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Patronage of Educational Broadcasts and its Effects on Academic Growth of Students of Winneba and Apam Senior High Schools in the Central Region of Ghana.

Daniel Yelkpieri

Wilson Esia-Donkoh Kweku

Kwesi

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Introduction

More than ever before, educators are seeking innovative ways to improve students' achievement, promote quality teaching, reduce cost and motivate students. Educational leaders, from heads to directors, are all working harder than ever to become more effective at managing change and innovation in the "Digital Age". Today, the large collection of media-rich teaching and everything from educational broadcasting is a good recipe for quality education.

Sound broadcasting as it is also known is the "type of audio device for teaching in a whole country or state or region as a supplement to what the teacher may teach in class" (Tamakloe, Amadahe and Atta, 2005:75). Tamakloe et al noted that sometimes the subject that is "broadcast may be new to both teachers and students". They observed that educational broadcasting to "schools have been on and off" in Ghana. Educational broadcasting to schools started in the "early 1960′s and continued to the early 1970′s" when it ceased (Tamakloe et al.,2005:75). It is noted that "broadcasts were limited to urban centres" because "rediffusion boxes which worked on electricity" could only be operated in urban areas at that time (Tamakloe et al., 2005:75). In order to ensure effectiveness "the broadcasts were time tabled, follow-up discussions were held and workbooks were used by the students" (Tamakloe et al., 2005:75).

It must be pointed out that "the use of the television for teaching began in July 1993 in Ghana" and the senior secondary schools' students were the "target groups" (Tamakloe et al., 2005:77). These broadcasts were presented outside school hours and the subjects involved were "mathematics, biology, physics and chemistry" (Tamakloe et al., 2005:77). This is what is referred to as "Science and Maths Quiz" today which is telecast on Saturdays at 11:15 am to 12 noon.

It is in this light that the government of Ghana has introduced the Distance Learning Programme, that is, "Presidential Special Initiative" (PSI) to complement the already exiting educational broadcasts such as "Science and Maths Quiz" and "Every Day English" on television and radio respectively by the Ghana Broadcasting Corporation (GBC).The government White Paper on the report of the education reform review committee revealed that government will sustain and expand the PSI on Distance Learning currently featured on Ghana Television (GTV) to cover other subjects in the school curriculum (Ministry of Education Youth and Sports, 2004).

To ensure quality education, prudent educational policies and programmes have been put in place in order that quality education for all children in every corner of the country is realized through the use of the mass media. This is done mindful of the inequalities in educational provision in different parts of the

country as a result of lack of personnel, logistics and problem of accessibility to certain parts of the country.

The use of the television and radio enable the Ministry of Education to transmit important educational programmes to all corners of the country to aid teaching and learning, even in the most deprived areas in Ghana.

Statement of the Problem

All over the world educational broadcasting has been embraced as an instructional technology to complement normal classroom teaching and learning processes. This is based on the premise that "the British system of educational broadcasting was widely studied and used as a model in many countries" (Cain, 2009:2). Educational broadcasts aid schools which have limited number of teachers to take advantage of the programme to provide lessons for less endowed schools and supplement instructions of well endowed schools in the urban areas where teachers and other logistics are available. This is evidenced in the words of Cain when he said:

…radio had great potential in both formal and informal education by adding to what teachers could provide, reaching isolated groups of learners, filling in for non-existent teachers…

(Cain, 2009:2)

Teachers through educational broadcasts can guide their students to learn new lessons and revise what they already know. The government of Zanzibar introduced television in 1972 mainly for educational purposes and not for leisure (Agu and Hamad, 2000). To achieve that objective, "the government ensured that television sets were affordable to many people by making them custom duty free".

In Ghana, the government's policy on educational broadcasting is a laudable one but need to be supported to ensure its success. In deprived communities, where the schools lack teachers in certain subject areas, volunteer teachers and other teachers can stand in to guide students during educational broadcasts. Children in such deprived communities will benefit from teachers with special knowledge in certain subject areas which are technical in nature in which the school lacks teachers. On the other hand such presentations could be recorded and played back to students later.

This method also helps to reduce the problem of teaching learning materials constraints that most of our schools in Ghana have to contend with. In spite of all these benefits that educational broadcasting presents to schools, the question that arises immediately is that "to what extent do students and schools in Ghana actually patronize educational broadcasts?"

