

Social Exclusion of the Deaf in Corporate Television Advertising in Ghana: A Pilot Study

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ABSTRACT Communication barrier is one of the problems for deaf persons with regard to social integration. This paper was conducted to determine the degree to which the deaf community understands corporate television adverts in Ghana and whether inclusion of sign language would improve and enhance their understanding. Using a pretest-posttest design, with a purposively selected sample of 30 deaf students (N=30) and utilised the theory of active viewing, the researchers found that the inclusion of sign language improves understanding of advertisement. Participants were more likely to identify the product being advertised, the corporate body running the advertisement, understand message communicated, and the use of the product advertised when sign language interpreters were embedded in them. The findings provide insight into some exclusion issues in television advertising communication that disadvantages deaf people in society. Embedding sign language interpreters in television advertisement broadens the scope of message clarity and understanding of deaf people.

INTRODUCTION

Scholarly investigations of the audiences for television have been a focal point for researchers since the medium's inception. Yet, perhaps somewhat surprisingly, mass media researchers have largely neglected the deaf audience for television even though deaf persons watch more television than hearing persons (Austin 1984). Nevertheless, many studies that have been conducted on television viewing versus the deaf with the objective of making content understandable have been skewed to how the medium's visual nature aids mainly in educational instruction and entertainment through captioning and/or sign language (Nugent 1983; Jensema 1998; Linebarger 2001; Lewis and Jackson 2001; Downey 2007; Egelston-Dodd and Ting 2007; Burnham et al. 2008; Cambra et al. 2009; Golos 2010; Kushalnagar 2015; Evmenova et al. 2015; Jones et al. 2015).

Television is the second-most widespread medium in Ghana after radio, with about 90 percent penetration. Available reports suggest that

only four million households have televisions, but as families tend to be large and close, this gives most Ghanaians access to television set (The Report 2011). Generally, television is believed to influence the development of cognition, attitudes, and social behavior (Huston et al. 1992), providing complex audiovisual stimulation that communicates stories, events, and ideas. Despite this complexity, there are audio and visual features that occur across almost all types of televised content and remain an important platform for marketing products and services (Schmidt et al. 1999). Ofcom argued that television advertising plays a strategic role for mass market advertisers as a channel to delivering their message swiftly to a *large audience across all demographic groups* (Select Committee on Communication Report 2011). The goal of commercial broadcasting is to deliver an audience to advertisers who then pay for access to the audience by buying airtime from broadcasters to place advertisements for their products (Osei-Hwere 2011) but the unanswered question is, whether the entire society understands the message conveyed through such commercials. It appears that deaf audience who forms an inseparable part of society and buys from the same market are excluded from campaigns for products. This concern calls for the need for the embedding of sign language interpreters and oth-

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er communication elements into corporate adverts to enhance understanding.

Objective

This paper is intended to determine whether the inclusion of sign language into existing corporate television adverts in Ghana would improve and enhance the understanding of the deaf community. The work asked the question: what is the benefit of embedding sign language into television advert for deaf people in Ghana?

Literature

Austin (1984) investigated the motives for viewing television by the deaf and hearing persons and revealed that deaf viewers were more likely than hearing viewers to view television for learning and information purposes. In a study by the National Captioning Institute, they found that 73 percent of deaf people switched to a brand that had television advert captions embedded (Quinn 1995 cf Haller and Ralph 1996). Corina (2012) suggested that the human ability for communication could be modified and not confined to speech and showed that though deaf persons are expected to recognise signs quicker than their hearing counterpart, it is astonishing that they recognise non-language gestures about 100 milliseconds faster than the hearing. Wehrmeyer (2013) conducted eye-tracking studies on deaf and hearing persons and how they view sign language interpreted news broadcast. The study unveiled that deaf viewers were more attentive to the embedded interpreter and access picture material secondarily, but sub-titles or lip-reading is given very little attention. Gernsbacher (2015) assessed the merits of embedding captions into motion pictures and observed that subtitling benefits everybody in society noting that such video format is ideal “for persons watching videos in their non-native language, for children and adults learning to read, and for persons who are deaf or HOH [Hard of Hearing]”. Using a sample of 22 children composed of equal numbers of deaf and the hearing, Cambra et al. (2014) analysed and tracked the attention participants apportioned concurrently to the visual (graphics and sub-titles) and audio (spoken language and background sounds) components of the content of television cartoons as they watch these programmes. They noted that

