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ATTITUDE OF TEACHERS AND ITS IMPACT ON THEIR INSTRUCTIONAL PRACTICE

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Abstract:
This study investigated the attitude of Integrated Science Teachers in Senior High Schools and its impact on their instructional practice. The study employed the quantitative research approach adopting the descriptive survey design. The study employed the use of questionnaire and observation checklist to collect data from 138 participants. This attitude towards the subject stems from the perception these respondents have had about the subject for so many years since perception influences one's attitude towards an event. These attitudes also influence their expectations of how their teaching can effectively help students learn which adversely affects their attitude towards the instructional process. It was also realised that persons' attitude towards instruction affects the demeanour and how the person carries out the instruction. The study therefore concludes that teacher's competency and positive attitude towards instructional practice could contribute to effective teaching and students' achievement. Knowledge on the subject matter of the curriculum that the teachers are required to teach influence the teachers' own perception of the subject that influences their attitude. Integrated Science teaching skills is highly technical therefore; teachers' personal development training enhances the content knowledge of teachers in Integrated Science as well as classroom management skills should be enhanced as this will go a long way to impact on the teachers' attitude in the classroom.

Keywords: attitude, instructional practice, teaching, evaluation, learning

1. Introduction

For any education system to flourish and achieve its goals, the role of teachers has to be paramount. The quality of training that teachers receive and the systematic support for their professional growth are what would ensure that education reaps the full potentials of teachers' contribution to quality education. However, the attitudes of teachers towards

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the teaching and learning of Integrated Science in a Ghanaian classroom has always been an issue of question. Teachers of the subject, however, are of the view that the volume of content in the integrated science syllabus is high and therefore makes it difficult for them to complete the syllabus in a school cycle. Some stakeholders are also of the view that teachers who are the implementers of the curriculum are not involved in any curriculum reforms. They are therefore taken aback when new concepts are introduced into the curriculum for students to be taught such concepts (Ministry of Environment, Science, and Technology, 2010) cited in Azure (2015). Some teachers also do not have basic knowledge in some of the science topics in the curriculum and are therefore demoralised to teach them whenever they are to teach such topics to the students making it difficult for the citizenry to get the needed science process and innovation skills needed to meet the demands of the 21st century scientific community. The dearth of Integrated Science teachers in Ghana and the lack of teaching skills and competencies among teachers are the result of their poor instructional approaches (Jones, 2008) and their negative attitude towards the Integrated Science as a subject. This together with the negative attitudes of some teachers towards the Integrated Science subject has resulted in the mass failure of students in this subject every year. The present crop of teachers who teach Integrated Science have been trained in specific subject areas of Biology, Chemistry, Physics, and Agriculture Science. Hence, they generally lack the skills of teaching Integrated science as a unified whole.

This study seeks to investigate the attitude of Integrated Science teachers and its effect on their instructional practice.

2. Literature Review

Fishbein and Ajzen (1975) explained that the foremost popular definition of attitude focused on the affective element which a transparent definition of attitude is important since it helps in creating valid procedures of measurement. They identified four functions of attitude, the various ways attitude is acquired, and the manner in which the cognitive, affective and behavioural components of attitude can be changed. The concept of attitude is essential to social psychology (Allport, 1935 as cited in Rokeach, 1986). Rokeach stated that the notion of attitude is indispensable to the psychology of personality (Rokeach, 1986). Furthermore, Fishbein acknowledged that the concept of attitude has become increasingly significant in almost every behavioural science (Fishbein, 1967).

Attitude towards works are the feelings we have toward different aspects of the work environment (Carpeter, Talya & Erdogan, 2009). According to him, there are some elements which influence the attitude towards works, namely personality, person-environment fit, job characteristics, psychological contract, organizational justice, work relationship, and stress. Arguments that support attitude towards works cause performance usually refer to the functions of attitudes as guidelines and facilitators of behaviour (Linz, 2002); or refer to the functions of attitudes as the energizing and facilitative effects of positive affection at the workplace. Riketta (2009) also states that the

attitudes serve as the motivational effects of the personal importance or identification with the job or organization (e.g., as a component or consequence of commitment.

