



Teachers' Perceptions and Attitudes on the Double-Track Educational System: A Case Study from Upper Denkyira East Municipality, Ghana

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: <https://doi.org/10.9734/jesbs/2024/v37i61336>

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/123807>

Original Research Article

Received: 14/07/2024

Accepted: 18/09/2024

Published: 23/09/2024

ABSTRACT

Introduction: Undoubtedly, the implementation of the free Senior High School (SHS) policy has resulted in a rise in student enrollment. In fact, the free SHS policy provides educational opportunities to children whose guardians and parents cannot afford school fees, otherwise they would not have been able to continue their education. The purpose of the study was to assess

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teachers' perceptions and attitudes on Double-Track Educational System (DTES) in the Upper Denkyira East Municipality.

Methods: The target population for the study was 178 teachers in the two Senior High Schools in the Upper Denkyira East Municipality. A descriptive study design using quantitative data collection methods involving 124 teachers. The researchers used questionnaire as the data collection instrument. The lottery method of the simple random sampling technique was used to select the 124 teachers for this study because it allowed participants equal probability of selection and thus avoided bias. Data were analysed using SPSS version 20 software (SPSS).

Results: The data were presented using frequencies, tables and texts. Statistical significance for all testing was set as 0.05. A significant proportion of the teachers (72%) had information on the double-track system from the media. Majority had no idea or understood the double-track system which was statistically significant. Significant proportion of the teachers had good attitude towards the implementation of the double-track system.

Conclusions/Recommendations: The study concludes that government should continue with the implementation of the DTES. Perception on DTES was poor among the respondents however, most teachers had good attitude towards the implementation of DTES. Government, Ministry of Education and Ghana Education Service must continue with their education on DTES and further extend it to the churches and the mosque in the Municipality.

Keywords: Double shift system; circuit supervisor; free senior high school; government.

1. INTRODUCTION

"There is no doubt that the introduction of free Senior High School (SHS) policy has increased enrolment in schools. Indeed, the free SHS policy offers students whose parents and guardians cannot afford school fees, and so would have missed the opportunity to further their education" [1]. "According to Ghana's 1992 constitution, Article 25 subsection 1 (a) and (b) All persons shall have the right to equal educational opportunities and facilities and with a view to achieving the full realization of that right- (a) basic education shall be free, compulsory and available to all; (b) secondary education in its different forms, including technical and vocational education, shall be made generally available and accessible to all by every appropriate means, and in particular, by the progressive introduction of free education" [2].

"A key tool to improving access to education is to remove financial barriers that hinder access to quality secondary education. However, only 17 Sub-Saharan Africa (SSA) countries (37%) offer some form of free secondary education" [3]. "Sub-Saharan Africa has the highest number of out-of-school children of any region in the world. The UNESCO Global Monitoring Report in 2019 showed that in many countries in sub-Saharan Africa where there are no school fees, much of the actual cost of education is still covered by the household, rather than the government" [4]. "Just like every new educational system, the free SHS policy has come with its own challenges of

inadequate infrastructure, such as classrooms, dormitories, teaching and learning materials" [5]. "The government of Ghana made the effort to introduce the Double-Track Educational System (DTES) in September, 2018 to create space for that batch of students, who reported to school in September, 2018" [6].

"The DTES was not applied to all schools but four hundred (400) out of 670 SHS. The 400 schools were selected because of the number of students who applied for admission" [7]. "With the new educational system, Ghana's second cycle institutions moved away from three school terms to a two-semester system similar to that run by tertiary institutions. The DTES temporarily ended the over 70-years old educational cycle of three terms to two-semester system in the selected schools. The system divided the entire student body and staff into two different tracks" [8]. "So while one track is in school, the other is on vacation. Candidates placed on the GREEN TRACK reported for the first time on September 11, 2018, whereas the GOLD TRACK also reported for the first time on November 8, 2018" [9].

"According to the minister of finance, the government has spent a total amount of GH¢7.62 billion (954 million USD equivalent) for the implementation of the FSHS programme during the past five years (2017-2022)" [10]. "Developing countries face grave economic and budget restrictions that deter their ability to increase their educational funds. Consequently,

decision makers in countries like Kenya have often resorted to Double-Shift System (DSS) to increase the source of school and classroom spaces: the school opens for a morning-shift and an afternoon-shift effectively doubling the amount of space existing in a school without the need to build additional infrastructure” [10].