Purpose of the study

The research sought to investigate how best teachers and students are utilizing educational broadcast on our national television and radio and the challenges associated with them.

Specific objectives

This study was expected to meet the following objectives at the end of the study:

1. to identify the types of educational broadcasts on television and radio that actually benefit students.
2. to identify which type of educational programme is patronized most by students and why?
3. to examine possible reasons or impediments that prevent students from benefiting from educational broadcasting.
4. to identify the type of arrangements put in place by the schools to ensure that students benefit from educational broadcasts.
5. to ascertain whether educational broadcasts on national television and radio complement teachers' efforts in the teaching and learning processes.

Research questions

The study was based on the following research questions:

1. Which type of educational broadcasts on television and radio actually benefit students?

2. Which type of educational broadcasts is patronized most by students and why?

3. What possible reasons or impediments prevent students from benefiting from educational broadcasting?

4. What types of arrangements are put in place by the schools to ensure that students benefit from educational broadcasts?

5. How does educational broadcasting on national television and radio complement teachers' efforts in the teaching and learning processes?

Significance of the study

This study may provide important information on educational broadcasting with respect to the level of patronage and suitability of time of presentations and other impediments to policy makers and other relevant stakeholders of education. It would also serve as a source of literature for student researchers.

Review of Relevant Literature

Educational broadcasting is usually television and radio "programming" that provides educative information "related to courses of study" (Mcnulty, 2009). Mcnulty further explains the term "educational" to apply "at times to other programs that are particularly enlightening, informative, or intellectually stimulating" (Mcnulty, 2009). This implies that it may not necessarily be a subject or course taught in the classroom but any piece of information that enlightens an individual or a group of people. It is noted that "educational broadcasting can be received" in one's "home or in an educational institution" (Mcnulty, 2009).

Historical Background

"Pioneers of wireless telegraphy (radio)" such as James Clerk Maxwell, a British physicist, Heinrich

Rudolf Hertz, also a German physicist and later Guglielmo Marconi, an Italian who took the technology to "the most significant steps" by "combining technical inventiveness with business acumen" (Hendy 2009, and Cain, 2009:1.

Educational broadcasting was introduced as a new instructional technology in 1922 through the use of "wireless" by the British Broadcasting Company which later became the British Broadcasting Corporation (BBC) (Cain, 2009:1). This idea of educational broadcasting was initiated by John Reith, "a public service broadcaster" whose main purpose was to "educate, inform and entertain" (Cain, 2009:1). In order to ensure the success of this project, he "set up the first National Advisory Committee on Education in 1923″ (Cain, 2009:1). He was "appointed a Director of Education", and "a school inspector". In 1924 he wrote an article in the BBC's programme listings magazine the *Radio Times*, proposing a Broadcasting University" (Cain, 2009:1).

The new instructional technology was started as an "experimental broadcasts to schools" in Glasgow and London in 1924 and in the later part of the year "regular secondary school and adult education broadcasts" had taken firm roots (Cain, 2009). As this new instructional technology became more popular, "education officers were appointed to liaise with the educational world and to advise on policy" (Cain, 2009:1). This really underscores the potential of educational broadcasts and the need to harness it. Later development necessitated that "Separate Advisory Committees for Schools and Adult Education" were established. However, in the case of Adult Education "a Group Listening movement was encouraged" (Cain, 2009:2). It was noted that in the 1930s "the whole system flourished" as most of the subjects on the school curriculum were treated". Through this medium Mathematics was noted to have received special interest from beneficiaries (Cain, 2009:2).

A study carried out by Agu and Hamad (2000) in Zanzibar revealed seven television programmes were available to be watched by students at home. This method provides equally good instructional opportunities to all schools.

Following the success story of educational broadcasting, new ways of learning were initiated which emphasized "a more imaginative, child-centred approach" (Cain, 2009:2). Programmes such as "Gaelic and Weish which were hitherto not taught through this medium were introduced for children in Scotland and Wales"(Cain, 2009:2). Before this period, "it was not thought appropriate to make broadcasts for younger pupils" (Cain, 2009:2). However, following "improved broadcasting practices" which used "drama and music in place of straight "talk", such broadcasting easily became successful later in the decade (Cain, 2009:2). Subjects likes "history and foreign language teaching series" were noted to be the "favourites" of beneficiaries (Cain, 2009:2).

In Canada, the Canadian Broadcasting Corporation (CBC) was the "most active organization in producing and broadcasting educational radio programmes" in 1936 (Mcnulty, 2009:1). The educational programmes broadcast included "programmes for preschool and school-age children".