Triandis (1971) refers to major theorists such as Smith (1947), Smith, Bruner, and White (1956), Katz and Stotland (1959), and Katz (1960) about the functions of attitudes in personality. These theorists proposed that attitudes help individuals understand a posh world, guard their self-worth, help people adjust, and permit them to speak their essential values.

According to Triandis (1971), attitude is learned. Additionally, he mentioned Allport (1954b) that the majority of the attitudes that a private develops are obtained from communicating with family and friends. Triandis explained further that folks also acquire attitudes from direct experience with the attitude object. However, only a small fraction of an individual's attitude is developed in this way.

Triandis (1971) argued that attitudes might be altered during a number of the way. He explained that the cognitive component is often changed by the acquisition of latest information, the affective component is often altered by unpleasant experiences involving the attitude object and the behavioural component are often altered by changes in norms or laws that force a behavioural change. There is much disagreement among scholars on the conceptual framework to elucidate the connection between attitude and behavior. Generally, scholars believe that attitude alongside other factors can predict behaviour with great accuracy. For instance, Triandis (1971) argued that behaviour might be predicted supported four components: attitude, norms, habits, and expectation. When the four components are consistent, there's a robust connection between attitude and behavior. However, when the four factors are inconsistent, the connection between attitude and behavior is weak.

However, Rokeach (1972) posited that behaviour may be a function of two attitudes: attitude towards an object and attitude towards a situation. He believes that one cannot act contrary to one's attitude. For example, if the results of an investigation seem to support that an individual acted contrary to a particular attitude, it means that the individual behaved in a manner consistent with a second or third attitude that superseded insignificance the attitude that was measured.

For the purposes of this study, conceptual framework that treats attitude as a major determinant that influences behaviour was used. Additionally, discussion was also centred on the four variables that influences a persons' attitude towards a subject which include pedagogical training, gender, subject area and experience with respect to teacher attitude towards content literacy instruction.

According to McCoss-Yergian and Krepps (2010), teachers' attitude towards reading in the content areas influences the probability that teachers will implement literacy instruction in their subject areas. Teachers that employ strategies in their instruction see significant improvement in student reading achievement (Spencer et al., 2008). Thus, teacher attitude towards content area literacy can play a significant role in student reading achievement and practice in secondary schools (Nourie and Lenski, 1998).

Abu (2013) argued that teachers' attitude towards science teaching is a potent predictor of students' academic achievement in science and attitude towards science learning. The Science of Education is a neighborhood of experience formed on the idea of two notions, "*education*" and "*instruction*" (Karsli, 2007). Education is the activity that aids new generations to obtain the necessary information, ability, attitude and understanding and develop their character while preparing them for communal life (Karsli, 2007). Teaching, on the opposite hand, is that the process during which the individual develops talents (obtained during the education phase) in proportion to their capacity (Karsli, 2007). The most important think about education and teaching activities is that the teacher.

3. Methodology

The study employed the descriptive survey design using the quantitative research approach. This design is appropriate and suitable for the study since the questionnaire is the major instruments used for the collection of data. The survey research design enables researchers to get first-hand undistorted information from the research subjects which influence the study. The research employed the simple random technique to select 138 Integrated Science teachers in the Central Region of Ghana. The study employed the use of questionnaire and observation checklist as quantitative instruments and interview as a qualitative instrument. Closed-ended structured questionnaire was used. The five likert-type scale ranged from "Strongly agree'' (SA), "Agree" (A), "Uncertain" (U), "Disagree" (D) to "Strongly Disagree" (SD). Cronbach Alpha reliability coefficient of 0.74 was used to determine the reliability of the quantitative research instrument.
The quantitative data were analysed into simple frequencies and percentages whereas thematic analysis were used for the qualitative data.

Data for the study were collected in sequence. Thus, the quantitative data was first collected followed by the qualitative data. Statistical Package for Social Sciences (SPSS) version 20 was used for the quantitative data analysis.

4. Results and Discussion

Table 1: Gender Distribution of Teachers

	Frequency	**Percent**
Male	105	**76.1**
Female	33	**23.9**
Total	**138**	**100.0**

Source: Field work (2019).