“Providing equal educational chance for all is a chief goal of liberal democracies, at least on paper. In practice, many democratic countries separate their students into different classes or even different schools based on their demonstrated academic ability and likely future career. Students in different ability groups or “tracks” not only learn at different paces, they also learn different subject matter and are exposed to different (and not equally effective) teaching styles” [11].

“Education is the medium through which the citizens of a particular nation acquire generally accepted knowledge, skills and attitudes, which enable them to preserve and improve upon their culture and transmit to the next generation, develop their full faculties (physical, psychological, emotional and social) and contribute their quota to the development of themselves, their communities and the nation as a whole” [12]. It is in the light of these that successive government of Ghana especially in the fourth republic have laid down policies and programmes to improve the educational system of the nation.

“Provisional National Defense Council (P.N.D.C.) government introduced the Senior Secondary School system in 1990 with much emphasis on vocational and technical skills. The first batch came out in 1993” [11]. “However, their performance did not meet the expectation of the programme. Therefore, there was the need for improvement hence, when President J.A. Kuffour took office in the year, 2001, he sought to avert the challenges faced by the Senior Secondary system under the former government” [13]. “Therefore, he inaugurated a Committee on Review of Educational Reforms in Ghana on 17th January, 2002. Professor Jophus Anamuah-Mensah, then Vice Chancellor of the University of Education, Winneba, chaired the 29-member committee. The committee proposed the Senior High School (SHS) system. The double-track system was part of the recommendations made by the Professor Anamoah Committee in 2008 to help revive and reshape the educational sector and it is now being implemented” [14].

“In between school tracking, students attend diverse secondary schools based on their capability level and likely future career. In systems with minimal or no tracking, all students attend the same classes in the same school regardless of ability level. Between-class tracking is common in the United States, while between-school tracking is the norm in Germany, the Netherlands, and several other European countries” [15]. “Japan is an example of a country that employs very little explicit educational tracking” [5].

“In order to ensure the effective operation of comprehensive education in primary schools as the means of removing obstacles to learning and participation the Tanzanian Government formulated different programs and strategies including Primary Education Development Program (PEDP) (I) 2002-2006 and PEDP (II) 2007-2011” [3]. “The main objectives of these two programs were to translate Tanzania’s Development vision of 2025 and education and training policy of 1995 into a specific priorities and achievable targets in the medium term and to realize the goals and targets agreed upon in the Salamanca statement and framework for action of 1994” [16].

“As practiced in other countries, double track system is a novel educational system in Ghana. Ghana has ever practiced the “the shift system” of education in the 1980s where students attended either morning shift or afternoon shift. Because it is a new system much is not known among the general population” [17].

“The teachers are supposed to educate the general public about the new system for the smooth implementation. However, information from stakeholders usually contradicts each other. Parents and the general public usually depend on teachers for their perception on this new educational paradigm” [18]. “Ghana, in her quest to remove these educational barriers, implemented the free compulsory primary education, the school feeding programme, free Senior High School (SHS) and now double-track system all to ensure the universal access to education in the country” [18].

“The introduction of the double-track system comes as government’s policy of free SHS encounters fresh and serious challenges” [19]. “The move to make education free at the second cycle in order to deepen access has led to

severe congestion in classrooms and pressure on already inadequate infrastructure. The system reduces class sizes, increases the contact hours between teachers and students, as well as increases the number of holidays" [20].

"The DTES was adopted as a stop-gap measure to prevent "wasting human resources" by wrongly turning away qualified candidates from pursuing secondary education simply because of lack of space" [21]. "Due to the free SHS policy, there was a leap in the number of candidates seeking secondary education from 308,799 in 2016 to 361,771 in 2017 with an expected rise to 473,730, in 2018. It is also disturbing to note that several students although eligible and placed by the Computerized School Selection and Placement System (CSSPS), could not be enrolled" [22].

"Studies have shown that successful implementation of any educational system is not an easy task or straightforward matter" [4]. "There could be many factors that would hinder the effective implementation of the double-track system. Among the factors that could disturb the implementation of the system in different parts of the country include teachers' perception and attitudes" [23]. "The way in which teachers realize educational system in the classroom largely depends on their attitude and perception towards that system" [24]. "If teachers do not accept the education of vulnerable, disadvantaged and the poor children as an integral part of their job, any new educational system can never be successful" [25].