both participants focused more attention on images compared to captions. In a similar study, Kacorri et al. (2014) evaluated and measured the perception of facial expression in American Sign Language (ASL) animations using eye-tracking technique. Participants were exposed to the following stimuli: “(i) videos of human signers (ii) high-quality animations of ASL and (iii) lower-quality animations of ASL”. They showed that significant relations exist between the qualities of stimulus (video) on one hand, and the “proportional fixation time” on the overall facial expression of signers including eye movements. Debevc and Ko•uh (2015) compared two different video whose formats were labeled as: (i) inclusion of sub-titles into a sign language interpreter video and (ii) the same sign language interpreter video without sub-titles to ascertain comprehension levels. Their study unveiled that the latter enhances comprehension of deaf (improved by 24%) and HOH (improved by 42%) video viewers. Sandford (2015) recruited a sample of caption users to assess the impact of the rate of caption display on the enjoyment of television viewing under normal settings. His study revealed that the perceived subtitling rate for regular users tallies with those of voice for the hearing and different content types are ideal at different captioning speeds.

Beyond the above studies, there have been few highlights on television advertising broadcast and the deaf community/persons living with disability. Example, Levi, B&Q, NIKE, Nissan, and Apple Computers featured disable persons and images in their television adverts as a means to ensuring inclusivity but this comes with high profitability motives (Haller and Ralph 2001). For instance, McDonalds in 1986 first aired a television commercial in which it featured college-age deaf students discussing going to McDonald’s in sign language (Dougherty 1986). Furthermore, Lipman (1990) explained that “Deaf people became a popular disability group to depict in television adverts and by 1990 Crest, Citibank and Levi’s had all used deaf actors. In fact, AT&T capitalised on the Academy Award winning actress Marlee Matlin’s fame by using her in some adverts. By 1990, the National Captioning Institute reported more than 200 advertisers were captioning their adverts resulting in 2,600 closed-captioned television spots” (cf Haller and Ralph 2001). Ganahl and Arbuckle (2001) delved into the involvement of persons with physical dis-

abilities in prime time television advertising and noted that persons with visible disabilities were virtually excluded as actors in prime time television advertising based on a comparison with US Census reports. Despite these, the inclusion of persons with visible disabilities as characters in prime time television advertising is still below expectation (Ganahl and Arbuckle 2001) because the prescribed language of communication is missing. The main problem for deaf persons with regard to social integration is the communication barriers they find in the world of the hearing (Cambra et al. 2009). Jensema (1998) observed that the outpouring of televised material for people who are deaf or HOH has raised many questions concerning how well the captions fit their intended audience. Dowey (2007) reiterated that the prospect of making television accessible to the deaf raised the fear of making television unpalatable to the hearing: pitting the numerically small, economically insignificant, and geographically distributed deaf/HOH audience against the large and lucrative mass market of hearing television households. Any solution would need to be a compromise between the public interest (achieving universal media accessibility), and the private interest (reaping the highest rate of advertising revenue for the smallest production cost).

In Ghana, no research to the best of the researchers' knowledge has been done to examine the effectiveness of embedding captions and sign language in corporate television advertising. Recently, the Ghana National Association of the Deaf (GNAD), a representative of the deaf community complained that they are often restricted from participation in socio-political activities as information transmitted through the electronic media is not accessible to them due to the communication barrier (Sackey 2011). However, it should be emphasised that the above concerns were raised at a time that only the state station, Ghana Television (GTV) broadcasts its primetime news embedded with sign language and in other occasions inserted in national advocacy communications like referendum, presidential elections, immunisation and HIV/AIDS campaigns. Even for advocacy broadcasts that are believed to have interpreter embedded, the GNAD came out to complain that they have been left out in the recent public broadcast of court hearing of the 2012 Presidential Election dispute after which an interpreter was embedded into

the broadcast. These concerns, on the other hand, have questioned whether the huge paid-for advertising spend by corporate organisations in Ghana is understood by *all* sections of the society. The deaf community tends to be united through the use of their common sign language which signifies identity symbol, interaction medium and a foundation for cultural knowledge (Baker-Shenk and Cokely 1981; Lombard 2006). Apart from Ghana, deaf people in the Netherlands for instance have argued strongly in favour of verbatim subtitling, claiming that vital information is withheld from them as a result of the summarising process (Schilperoord et al. 2005).

Thus, the embedment of sign language interpreters and other communication tools/ elements into specifically corporate television adverts as a stimulus to ascertain the comprehension level of the deaf community has not been given much attention. The outcome of this paper fills a significant gap in advertising and the corporate world to help influence social integration of the deaf community particularly in Ghana and Africa at large.