From the data from this study, 76.1% were male teachers whiles 23.9% were female teachers. According to Hannula, (2002) students taught by female teachers performed significantly better than students taught by male teachers in English Language, Mathematics, Science and Social studies. Brady and Woolfson, (2008) also reported that in their study in Israel, students taught by female teachers achieved more than those

taught by male teachers. However, the studies of Arbuckle and Williams (2003) declared that male teachers performed better than female teachers in areas of asserting authority and using meaningful voice tones during teaching.

The study realised that gender of a person has no influence on the persons attitude towards a subject although there are assertions that male teachers have positive attitude towards the teaching of science than female teachers as it is known that female teachers are very good when it comes to the teaching of languages than in the science and mathematics.

Table 2: Educational Qualification of Teachers

	Frequency	**Percent**
BSc/BEd Degree	80	58.0
MSc	17	12.3
MEd Science	39	28.3
MPhil Science	2	1.4
Total	**138**	**100.0**

Source: Field work (2019).

The data indicated that all the teachers had obtained the requisite teaching qualification. Some research findings have established that teacher's teaching qualification is positively correlated with learning outcome. Abe and Adu (2013) found out that teachers' qualification contributed to the improvement of students' scores in their academic performance. However, for the purpose of this study, it was evident that teachers' academic qualification had no influence on their attitude in class. It was realised that regardless of the level of education of a teacher, the anxiety to teach certain run through them. This is because most of these topics has been given less attention has been given to it by teachers and students alike.

Table 3: Teachers' Major Area of Specialization

	Frequency	**Percent**
Biology	23	16.7
Chemistry	18	13.0
Integrated Science	30	21.7
Physics	20	14.5
Agriculture Science	19	13.8
Other	28	20.3
Total	**138**	**100.0**

Source: Fieldwork (2019).

The study realised that apart of 21.7% of the teachers, 78.1% of the teachers did not have specialisation in Integrated Science but are teaching the subject because they did general science in the senior high school. This system of allocating Integrated Science teachers in senior high schools in Ghana has made many teachers teach certain topics which they are familiar with while neglecting the concepts they are not familiar with. This has resulted

in students having their final examinations half-prepared because they know certain concepts while for some, they have no idea what that is.

Table 4: Teaching Experience of Teachers

	Frequency	Percent
Less than a year	28	20.3
1 - 5 years	63	45.7
6 - 10 years	23	16.7
11 - 15 years	16	11.6
Above 15 years	8	5.8
Total	**138**	**100.0**

Source: Fieldwork (2019).

Research findings has established that teacher's teaching experience is positively correlated with learning outcome. Akinsolu (2005) advocated that experienced teachers need to be retained in schools if higher productivity is to be obtained because learners achieve more from these teachers.

Experienced teachers can identify students' problems and be able to change methodology to aid effective teaching and learning. Approximately 78% of the teachers have had 6 years or more teaching experience. This implies the teachers have skills and experiences for teaching. Kosgei, Mise, Odera, and Ayugi, (2013) concur that teachers with years of experience in the profession turned out students with higher academic performance.

Table 5: Teacher's Attitude towards Integrated Science Teaching

Premise	SA F %	A F %	UN F %	D F %	SD F %
Integrated Science teaching is boring to me.	0 (0.0)	42 (30.4)	18 (13)	47 (34.1)	31 (22.5)
I engage my students in the teaching and learning of the subject.	57 (41.3)	72 (52.2)	9 (6.5)	0 (0.0)	0 (0.0)
I enjoy my lessons in Integrated Science.	62 (44.9)	61 (44.2)	13 (9.4)	2 (1.4)	0 (0.0)
Integrated Science teaching is time consuming.	5 (3.6)	22 (15.9)	19 (13.8)	64 (46.4)	28 (20.3)
I teach only some topics because I hate to teach all the aspects of the syllabus.	24 (17.4)	37 (26.4)	16 (11.6)	43 (31.2)	18 (13.0)
Integrated Science teaching is a waste of valuable academic study time.	0 (0.0)	5 (3.6)	9 (6.5)	46 (33.3)	78 (56.5)
Teachers should be authoritative in the classroom to teach effectively.	34 (24.6)	41 (29.7)	15 (10.9)	34 (24.6)	14 (10.1)
Students should be given freedom to ask questions in Integrated Science lessons	58 (42.0)	74 (53.6)	6 (4.3)	0 (0.0)	0 (0.0)
It is frustrating teaching Integrated Science.	43 (31.2)	44 (31.9)	16 (11.6)	29 (21.0)	6 (4.3)
I prefer teaching Integrated Science to any elective science subject.	17 (12.3)	80 (58.0)	14 (10.1)	27 (19.6)	0 (0.0)
I give frequent class exercises to monitor	43	82	9	4	0