The Impact of Educational Broadcasting

Educational broadcasting as an instructional technology has contributed immensely to teaching and learning the world over. This is based on the fact that "the British system" was "widely studied and used as a model in many countries" especially among commonwealth countries and "in more distant countries, such as Japan" (Cain, 2009:2). This implies that this instructional technology was widely

accepted and it is still very useful in this present era. The potential of radio as a medium of instruction in "both formal and informal education" was far reaching because it added "to what teachers could provide, reaching isolated groups of learners, filling in for non-existent teachers, and acting as an agent of in-service training" (Cain, 2009:2). Besides these, "radio schools" were adopted in "countries with dispersed and remote populations", a particular example is the "School of the Air in Australia, where two-way radio supplemented correspondence courses" (Cain, 2009:2).

In spite of the disruption of life by the "World War II in Britain" school broadcasting still made a tremendous impact to the extent that "by 1945 some 2,000 more schools were using the service than in 1939, with 30 weekly series offered" (Cain, 2009:2).

Educational broadcasting made subjects like "music, drama, arts crafts, civics and current affairs" more popular (Cain, 2009:2).

As pointed out by one headmistress "educational broadcasts became an anchor for teachers" who were seen as "lifebuoys in a queer, turbulent, scholastic sea" (Cain, 2009:2). Meaning educational broadcasting really served as a good medium for revision for teachers who were found wanting with their teaching jobs.

By the middle of 1960s "a comprehensive system of school broadcasts" was provided by "the BBC and an Independent Television (ITV), which had started school television just ahead of the BBC in 1957″ in Britain (Cain, 2009:2). A new television station known as "Channel 4″ launched in 1982 began "school broadcasting for commercial television" (Cain, 2009:2). It was observed that "the visual medium added a new dimension to learning" and more especially in the teaching and learning of mathematics which "became a successful subject for educational broadcasting, helping pupils and teachers to deal with the "new maths" ", which was much talked about in the news (Cain, 2009:2).

Later, other social educative programmes such as language teaching, science, history, adult education were broadcast to "address social issues such as parenting, old age, illiteracy, and unemployment" which was dubbed "Social Action broadcast" (Cain, 2009:3).

The success story of educational broadcasting worldwide in 1969, was a significant move made in the "United Kingdom with the setting up of the Open University (OU)" (Cain, 2009:3). The OU system worked hand-in-hand with the "practice of correspondence learning, a well-proven distance learning technique, with educational broadcasts" (Cain, 2009:3). This became possible "by an alliance with the BBC, which created a department to provide the radio and television programmes" (Cain, 2009:3). The radio or "transistor" is noted to have assisted "many more people, especially in developing countries where teachers were scarce; stereo sound; black and white television, followed by colour television" were used in the teaching of: subjects such as natural history and geography; improvements in recording techniques, cassetting, and disc recording (CD-ROMs); and the growth of transmission systems, such as cable and satellite, resulting in much-increased coverage.

(Cain, 2009:3).

Methodology

Research design

The researchers adopted a descriptive survey. This design enabled the researchers to sample views from a wide range of the population, which were students and heads of departments in the schools concern. The descriptive survey allowed the researchers to present their findings in a convenient, usable and understandable form by using frequency count, means, standard deviations and also describing the phenomenon under study.

Population, Sample and Sampling Procedure(s)

The population of the study included all teachers and students in senior secondary schools in Ghana. For convenience, the researchers selected two senior high schools (SHS) in the Central Region of Ghana. The target population of the study was about 3250 students and teachers.

The sample size of the study was 310 respondents which consisted of 300 students and 10 heads of departments. The stratified random sampling technique was employed in selecting student respondents because they were in different forms (SHS 1, 2 and 3). It is always “advisable to subdivide the population into smaller homogeneous groups” in order to “get more accurate representation” (Best and Kahn, 1995). In the light of this, each form was taken as a stratum from which a number of respondents were selected based on proportional representation. In each form, students were given codes (numbers) and these codes were written on pieces of papers and put in a box. The box was turned over and over again to ensure that these pieces of papers were well mixed to guarantee that each student had an equal opportunity of being selected. An independent person was asked to pick a piece of paper at random from the box and the students whose numbers were picked were identified and made to participate in the study. Purposive sampling procedure was also employed to select the heads of departments to respond to the questionnaires. Heads of departments were purposively selected to participate in the study because as heads they plan all activities in the department with their colleague teachers. Based on this, they were the right people to participate in this study.