Since the double-track system is a recent educational system, there is little data about the perception and attitude of teachers on system. Depending on the person's attitude and perception, issues pertaining to DTES are analysed in favour of his or her attitude. This study sought to assess teachers' perception and attitude towards the implementation of the DTES in the Upper Denkyira East Municipality.

The objectives of the study included teachers' perception on the double-track system, teachers' attitude towards the implementation of the double-track system and the correlation between the socio-demographic characteristics of the respondents and their attitude towards the implementation of the double-track system in Upper Denkyira East Municipality. The study provided a platform for teachers to state their perception and attitude towards the implementation of the double track system. The findings of the study have informed the policy

makers on how to make the double tract system a success. Again, findings of this study have helped to know whether these teachers understand the new system themselves. Lastly, this study has served a significant reference to other researchers who want to do their research on teachers' perception and attitude towards the double track system in different parts of the world.

2. METHODS

2.1 Study Site

Upper Denkyira East Municipal covers a total land area of 501.9sq kilometres, about 17% of the total land area of the Central Region. Dunkwa Municipal hospital is located at the south western part of Dunkwa Township. It covers an area of 3.20hectorers and shares boundaries with Babianiha to the south, Compound to the west, Kyekerewere to the north and Mmradan to the east. The Municipality has 338 educational institutions, comprising 126 Nurseries/Kindergarten, 132 Primary, 77 JHS and 3 SHS. With this number of schools, the percentage of the population within 5 km of a primary school stands at about 87 percent. Two of these Senior High Schools are located at Dunkwa-On-Offin, the Municipal capital. The other one is located at Kyekyewere a suburb of Dunkwa-On-Offin.

2.2 Research Design

The researchers used descriptive survey design with a quantitative approach for the study. Descriptive survey is concerned with conditions that exist, practices that prevail, beliefs and attitude that are held, processes that are on-going and trends that are developing [26]. The descriptive survey design method deals with questions concerning what exists with respect to variables or conditions in a situation [27].

Information is obtained from a sample rather than the entire population at one point in time which may range from one day to a few weeks. This is one of the most commonly used research methods in social sciences, and it is used to gather data from a sample of a population at a particular time [28]. A quantitative research is the systematic scientific investigation of quantitative properties and phenomena and their relationships [29]. The objective of quantitative research is to develop and use mathematical models, theories and/or hypotheses pertaining to natural phenomena.

2.3 Population of the Study

The target population for the study was 178 teachers in the two Senior High Schools in the Upper Denkyira East Municipality. It is postulated that, population of a research study is any group of individuals that have characteristics in common that are of interest to the researcher [5].

2.4 Sample Size Determination

The quality of a piece of research does not only stands or falls by the appropriateness of methodology and instrumentation but also by the suitability of the sampling strategy that has been adopted [30]. To get an appropriate sample size for the study, Yamany's statistical formula was used for the determination of the sample size for this study as follows:

$$n = N / (1 + N(e)^2)$$

n= The required sample size

N= Known population size

1= Constant

e= Standard error (0.05)

With the known population size of 174 teachers, the sample size for teachers was calculated at 124. Stratified sampling method was used to determine the number of respondents from each stratum. The breakdown of the population is shown in Table 1. The significance level was set at 0.05 for the study.

2.5 Sampling Technique

According to a study sample is the set of actual participants that are drawn from a larger population of potential data sources [31]. It is suggested that if the population is a few hundred a 40% or more sample size will do; if several hundred a 20% sample size will do; if a few thousand a 10% sample size will do; and if several thousand a 5% or less sample size will do [32]. It is a basic principle of statistical sampling that a conclusion may be drawn from a large population of data based on a relatively

small sample taken from that data, with a certain degree of statistical confidence.

The lottery method of the simple random sampling technique was used to select the 124 teachers for this study because it allowed participants equal probability of selection and thus avoided bias.

Updated lists of the teachers were obtained from the headmaster of the two Senior High Schools. Numbers were assigned to the individual teachers and written on slips of papers, folded and put in a bowl. Those teachers whose numbers were picked randomly were selected to answer the questionnaire for the study. In all, a total of 124 respondents comprising 124 teachers were selected for the study.