students' progress in the subject.	(31.2)	(59.4)	(6.5)	(2.9)	(0.0)
I only explain a few concepts to students during instructional practice.	10 (7.2)	68 (49.3)	13 (9.4)	43 (31.2)	4 (2.9)
I will not waste time conducting practical work in Integrated Science.	2 (1.4)	11 (8.0)	17 (12.3)	77 (55.8)	31 (22.5)

Key: A = Agree; SA = Strongly Agree; UN = Uncertain; SD = Strongly Disagree; D = Disagree
Source: Fieldwork data (2019).

The table above was intended to assess teachers' attitude towards the teaching of Integrated Science.

The results indicated that 30.4% of the respondents recounted that the teaching of the subject is boring to them, 13% were unable to tell if the teaching of the subject interests them or not while 56.6% disagreed to the boring nature of the subject. This attitude towards the subject stems from the perception these respondents have had about the subject for so many years since perception influences one's attitude towards an event.

The finding is supported by Tsai (2009), who conceded that teachers' attitude in the classroms stems from their own experiences and their educational environments. Oliver and Koballa (1992) found that science teachers' perceptions highly relate to knowledge, attitudes and behaviour, personal experience, and beliefs of acceptance or rejection of a proposition. Teachers' beliefs and personal experiences also create a subjective view that influences their beliefs concerning what constitutes an effective and efficient learning environment (Mansour, 2009).

Teachers' attitudes and beliefs also influence their expectations of how their teaching can effectively help students learn (Bell & Gilbert, 1996; Benner & Mistry, 2007) which adversely affects their attitude towards the instructional process.

On the item dealing with the instructional process, majority of the respondents (93.5%) reported that they engage students during the instructional process. These findings were in cognisance with Mucella, Melis and Eryilmaz (2011) which states that participants generally describe teachers' positive attitude as compassionate, understanding, helpful, seeing the student as an individual, being friendly and interested, communicating, being genuine and tolerant, supporting, motivating and inspiring participation in social events. Teachers' negative attitude are listed as discrediting, vengeful, too disciplined, uninterested, favouritism, being angry, not caring, being intolerant, not understanding and being inconsistent. This stipulates that teachers in the Central Region of Ghana due to the positive attitudes they have towards the teaching of Integrated Science do engage students in the instructional process to instill learning. This was evident with a calculated mean of 4.35 which is a clear indication of the teachers' engagement of students in the instructional process.

Again, it was found out that 89.1% of the teachers agreed that they enjoy teaching Integrated Science. Despite reports of high levels of teachers' job stress (Chaplain, 2008; Schwarzer & Hallum, 2008), many teachers find personal satisfaction in their work. Job satisfaction is derived from day-to-day work activities is associated with higher levels of job performance (Judge, Thoresen, Bono, & Patton, 2001). Caprara et al., (2003) considered job satisfaction a "decisive element" influencing teachers' attitudes and

performance and located self-efficacy to be a crucial contributor to teachers' job satisfaction. Teachers report that job satisfaction is gained from the character of day-to-day classroom activities, like working with children, seeing students make progress, working with supportive colleagues, and overall school climate (Cockburn & Haydn, 2004). Teachers who are dissatisfied with their work display lower commitment and are at greater risk for leaving the profession (Ingersoll, 2001). Liu and Ramsey (2008) found that stress from poor work conditions had the strongest influence on teachers' job satisfaction and noted that inadequate time for planning and preparation and a heavy teaching workload reduced satisfaction from teaching.