Research Instrument(s)

The study employed questionnaires and direct observations to collect information about the study. The questionnaires were made up of checklists, close-ended and open-ended questions. The content and face validity of the instruments were assessed by colleague research fellows at the Centre for Educational Policy Studies, in the University of Education, Winneba, and their comments and suggestions were noted.

Findings and Discussions

The data is presented using descriptive statistics such as percentages, cross tabulations, means and standard deviations. The presentation of the findings was done according to the research questions in the order in which they were presented earlier.

Before the main findings are presented the bio-data of student respondents will be presented with respect to their gender and forms.

Table 1 shows the number of respondents who actually responded to questionnaires which were given to them. Out of the 310 questionnaires, 297 were retrieved. This was made up of 151(50.8%) males while females constituted 146 (49.2%) of the participants.

Table 1.

Gender Distribution

Gender	Number	%
Male	151	50.8
Female	146	49.2
Total	**297**	**100**

Source: Field data (2010)

Data from Table 2 show that 106 (36.9%) SHS1 students in the senior high school (SHS1) participated in the study, While 100 (34.9%) and 81(28.2%) SHS 2 and 3 students respectively took part in the study. This means more form one students participated in the study than other students in other forms.

Table 2.

Forms of Students

Form	Number	%
SHS 1	106	36.9
SHS 2	100	34.9
SHS 3	81	28.2
Total	**287**	**100**

Source: Field data (2010)

Research Question 1:

Which type of educational broadcast on television and radio actually benefit students?

In response to the question students indicated the types of educational broadcasts that benefit them most as grouped according to the media (television and radio).

Data in Table 3 show that 256 (89%) of the respondents indicated that they benefited most from the “Science and Maths Quiz” while 248 (86%) also watched Distance Learning Programme which is a Presidential Special Initiative (PSI) telecast from 4 pm to 6pm from Monday to Friday on selected subjects to help students in second cycle schools. The Basic school version is also presented earlier in the morning from 10 am to 12 noon. On the other hand, 195 (68%) expressed the view that “What do you know?” a quiz contest shown on Ghana Television and also aired on Radio Ghana was helpful to them. The findings in the present study is in agreement with a similar study carried out by Agu and Hamad (2000:79) which found that “the secondary school students were found to be more interested in the programmes related to their academic work”. Farrant (1980:335-336) observed that “special

broadcasting units responsible in most countries for the programmes produced for schools, have worked hard to make their programmes match the needs of pupils in primary and secondary schools and also students teachers' colleges".

However, other students indicated "children's channel", "smart kids" and "It Takes Two" as some of the education related programmes that were useful.

Table 3.

Educational Broadcast on Television

Programme	Number	%
Science and Maths Quiz	256	89
Distance Learning Programme	248	86
What do you know?	195	68

Multiple choice: N=297

Source: checklist

With respect to programmes on radio, 237 (83%) were of the opinion that 'Everyday English' was beneficial and so they listened to it. 'Everyday English' is an educational broadcast on Radio Ghana in the mornings at about 6.30 am to 6.45 am. Again, 195 (68%) of the respondents also indicated that they listen to "what do you know?" a quiz contest on general knowledge also shown on Ghana Television (GTV). This programme is also presented on Radio Ghana concurrently. The findings from this study supports Agu and Hamad (2000:78) when they indicated that the radio is "a potentially very important tool for improving education…"

Research Question 2:

Which media type of educational broadcast is patronized more by students and why?

In the researchers' attempt to investigate which media type is most patronized by students, the following results came out as can be seen from Table 5.

Table 4.

Patronage of Educational Broadcasts on Television and Radio

Media	Number	%
Television	178	62
Radio	10	4
Both (Television and Radio)	93	32

Source: checklist

Results from Table 4 reveal that 178 (62%) of the respondents patronized educational broadcasts on television more than on radio. In line with this finding Hesmondhalgh (2009:1) observes that in spite of the advent of new technology like the World Wide Web TV still "remains one of the most important forms of mass communication of the 21st century". On the contrary, Farrant (1990:334-335) notes that "radio is the cheapest of the audio media used in schools and therefore tends to be the most common". However, 93 (32%) of the respondents indicated that they patronized educational broadcasts on both media.