2.6 Data Collection Instrument

An adapted Teachers' Checklist Questionnaire [19] was used as the data collection instrument. A questionnaire is a printed self-report form designed to elicit information that can be obtained through the written responses of the subjects [33]. The information obtained through a questionnaire is similar to that obtained by an interview, but the questions tend to have less depth [34]. Closed and opened ended questions were also used to collect data for the study. The questionnaire was a self-administered tool designed by the researchers. It was a 5-point Likert scale (1= Strongly Agree, 2 = Agree, 3 = Neutral, 4= Disagree and 5 = Strongly Disagree) in which higher score indicate more perceived positive responses.

The questionnaires were structured into three sections in accordance with three research objectives of the study. Section A dealt with the demographic characteristic of the respondents. Section B focused on the perception of teachers on DTES. Section C dealt with the teachers' attitudes towards the implementation of DTES. The use of the questionnaire gave flexibility to respondents to answer the questions at their own time and convenience. The questionnaire included a paragraph explaining the purpose of the study.

Table 1. Proportionate stratified sampling method

School	Population	Sample
Boa-Amponsem SHS	97	97/178*124 = 68
Dunkwa Senior High Technical	81	81/178*124 = 56
Total	178	124

The researchers personally administered the questionnaire to all the 124 respondents. The researchers used five (5) working days for the collection of data from the respondents. They visited the two schools to distribute the questionnaires. The questionnaires were given to the teachers who met the inclusion criteria at the staff common room during break time. Those who were not around were visited subsequently to respond to the questions. Majority of the teachers were able to answer the questions the same day while others answered subsequently but within the five working days.

2.7 Pilot study

A pilot study was conducted to make sure the research instruments were valid and reliable. The purpose for piloting the instrument was to get the bugs out of the instrument so that the respondents in the study area would experience no difficulties in completing the questionnaire and also enable one to have preliminary analysis to see whether the wording and format of questions. The questionnaire was piloted on 20 teachers at Diaso Senior High School which was outside the study area. The purpose of the pilot study was to allow the researchers to make the necessary changes to items which were inappropriate and also determine the level of ambiguity of the questions for the necessary corrections to be made. After the pilot study, some items on political affiliation and tribe such as respondents' political party and kind of tribe were deleted since the respondents were not comfortable with those items which were duly agreed by the supervisor.

2.8 Validity

"The validity of an instrument is the degree to which it measures what it is intended to measure. Content validity refers to the extent to which an instrument represents the factors under study. The relevance of the questionnaire items was established by giving the instrument to the supervisor of this work and other experts in research to scrutinize the items for proper construction [35].

2.9 Reliability

"Reliability is the degree of consistency with which an instrument measures the attribute it is designed to measure. To determine the reliability of the instrument, the questionnaire was administered on the same group of respondents

twice in the pilot study and given two weeks grace period between the first and second tests and the coefficient of reliability from the two data were correlated. The reliability test yielded Cronbach alpha of 0.86, indicating that the questionnaire was reliable. Almost all the items in the questionnaire had multiple scores and therefore, the Cronbach Alpha was considered appropriate to use" [36].

2.10 Data Collection Procedure

Permission was from the Upper Denkyira Municipal Director of Education and the two Headmasters of Boa-Amponsem Senior High School and Dunkwa Senior High and Technical School to carry out the study in their schools. The researchers were given the permission to conduct the study after which they paid a working visit to the target population. The questionnaires were then administered to the respondents upon the approval of the headmasters of the sampled Senior High Schools in the study area.

2.11 Data Analysis Procedure

The data were cleaned with the aim of identifying mistakes and errors which may have been made and blank spaces which were not filled. A code book for the questionnaire was prepared to record the responses. The data were computed using the Statistical Package for Social Sciences (SPSS) software package version 23. The data were analyzed and presented in frequency distribution tables. The correlation between the respondents' socio-demographic characteristics and their attitude towards the implementation of DTES was tested using inferential statistics (correlational analysis).

3. RESULTS

3.1 Socio-Demographic Characteristics of the Respondents

Table 2 shows the socio-demographic characteristics of the respondents. Most of the teachers 45(36%) were aged 43 whilst 21(17%) within the age range of 37-42 years. Also, 102(82%) of the respondents were males where as their female counterparts were made up of 22(18%). An overwhelming majority of the respondents 91(73%) were First Degree Holders with only 6(5%) been Diploma holders. The majority of the teachers 89(72%) were married as against 35(28%) of the teachers who were single. Most of the teachers 61(49%) lived in

their own houses with only 23(19%) who lived in staff quarters. Majority of the teachers 106(85%) were Full time employees whilst just 5(4%) were Part-time workers. Most of the teachers 54(43%) had worked for 6-20 years whilst 14(11%) had worked for 3-5 years.