From the study, it also came to light that 3.6% of the respondents agreed to the fact that teaching Integrated Science is time wasting while majority of the teachers disagreed (89.8%). This is an indication that majority of the teachers in the Central Region of Ghana believed that Integrated Science should be taught to students for them to be able to have a basic knowledge in the subject even though not all of them will be elective science students. Again, 43.8% of the respondents agreed that they can only teach some aspects of Integrated Science and therefore cannot handle it as an integrated whole.

Table 6: Influence of SHS Integrated Science Teachers' Attitude on Instructional Process

Premises	**VG**	**G**	**S**	**P**	**A**
	F %	**F %**	**F %**	**F %**	**F %**
State objectives for the lesson.	7 (20.6)	10 (29.4)	6 (17.6)	7 (20.6)	4 (11.8)
Effective and relevant introduction linked with lesson.	12 (35.3)	17 (50.0)	5 (14.7)	0 (0)	0 (0)
Engages students in discussion, critical thinking and problem-solving.	14 (41.2)	17 (50.0)	3 (8.8)	0 (0)	0 (0)
Systematic and sequential presentation adapted to the level of the students.	18 (52.9)	15 (44.1)	1 (2.9)	0 (0)	0 (0)
Identifies and uses opportunities for accidental teaching.	14 (21.2)	9 (26.5)	7 (20.6)	2 (5.9)	2 (5.9)
Focuses students attention by using motivational techniques.	5 (14.7)	18 (52.9)	9 (26.5)	0 (0)	2 (5.9)

Key: VG = Very Good; G = Good; S = Satisfactory; P = Poor; A = Absent
Source: Fieldwork (2019).

Table 7: Effects of Teachers' Attitude on Classroom Management

Premises	**VG**	**G**	**S**	**P**	**A**
	F %	**F %**	**F %**	**F %**	**F %**
Promotion of cooperation during lesson/assessment (group work).	12 (35.3)	21 (61.4)	1 (2.9)	0 (0)	0 (0)
Respects diversity among students.	15 (44.1)	16 (47.1)	3 (8.8)	0 (0)	0 (0)
Exhibits balance of fairness and firmness.	15 (44.1)	14 (41.2)	5 (14.7)	0 (0)	0 (0)
Maintains positive rapport with students.	8 (23.5)	23 (67.6)	2 (5.9)	1 (2.9)	0 (0)
Reinforce appropriate behavior	11	15	6	2	0

through encouragement.	(32.4)	(44.1)	(17.6)	(5.9)	(0)
Remain calm in dealing with conflict and disagreement.	11 (32.4)	18 (52.4)	3 (8.8)	2 (5.9)	0 (0)

Key: VG = Very Good; G = Good; S = Satisfactory; P = Poor; A = Absent
Source: Fieldwork 2019

Table 8: Effects of Teachers' Attitude towards Lesson Evaluation

Premises	**VG** **F %**	**G** **F %**	**S** **F %**	**P** **F %**	**A** **F %**
Monitors students participation and progress	10 (29.4)	21 (61.8)	1 (2.9)	2 (5.9)	0 (0)
Gives immediate feedback after an assessment	10 (29.4)	15 (44.1)	7 (20.6)	0 (0)	2 (5.9)
Focusses evaluation on instructional goals and objectives	10 (29.4)	15 (44.1)	6 (17.6)	1 (2.9)	2 (5.9)
Demonstrate fair assessment of all students	5 (14.7)	18 (52.9)	9 (26.5)	0 (0)	2 (5.9)

Key: VG = Very Good; G = Good; S = Satisfactory; P = Poor; A = Absent
Source: Field data (2019).

The Researcher observed the teachers' classroom practices during lessons. This was to help ascertain how their attitudes towards the subject as indicated in the questionnaire influence how they teach in class. The area that was looked at included instructional skills, classroom management and evaluation of the lesson.

From the results gathered, it was evident that teachers' attitude stems from their perception of the subject and this can have great consequence on their instructional practice. This is because teachers with a positive attitude will handle the subject with much passion and enthusiasm. The Researcher observed that majority of the teachers had positive attitudes towards the teaching of the subject. Eighty-five percent (85%) of the teachers taught with passion and a well-balanced attitude that saw to a conducive classroom atmosphere. The fulfilment of this responsibility is only possible through the teacher's being able to develop healthy personality values for themselves as well as showing good rapport in their relationships with students so as to allow them to develop their personality freely as posited by Can (2011) and Inelmen, (2011).