The following reasons were given for the preference for television or radio:

1. Television

Respondents' reasons for patronizing television broadcasts are as follows:

- It encourages me when I see young people performing.
- The questions are presented on the screen and that gives students clear idea of the question.
- The television has the advantage of providing both audio and visual signals.
- Programmes on televisions are more colourful because they have live pictures.
- Answers to questions can be seen on the screen of the television.
- An educational broadcast like distance learning programme cannot be taught on radio because it involves calculations and practical activities which cannot be done on radio.
- Educational broadcast on television is live and if it involves calculations one will know how to do it well by following the procedures.
- Students patronize television programmes because, for instance, if something is mentioned on radio one may not hear the word properly, but on television one can at least read the lips of the presenter.
- Students are able to determine whether schools are performing better than what they are doing in their schools.
- Television makes educational broadcast interesting and clearer. For example, in the Distance Learning Programme ("Presidential Special Initiative") questions are solved in a live classroom which bring better understandings, and

The television makes one feel being part of the programme when watching and participating at the same time. **(Source: responses from student respondents)**

In the opinion of Talabi (2004:2) "instructional television can serve as one of the best media for teaching any subject in the school because it uses pictures and sounds".

2. Radio

The following are the reasons why respondents patronize radio broadcasts:

- It is not everybody who can afford television because it is expensive than radio.
- Some people do not have access to televisions or electricity however, they can easily use radios with batteries.
- One can listen to radio whiles doing another thing which saves time.
- Radio is portable to carry anywhere and one can listen to any programme no matter where you are, and

There are more educational programmes on radio than on television. **(Source: responses from student respondents)**

Farrant (1980:366) observes that "radio offers a ready-made medium for reaching far more people than could possibly be achieved by conventional schooling, and is also a useful medium for supplementing education in the schools". This idea is shared by Talabi (2004:2), when he indicated that instructional radio means organized transmission of radio programmes to supplement other information got from textbooks and the teacher".

In order to ascertain which of the programmes students prefer most they were given the opportunity to rank the programmes from first to fourth as shown in Table 5.

Table 5.

Students' Preference for Educational Programmes

Programme	Rank	1st	2nd	3rd	4th			
Weight	4	3	2	1	WM		SD	Ranking
Science and Maths Quiz	142	101	35	8	3.32		1.82	1st
Distance Learning Prog.	104	77	69	35	2.88		1.70	2nd
What do you know?	22	64	83	111	1.96		1.40	3rd
Everyday English	17	42	94	130	1.81		1.35	4th

Source: Field data (2010)

The data from Table 5 show that respondents prefer science and maths quiz to all other educational programmes and the least ranked among them is "Everyday English". The standard deviations shown on Table 5 reveals that science and maths quiz, distance learning programme, "what do you know?" and "Everyday English" had values more than 1 which implies that the responses were more homogenous and scattered. This simply means that even though science and maths quiz was rated the highest showing respondents' preference for it, it also means that distance learning programme, "what do you know?" and "Everyday English" were equally popular among respondents.

An attempt to investigate the students' perception of the benefits they derived from educational broadcasts generally resulted in these findings as presented in Table 6.

Table 6.

Students' Perceptions of the Benefits Derived from Educational Broadcasting

Benefits	Responses							
	SA 5	A 4	NDNA 3	DS 2	SDS 1	WM	SD	I
Educational broadcast helps me to utilize my free time well.	195	71	7	8	3	4.57	2.14	A
Educational broadcast enables me make up for lessons I did not understand or learn in my class.	132	106	17	25	5	4.18	2.04	A
Educational broadcast enables me learn new things.	213	64	2	0	1	4.75	2.18	A
Educational broadcast provides an equal opportunity to all students irrespective of ones location.	91	81	41	39	30	3.58	1.89	N
Educational broadcast provides a good opportunity for the revision of my lessons.	116	105	23	31	9	4.01	2.00	A
Mean of means = 4.22						**Standard deviation = 2.05**		

Source: Field data (2009)

Key to Table 6

SA = Strongly agree, A = Agree, NDNA =Neither disagree nor agree, DS =Disagree, SDS =Strongly disagree, WM =Weighted mean,

SD =Standard deviation, I =Interpretation

Interpretations of weighted means

5 =Strongly agree, 4.0-4.9=Agree, 3.0-3.9=Neither disagree nor agree, 2.0-2.9=Disagree, 1.0-1.9=Strongly disagree