3.2 Teachers' perception on the Double-Track System

The first objective assessed the perception of teachers on DTES. Majority of the teachers 34(27%) had no idea about the meaning of the double-track system whilst 20(16%) defined it as shift system to make free SHS accessible. Majority of the teachers 89(72%) had their source of information from the media. With Most of the teachers 112(90%) stated that they were not involved in the planning of the double-track system. The majority of the teachers 50(40%) stated that inadequate infrastructure accounted

for the implementation of the DTES whilst the minority 22(18%) also stated that the DTES was implemented so that more JHS graduates could be pushed to SHS. Again, most of the respondents teachers 61(49%) did not know when the DTES was intended to stop.

More than half of the teachers 96(76%) agreed that DTES increased teacher-students contact hours. Out of 96 teachers who responded this particular item, 60(62%) stated that the contact hours have just increased followed by 25(26%) who said it has increased from 40minutes to 1 hour. Out of the 28 teachers who argued that DTES did increase contact hours, 19(67.8%) said that teachers and students did not spend much time in school while 1(6%) said the period for each track was short. On criteria for the inclusion of school in the DTES, majority of the teachers 67(54%) had no idea why their schools were selected to be part of the DTES (Table 3).

Table 2. Socio-demographic characteristics of the respondents

Variables	Frequency (124)	Percent (%)
Age range		
26-30	26	21
31-36	32	26
37-42	21	17
43 & above	45	36
Sex		
Male	102	82
Female	22	18
Educational level		
Diploma	6	5
First degree	91	73
Master's degree	27	22
Marital status		
Single	35	28
Married	89	72
Place of residence		
Staff quarters	23	19
Own house	61	49
Rented apartment	40	32
Employment status		
Full time	106	85
Part-time	5	4
National service	13	10
Work experience		
Less than 2yrs	22	18
3-5yrs	14	11
6-20yrs	54	43
21yrs & above	34	27

Table 3. Teachers' perception on the Double-Track System

Variables	Frequency	Percent (%)
Definition of DTES		
Dividing the year into two semesters, Rotational system of education.	33	27
Shift system to make free SHS accessible.	17	14
Grouping free SHS students into two groups.	20	16
No idea	20	16
	34	27
Source of information		
Mass media	89	72
Education office	15	12
Conference	4	3
The school	16	13
Involved at the planning stage		
Yes	12	10
No	112	90
What accounted for DTES		
Inadequate infrastructure	50	40
To push more JHS graduates to SHS	22	18
Increased in students' population	28	23
No idea	24	20
When the DTES is intended to stop		
7yrs	8	6
5yrs	8	6
Don't know	108	87
DTES increase teacher-students hours		
Yes	96	76
No	28	23
How does it increase contact hours		
Contact hours have just increased	60	62
Hours increased from 40mins to 1hour	25	26
Hours increased from 7:30am to 3:30pm	11	11
How it decreases contact hours		
Teachers & students don't spend much time	19	68
The closing time is the same	2	7
The period for each track is short	1	6
No reason	6	21
Criteria for inclusion of school		
Inadequate infrastructure in the school	29	23
School endowed with enough facilities	10	8
Increased students' population	18	15
No idea	67	54

3.3 Teachers' Attitudes towards the Implementation of the DTES

Most of the teachers 33(27%) disagreed that DTES would compromise on the quality of education in the country whilst 14(11%) were neutral as shown in Table 4. Again, 48(39%) of the teachers disagreed that DTES would harm the educational system whereas 6(5%) of them strongly agreed. Majority of the teachers 41(33%) agreed that government should continue with the double-track system. The

majority of the respondents 58(47%) agreed that DTES would increase students' enrolment. Again, majority of the teachers 44(35%) agreed that the DTES would produce quality students. Most of the teachers 48(39%) strongly agreed more infrastructure should be built instead of DTES. Whether DTES is politically motivated, majority of the teachers 48(39%) disagreed. Furthermore, most of the teacher agreed that DTES would give extra task to them as detailed in Table 4. Most of the teachers 34(25%) disagreed that DTES would improve their

motivation level. Majority of the respondents, 43(35%) agreed that parents' approval was crucial for the implementation of the DTES. Lastly, most of the teachers 32(26%) strongly disagreed to their involvement at the implementation stage of the DTES as shown in Table 4.