These abilities and characteristics are very necessary in order to be a good teacher. A good teacher has eight basic characteristics, which are: knowledge of material; decision making; critical thought and problem-solving ability; self-understanding and self-correction; reflecting; recognizing students and knowing students learning needs; applying new finding in education; teaching and communication ability. Attitude defines these characteristics and affects instruction and instils learning in students.

A person's attitude towards instruction affects the demeanour and how the person carries out the instruction. From the study, it was realised that 97.1% of the teachers promote cooperation during the instructional process. They do this through group works and also class discussion moderated by the teacher. With respect to the teachers' respect of students' diversity, 91.2% of the teachers placed many emphases on students' diversity during the instructional process. This was manifested in their choice of words which does

not have any gender, or ethnic biases and treat students with fairness and firmness without exercising favouritism to any student. Majority of the teachers 91.1% maintains a positive rapport with students that enable them to contribute in class and ask questions to enhance understanding of concepts. In the midst of tension and disagreement, it was observed that 85.3% of the teachers were seen to have remained calm and they found an antidote to the tension and misunderstanding. These findings are in cognisance with the works of Martin, Yin and Baldwin (1998) which asserts that teachers' classroom management approaches are, to a great extent, based on their understanding of appropriate and inappropriate behaviours and ways of controlling them.

Classroom management is one of the most challenging tasks that teachers have to deal with. Although teachers usually receive pre- and in-service training on this challenging task, studies show that their classroom management decisions and practices are significantly affected by their attitudes and beliefs concerning classroom management (Parker, 2004; Garret, 2005).

From the findings, it was evident that 91.3% of the teachers engaged in formative evaluation. They do this by monitoring students' participation and progress of the lesson. As Curry, Mwavita, Holter, and Harris (2015) posit, a formative assessment conducted in a classroom gives teachers real-time results of student understanding which allows teachers to make immediate decisions regarding the next steps in the learning process. It also enables the teacher to assess his or her own methods of teaching.

It became evident that 73.5% of the teachers give immediate and effective feedback to their students during the instructional periods. These feedbacks serve as a source of motivation to the students as it affects their learning and understanding of the concepts. It was also evident from the data gathered that 67.6% of the respondents ensure fair assessment process for all students. In classroom assessment, since teachers themselves develop, administer and analyze the questions, they're more likely to use the results of the assessment to their own teaching. Therefore, it provides feedback on the effectiveness of instruction and provides students a measure of their progress. Biggs (1999) maintains that two major functions can be pointed out for classroom assessment: one is to show whether or not the learning has been successful, and the other one is to clarify the expectations of the teachers from the scholars (Dunn et al., 2004). Fairness in an assessment provides equal opportunities for teachers to assess students' ability on the subject matter and also improve on teachers' instructional assessment skills this is because the purpose of classroom assessment and evaluation is to give students the opportunity to show what they have learned rather than to show what they have not learned. Needless to say, evaluation and assessment can focus on different aspects of teaching and learning: respectively textbooks and instructional materials, student achievement, and whole programmes of instruction. This was clearly demonstrated by the participants in this research.

5. Conclusion

The study therefore concludes that teacher's competency and positive attitude towards instructional practice could contribute to effective teaching and students' achievement. Knowledge on the subject matter of the curriculum that the teachers are required to teach influence the teachers' own perception of the subject that influences their attitude. Integrated Science teaching skills is highly technical therefore teachers' personal development training enhances the content knowledge of teachers in Integrated Science as well as classroom management skills should be enhanced as this will go a long way to impact on the teachers' attitude in the classroom. Some teachers may have higher attitude when it comes to teaching certain concepts of the subject and have a less motivated attitude when teaching other topics hence teachers of Integrated Science should be train in such a way that they can handle the subject as an integrated whole rather than handing it in aspects. Teachers' attitude in the classroom has an effect on their instructional delivery as well as student achievement hence maintaining a positive attitude in class will go a long way to ensure a positive instructional classroom environment.

Conflict of Interest Statement
The author whose name is listed in this manuscript certify that he has no affiliation in any entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

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