The data from Table 6 show a weighted mean of 4.75 and a standard deviation of 2.18 which indicates that respondents agreed that educational broadcasts enabled them learn new things. This means that students were able to acquire new knowledge through educational broadcast. Again, a weighted mean of 4.57 and a standard deviation of 2.14 also imply that respondents were of the view that educational broadcasts helped students utilize their free time well. The results further reveal that respondents were neutral to the opinion that educational broadcast provide an equal opportunity for all students irrespective of their location. This is indicated by a weighted mean of 3.58 and a standard deviation of 1.89. This findings is not in line with Cain's observation that educational broadcasting is capable of "reaching isolated groups of learners, filling in for non-existent teachers" (Cain, 2009:).This means that they were not sure if all students have access to educational broadcasts irrespective of their location.

Overall, a mean of means of 4.22 and a standard deviation of 2.05 reveal that generally respondents were of the opinion that educational broadcasts benefit all students. This agrees with Cain (2009:2) when he indicated that educational broadcasting helps "pupils and teachers".

The standard deviations as indicated in Table 6 show that the least value was 1.89 and all others were 2.00 or more, signifying that the responses were more homogenous and scattered from the mean. This therefore implies that all the benefits outlined in the table were known and accepted by respondents to some extent.

Research 3: What possible reasons or impediments prevent students from benefiting from educational broadcasts?

In trying to answer this question the researchers wanted to know in the first place if students have access to equipment such as television and radio to afford them the opportunity to avail themselves of the educational broadcasts. The question on the availability of equipment at school and home for students to benefit from the programmes either at school or at home is presented in Table 7.

Table 7.

Availability of Equipment at School or Home

Type of Equipment	**Frequency**	**%**
Television	107	37.3
Radio	26	9.1
Both (Television and Radio)	144	50.2

Source: checklist

The data from Table 7 reveal that 107 (37.3%) of the respondents had access to televisions, whilst 26 (9.1%) indicated that they also had access or owned radios. Meanwhile, 144 (50.2%) of the respondents indicated that they had access to both televisions and radios. A close look at the data reveal that there are some inconsistencies with the responses provided by respondents, because initially 107 (37.3%) indicated that they had access to televisions but when the researchers wanted to know those who had access to both televisions and radios 144 (50.2%) indicated that they had access to both. In a similar way, 26 (9.1%) of the respondents revealed that they had access or owned radios yet when the researchers wanted to know those who had both, 144 (50.2%) pointed out that they had access to both televisions and radios. This means that some respondents had access to televisions and radios to enable them watch and listen to educational broadcasts. It can however, be conjectured that these facilities were not their personal asserts. This implies that generally, respondents had access to facilities that enabled them to watch or listen to educational broadcasting.

On the other hand, when the researchers tried to investigate if respondents had time to watch or listen to educational broadcasts without much difficulty, it was found out that 163 (57%) indicated that they had time to watch or listen to the programmes. However, 118 (47%) were of the opinion that they had problems getting time to watch and listen to educational broadcast.

The reasons respondents gave for not getting time to patronize educational broadcasting are as outlined below:

- household chores
- church activities
- educational broadcast clashes with school activities, eg. Grounds work, general cleaning

- power interruptions/power outages
- social gathering in school
- educational broadcasts are telecast during school hours, and
- running of errands.

(Source: responses from student respondents)

This implies that respondents at least had good reasons for not making time to watch and listen to educational broadcasts. School activities and the time of the broadcasting were not conducive for students especially the Distance Learning Programme which clashes with afternoon classes.

The researchers' investigation further revealed that the main impediments that prevented the schools for making any arrangements for students to benefit from the lessons were:

- Time for educational broadcast is not suitable for the schools because it is presented during afternoon classes time, and
- General cleaning and inspections sometimes coincide with the "Science and Maths Quiz".

(Source: Responses from heads of department)

Research Question 4:

What types of arrangements are put in place by the schools to ensure that students benefit from educational broadcast?

On the question as to whether the schools had put any arrangements in place for students to benefit from the educational broadcasts, it was realized that 83 (29%) of the respondents responded 'yes' to the question while 189 (66%) indicated 'no'. Meanwhile, 15 (5%) of the respondents did not answer the question at all. This gives the impression that more students do not get time to watch and listen to educational broadcasting.