3.4 The Association between the Teachers' Demographic Characteristics and their Attitude towards the DTES

Table 5 shows the association between the teachers' sociodemographic characteristics and attitude towards the double-track system. Majority of the teachers 69(55%) and those whose age fell within 43yrs and above 25(18%) agreed that government should continue with the implementation of the DTES as against 32(26.6%) respondents who disagreed with DTES implementation. The difference was statistically significant (p -value=0.000) as shown in table 5. Most of the males 54(41.6%) supported the DTES implementation while few females 15(12.5%) also supported the implementation of DTES. The difference was not significant (p -value=0.683). There was statistical significance between teachers' level of education and the attitude towards the implementation of the DTES (p -value=0.053) as teachers whose highest level of education was first degree were 53(41%) with the least being diploma 6(5%). A significant proportion of the teachers 52(40%) who were married had good attitude towards the DTES implementation. Also there was statistical significance between work experience (p -value=0.001) and the attitude towards the implementation of DTES as detailed in table 4. With no statistical significance, most of the full time teachers 57(44%) had good attitude towards the implementation of the DTES (p -value=0.165).

4. DISCUSSIONS

4.1 Teachers' Perceptions on the Double-Track Educational System

The first objective of the study assessed the teachers' perceptions on the DTES. Majority of the teachers had no idea about the meaning of the double-track system followed by those who defined DTES as "dividing the year into two (2) tracks whilst some students stay in the school others are on vacation" which was statistically significant. Most of the teachers heard of double-

track system from the media. Even though information on double-track system was high, the understanding of DTES was low as confirmed by the number of respondents who could not define DTES. Therefore, it is clear that just perception or information on DTES did not suggest that respondents would have understanding and positive attitude towards the implementation of the DTES though perception is vital in improving the understanding and the rationale for the DTES to have positive attitude towards its implementation. This situation is evident in several studies that if teachers have good perception on DTES and they have positive feelings about any educational system, then they will have the confidence and ability (self-efficacy) to create conducive atmosphere for effective teaching and learning in their classrooms [11].

In Kenya where knowledge on double-shift system was high but negative attitude towards its implementation, this positive perception or information on DTES but low attitude towards its implementation [14]. This might be as a result of challenges teachers encounter whilst implementing DTES couple with inadequate support and inappropriate information they received as a solution to overcome those challenges. This is supported by the study finding where majority both teachers said they were not involved at the planning stage of the DTES. Non-involvement of these major stakeholders in education will bring negative attitude towards the DTES.

Again when the teachers were asked whether the DTES has increased teacher-students contact hours, majority perceived that the contact hours have indeed increased but could not state the exact minutes added to the previous one. However, the minority perceived that the contact hours have been increased by 20 to 30 minutes. These disparities might be due to the fact that though teachers had heard about the DTES they did not have in-depth knowledge to communicate clearly to the public especially parents to accept the new system (DTES). If the public particularly parents are misinformed about DTES they would develop negative attitude towards it and this would lead to low acceptance rate [20].

Ironically, most of the teachers had no idea about the criteria used to select their own schools to be part of the DTES. Most of the teachers said DTES was due to the inadequate infrastructure in the school whilst the majority of the teachers said it's as a result of increased in students' population.

Table 4. Teachers’ attitude towards the implementation of DTES

Statement	Strongly agree		Agree		Neutral		Disagree		Strongly disagree		Total	
	f	%	f	%	f	%	f	%	f	%	f	%
DTES will compromise the quality of education	32	26	28	23	14	11	33	27	17	14	124	100
DTES will harm the educational system	6	5	24	19	19	15	48	39	27	22	124	100
Gov’t should continue implementing the DTES	28	23	41	33	23	19	25	20	7	6	124	100
DTES increases students’ enrolment	48	39	58	47	9	7	5	4	4	3	124	100
DTES will produce quality students	17	14	44	35	23	19	25	20	15	12	124	100
More infrastructure instead of DTES	48	39	39	31	27	22	8	6	2	2	124	100
DTES is political	16	13	19	15	27	22	48	39	14	11	124	100
DTES will give extra task to teachers	20	16	43	35	27	22	26	21	8	6	124	100
DTES improves teachers’ motivation	16	13	29	23	29	23	34	27	16	13	124	100
Parents approval crucial for DTES	16	13	43	35	36	29	18	15	11	9	124	100
Was involved at the implementation stage	24	19	20	16	22	18	26	21	32	26	124	100

