficacy (CE) among the science students in public senior secondary schools in Lagos state was negative as respondents disagreed with most of the items. Most of the students disagreed that the school sets high standards for performance ( $\bar{x}$  =2.67<3.50), students respect others who get good grades ( $\bar{x}$  =3.20<3.50), students seek extra work so they can get good grades ( $\bar{x}$  =2.63<3.50), students try hard to improve on previous work ( $\bar{x}$  =2.80<3.50), the learning environment is orderly ( $\bar{x}$  =3.03<3.50), and that the students can achieve the goals that have been set for them ( $\bar{x}$  =2.90<3.50). However, most of the students agreed that students seek extra work so they can get good grades ( $\bar{x}$  =3.70<3.50) and that teachers believe that students have the ability to achieve academically

**Hypothesis**

Ho: Academic emphasis, faculty trust and collective efficacy are not significantly related among public senior secondary school science students in Lagos state.

**Table 4:** Correlation between academic emphasis, faculty trust and collective efficacy among public senior secondary schools in Lagos

		1	2	3	Mean	Stdev
1	CE	1	.492**	.348	43.83	7.38
2	FT		1	.604**	41.47	9.38
3	AE			1	23.57	5.28

\*\* . Correlation is significant at the 0.05 level

As presented in Table 4, a positive and significant relationship is reported between Collective Efficacy (CE) and Faculty Trust (FT) (r=0.492, p<0.05). Also, a positive and significant relationship is reported between Faculty Trust and Academic Emphasis (r=0.604, p<0.05). However, a positive and insignificant relationship is observed between Collective Efficacy (CE) and Academic Emphasis (AE) (r=0.348, p>0.05). Thus, academic emphasis, faculty trust and collective efficacy is significantly related among science students in public senior secondary schools in Lagos. The null hypothesis is rejected.

**7. Discussion and Conclusion**

The finding that showed the responses to Academic Emphasis (AE) was positive among the science

students in public senior secondary schools in Lagos state agrees with Hoy et al, (2006), Malloy 2012 and McGuigan and Hoy (2006) who asserted that academic emphasis is increased rigor and academic focus, and it correlated with improved students' performance outcomes. As reported in this study, most of the participants agreed that their teachers were able to get through to the most difficult students, teachers in the schools are confident they will be able to motivate their students, teachers believe that every child can learn and that the students come to school ready to learn. Also, many of the students agreed that the opportunities in the school help ensure that students will learn, learning is more difficult at the school because students are worried about their safety and that drug and alcohol abuse in the community make learning difficult for students.

Also, the finding that showed the responses to the Faculty Trust (FT) was positive among the science students in public senior secondary schools in Lagos state agrees with the findings of Bryk and Schneider (2002), who opined that trust was an essential factor for school improvement. Also, Goddard, Tschannen-Moran, and Hoy (2001) asserted that trust creates a better learning environment for students by facilitating and empowering positive connections between families and schools. In this study, most of the participants agreed that teachers in the school trust their students, the parents and the students in the school care about each other. In the same vein, many of the participants agreed that parents in the school are reliable and that students can be counted upon to do their work. On the contrary, findings indicate that many of the participants disagreed that the school sets high standards for performance and that students respect others who get good grades. Majority of the participants also disagreed that students seek extra work so they can get good grades and try hard to improve on previous work.

Another finding that showed Response to Collective Efficacy (CE) among the science students was negative in public senior secondary schools in Lagos state contradicts the findings of Goddard et al., (2000) who reported that collective teacher efficacy in a specific school as a whole can execute courses of action required to positively affect students' achievement. The negative response reported in the self-efficacy could be traceable to the poor performance recorded in the science subject in the public examination over the years and thereby students do not see themselves performing up to expectations.

From the foregoing, the study recommended that to improve collective efficacy of the students, teachers should let students express themselves so that they can make their own decisions. Also, every student should be encouraged to take part in the teaching and learning exercise in order to be self-assertive. Also, teachers should also give frequent focused feedback and provide appropriate remedial instructions to students that required it. In addition, teachers should provide appropriate re-enforcement strategies to students that are doing well in science subject.

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