However, when student respondents were asked to indicate the type of arrangements put in place by the schools to enable them watch and listen to the programmes these responses were recorded:

- No arrangements are made by the school for us to benefit.
- We are allowed to watch science and maths quiz at the library.
- We take our note books and pens to solve problems we know on our own.
- We share ideas and sometimes debate on answers.

(Source: responses from student respondents)

On the other hand, when the heads of departments were asked the kind of arrangements the schools made to ensure that students benefited from educational broadcasts, the responses were:

- Educational programmes are recorded and played back to students.
- No arrangements are made for students but some students watch them.
- Television is usually kept in the dining hall or library for students to watch the “Science and Maths Quiz”.

(Source: responses from heads of departments)

When the researchers probed further to know the types of educational programmes usually arranged for students, the following programmes were listed:

- “Science and Maths Quiz”.
- Evening television news.
- Documentaries or video clips on educational issues or subject related documentaries such as wildlife.

All the responses provided by both students and teachers point to the fact that no special arrangement were made for students to benefit from educational programmes on televisions and radios. Our investigation and observation revealed no arrangements are made for students to watch and listen to educational broadcasts on regular basis except when the schools were competing on the “Science and Maths Quiz”. Thus, participating students were made to watch and listen to educational broadcasts to prepare themselves for their turn.

Research Question 5: How does educational broadcasting on national television and radio complement teachers’ efforts in the teaching and learning processes?

In an attempt to answer this question ten heads of department views were sought. Generally, they thought educational broadcasting was a necessary complement to classroom instructions. This new finding supports Cain (2009:2) assertion that radio had a great potential in both formal and informal education by adding to what teachers could provide”. Reasons raised to back their arguments were that educational broadcasting:

- provides students with first hand information and this is usually exhibited in class.
- enables them make useful contributions in class.
- adds to students’ repertoire of knowledge.
- offers students a variety of presentations and thus making academic work exciting.
- enables students to sharpen their listening skills.
- improves students’ language.
- enables students cover topics which teachers could not teach in the classroom.
- provides opportunities for revision for students, and
- handled by competent teachers.

(Source: responses from heads of departments)

These are strong reasons indeed; it is however left to the schools and students to make good use of these programmes.

An investigation to establish whether there was the need to adjust educational broadcasting to the academic level of students revealed that the “Science and Maths Quiz” has been adjusted to the standard of the senior high school (SHS) students.

Conclusions and Implications

Based on the findings from the study the following conclusions could be made:

- Educational broadcastings on televisions are live and if the lessons involve calculations students who watch these programmes would know how to do it by following the procedures.
- Educational broadcasts such as “Science and Maths Quiz”, Distance Learning Programme, “What do you know?” and “Everyday English” were beneficial to respondents.
- Educational broadcasts on television were more patronized by students.
- Respondents rated ‘Science and Maths Quiz’ as their preferred educational broadcasting followed by Distance Learning Programme.
- Respondents were of the opinion that educational broadcasts enabled them make up for lessons they did not understand or learn in class and also provided opportunities for revision of their lessons.
- Respondents pointed out that what prevented them from benefiting from the educational broadcasts were that the programmes were telecast during their afternoon classes and also usually clash with school activities on weekends.
- Majority of the respondents indicated that no arrangements were made by the schools to ensure that students benefited from the programmes.

The implications that could be deduced from the above conclusions are that:

- Educational broadcasts are helpful to students, especially in schools that are not well resourced in terms of teachers, teaching and learning materials and equipments.
- Ghana Education Service need to make it a policy that all schools should put educational broadcasts on their time-table in order for pupils and all categories of students to benefit from the lessons.
- Considering the level of patronage it is time government expanded the Distance Learning Programme to cover all subject areas in both basic and second cycle schools.
- It also implies that government must provide all schools with television and radio sets in the country.
- Educational broadcasts will enable all schools to have access to quality teaching irrespective

of the schools' locations.

Recommendations

In the light of these findings it is recommended that:

1. All schools should take steps to ensure that they make arrangements for all students to have their turn on educational broadcasts on the distance learning programme.

2. Senior high schools should programme their activities during the weekends such that they do not clash with 'Science and Maths Quiz' so that students can use just one hour to learn from the programmes.

3. Teachers in the various subjects should be tasked to guide students during the lessons. However, such teachers should be paid some allowances by GES since this is an extra responsibility.

4. Government on its part should provide all schools with television and radio sets and all other relevant equipment and materials to ensure the success of the programme.

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