4.2 Teachers Attitude towards the Implementation of DTES

Significantly, most of the teachers disagreed that DTES would compromise on the quality of education in the country. Though specific reason was not given in this study however it might be due to the fact that old and new teachers would be teaching the students for both tracks because government did not sack any teacher from his her post. As a matter of fact, most of the teachers were being economical on their response but not the betterment of the educational system simply because they did not want to be seen as being part of a particular section of people. This finding correlates with a study [20] stating that, no matter the track of students, teachers must be ready to teach what they are supposed to teach.

Furthermore teachers should be capable of establishing shared inclusive values like high expectation of all students [21]. Educationist should always be able to stand for the truth rather than parochial and selfish interest. Teachers’ attitudes play a significant role on whether DTES can be effectively implemented in schools or not [15]. It was recommended that teacher’s positive attitudes towards teaching students with diverse educational needs are a

crucial factor for becoming a complete teacher [2].

Attitude is one of the important factors for the successful implementation of DTES [10], hence in order for the school to be an effective DTES; its regular teachers must have positive attitudes towards teaching students with diverse educational needs [4]. Their knowledge and feelings would influence their classroom behaviours which will determine positive students’ learning outcomes [13]. All the aforementioned studies confirm that positive attitude will play a major role in the implementation of the double-track system in Ghana.

Again, with statistical significance, majority of the teachers agreed that government should continue with the double-track system. The early researches conducted in America and other parts of the world show that there are contradictory findings [13]. This means that there are teachers who have positive attitudes and others with negative attitudes. For example the research which was conducted from 1958 to 1995 in United States, Canada and Australia found that two thirds of teachers supported shifting educational system and they were willing to teach students with different education needs and shifts in their classes [18].

Table 5. The correlation between demographic features of teachers and attitude towards the DTES implementation

Variables	Agree n(%)	Neutral n(%)	Disagree n(%)	X ² (p-value)
Age				
26-30	13(10.8)	6(5.0)	7(5.8)	31.759(0.000)
31-36	19(15.9)	2(1.7)	11(9.1)	
37-42	12(10.0)	4(3.3)	5(4.2)	
43and above	25(17.5)	11(9.2)	9(7.5)	
Total	69(54.0)	23(19.2)	32(26.6)	
Sex				
Male	54(41.6)	20(16.7)	28(28.5)	2.242(0.683)
Female	15(12.5)	3(2.5)	4(3.3)	
Total	69(54.1)	23(19.2)	32(26.6)	
Higher Edu certificate				
Diploma	6(5.0)	0(0.0)	0(0.0)	14.202(0.053)
First degree	53(40.8)	14(11.7)	24(20.0)	
Masters' degree	10(8.3)	9(7.5)	8(6.7)	
Total	69(54.1)	23(19.2)	32(26.6)	
Marital status				
Single	17(14.2)	7(5.8)	11(9.1)	3.006(0.544)
Married	52(40.0)	16(13.3)	21(17.5)	
Total	69(54.1)	23(19.2)	32(26.6)	
Residence				
Staff quarters	10(8.3)	4(3.3)	9(7.5)	11.780(0.153)
Own house	36(30.0)	10(8.3)	11(9.2)	
Rented apartment	19(15.8)	9(7.5)	12(10.0)	
Total	65(54.1)	23(19.2)	32(26.6)	
Employment Status				
Full time	57(2)	20(16.7)	29(24.1)	9.782(0.165)
National service	12(6.7)	3(2.5)	2(1.7)	
Total	69(54.1)	23(19.2)	32(26.6)	
Work experience				
Less than 2yrs	11(9.2)	6(5.0)	5(4.2)	31.164(0.001)
3-5yrs	4(3.3)	4(3.3)	6(5.0)	
6-20yrs	40(30.0)	5(4.2)	9(7.5)	
21yrs and above	14(11.7)	8(6.7)	12(10.0)	
Total	69(54.1)	23(19.2)	32(26.6)	

The studies carried out in Illinois and California concluded that teachers had positive attitudes towards the shifting educational system [3]. In the same line study conducted in Malaysia revealed that the majority of the teachers supported the shifting system [9]. The aforementioned studies are in line with this study where classroom teachers have positive attitude towards the DTES. With regards to funding the free SHS, teachers argue for partnership between parents and the government to get parents to take some responsibilities in their wards education. Some teachers however, are lauding the free SHS program but fears the

double-track system could erode the sustainability of the free education policy.

4.3 The association between the teachers socio-demographic characteristics and attitude towards DTES the implementation

In this study, teachers aged 43 years and above had good attitude towards the implementation of the double-track system which was statistically significant. The age of the teachers was linked to their working experience which was also significant. These findings may be due to the fact that these teachers have spent many years in the

educational sector and know the various challenges faced by the sector after the introduction of the free Senior High School. This is contrary to a study conducted where perception and selection of teachers to teach in any shift did not depend on age or experience of the teacher; it was purely based on random selection to blend teachers of all age groups [20]. This implies that both teachers with positive and negative attitude towards the shifting system worked together to achieve common goal.

The results again revealed that, most of the respondents could not express their full understanding of the information that was given to them as they were unable to define DTES appropriately. Respondents could not state what accounted for DTES, when DTES was intended to stop and the criteria used for the selection of the DTES schools in the Municipality.

Marital status of the respondents was not significantly associated with teachers' attitude towards the implementation of the double-track system. This might suggest that, teachers share similar characteristics on educational reforms irrespective of their gender. However, some female teachers are of the view that the long vacation that comes with the semester-based double-track system could cause students to engage in vices as the devil finds a job for idle hands. Many parents cannot finance extra tuition for their wards, internet fraud, teenage pregnancy among others are likely to be on the ascendency during the long vacations [5].

This finding is in sharp contrast with a study where most of the males supported the shifting system as against their female counterparts [17]. The female were of the view that it was going to give extra work and would not have time for their families. Examining the DTES critically, it offers different teachers for each track thereby relieving teachers of stress and extra workload. More teachers have been added to the DTES schools to improve teacher-students ratio for quality education and academic performance.

4.4 Limitations of the Study

The study had the following limitations: The study was done in Upper Denkyira East Municipality only. Due to this, the sample was not statistically representative of the whole country (Ghana) therefore the findings could not be generalized to other parts of the country; however it could be

applied in the areas which have the similar geographical and demographic characteristics.

Although the findings of this study could reveal participants both positive and negative attitudes towards DTES, it should however be interpreted with caution because it could be possible that the findings of this study were influenced by factors for example: Lack of awareness, good working environments, support from government and many other factors.

Again, it was very challenging to investigate teachers' perception and attitudes towards the DTES. This is because the DTES seems to be complex and new to most of participants. Again most of the respondents were unwilling to give out certain information concerning the DTES because they thought it has political influence.

5. CONCLUSION

It was evident that majority of the respondents had been exposed to DTES information; however they did not understand DTES in detailed. This was realized as most of the respondents could not give the standard definition of the double-track system. Again, most of them did not even know when the DTES would stop, the criteria government used to select their schools and whether or not DTES would increase teacher-students contact hour they had no idea about that. It is true that exposing people to just information does not guaranteed their understanding. This study concludes that teachers did not have in-depth knowledge on the DTES. On attitude towards the implementation of DTES, the study concludes that teachers have positive attitude towards the implementation of the double-track system.

Significantly, there was statistical relationship between socio-demographic characteristics such as; age and work experience of the teachers and the attitude towards the implementation of DTES. On the contrary, socio-demographic characteristics such as highest educational certificate, marital status, residence, employment status were not statistically significant with the attitude towards the implementation of the double-track system. This concludes that sociodemographic characteristics of teachers can affect their attitude towards the implementation of double-track system.

6. RECOMMENDATIONS

- i. The Municipal Directorate of Education must continue with education on DTES

- and further extend it to the churches and the mosque in the Municipality to enhance people's perceptions on the system.
- ii. Ghana Education Service in the Municipality should organize seminars for teachers to boost their perceptions towards the implementation of the DTES.
 - iii. District and circuit supervisors should intensify education on double-track system in their districts and circuits for successful implementation.
 - iv. Further studies should be carried out on the impact of double-track system on students' academic performance.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

CONSENT

As per international standards or university standards, respondents' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standards or university standards written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
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