Deaf Community in Ghana: An Overview

Deaf education was started in Ghana in 1957 by the legendary African American Deaf missionary Rev. Andrew Foster, Africa's Gallaudet (Oteng 1988) who opened a school for the deaf in the Christianborg Castle in Accra, and which later moved to Mampong-Akuapem, near Adamorobe (Nyst 2007). Support for the deaf in Ghana began in 1959, when the government under Kwame Nkrumah began to support the experimental mission school (Jeff and Grischow 2011) and the state fully took over the school in 1962 from Rev. Foster (Oteng 1988). The manual system through the employment of sign language and finger spelling were the mode of communication in the early deaf school. In the beginning of 1970, it became imperative to build more schools which led to the establishment of Teacher Training College in 1975 to educate teachers for the deaf in Mampong-Akwapim. Moreover, each of the ten regions of Ghana has a deaf school from the basic to Junior Secondary School (JSS) level. With more deaf children enrolled at those schools, it prompted the establishment of vocational secondary schools for the deaf at Mampong-Akwapim and Bechem re-

spectively (GNAD 2012). Currently, there are thirteen deaf schools: two secondary, ten basic/JSS schools and a Teacher Training School (GNAD 2013) in addition to a teacher training programme at the University of Education, Winneba (Oteng 1988). According to GNAD, deaf persons spend extra three years on the academic ladder compared to their hearing counterparts to enable them go through preliminary studies in Ghana.

The GNAD has a registered membership of 6000. It was established in 1968 with the vision to achieve an active and productive deaf community with access to education and information, and steady economic activities that can sustain and maintain quality and security of life (GNAD 2013). In terms of categorisation, the deaf community in Ghana comes in three main groups. The HOH, those who do not use the General Sign Language (GSL) due to lack of formal education and the Adamorobe community, a town with strangely large number of inhabitants attributable to hereditary factors. The Adamorobe Sign Language (AdaSL) was developed by this community and is different from the GSL (Mprah 2013). The exclusion of the deaf from economic, political and social spheres of society stemming mostly from barriers in communication and poor education is a primary problem. Though the deaf community has specific needs concerning communication, there is a lack of recognition and promotion of sign language and many grow up without strong contact with other deaf or hearing people for that matter. Also, many deaf people are poor and suffer a lot of prejudice and discrimination because people believe that they have learning disabilities as well as a hearing impairment. The deaf community is often regarded as unproductive and incapable of contributing in a positive way to society (Ghana Statistical Service 2012).

On the state of deafness as a disability in Ghana, the following is evident. A total of 737,743 persons have some form of disability and this represents 3.0 percent of the population of which hearing and speech disabilities form 0.4 percent respectively (Ghana Statistical Service 2012). The above revelation seems to support the researcher's observation during the interview section that all the deaf interviewees also had speech disability. Without considering the size of deaf communities, industrialisation and globalisation transformations have made it necessary for the interaction between deaf communities and the formation of national and international advoca-

cy bodies to safeguard deaf interests. Examples are the DeafSA and the World Federation of the Deaf (WFD), a UN accredited body. As of the 1980s, the rights of the deaf community have received increasing international recognition and concomitantly, sign language interpreting as accepted profession (Wehrmeyer 2013). Thus, holding the view that the deaf community forms a minority of the consuming populace and their impact is insignificant economically in society is an illusion with respect to accessing market information through television adverts.

Theoretical Framework

The theory of Active Viewing (Anderson and Lorch 1983) served as the theoretical framework to determine the effectiveness of including sign language into television advertisement. The theory of active viewing suggests that individuals are not passive viewers of television, but rather attend to and engage in television programming. It explains that both children and adults actively interpret television content rather than passively been cultivated by it (Gunter 2012). In applying this theory to the current paper, the researchers intend to show that embedding sign language interpreter into corporate television adverts would ensure better comprehension by young deaf viewers as the flow of communication will hold their attention. However, if content becomes redundant or incomprehensible, children return to their other activities. Thus, a reduction in the comprehensibility of the audio portion has a strong effect of reducing visual attention (Anderson and Collins 1988 cf Evra 2004). Also, this paper intends to draw on Wehrmeyer (2013) to also ascertain the fact that embedded interpreters, subtitling and lip-reading impact on young deaf viewers.

METHODOLOGY

Design and Sample

A non-experimental pretest-posttest design was used in this study. This approach allowed the researchers to examine the effect of an intervention, after previously accessing them. A sample of 30 students (N=30) aged between 12 and 17 years with equal number of boys and girls selected from a school for the deaf in the Shama-Ahanta East District of the Western Region of Ghana participated in the study. This teenage group was targeted based on the "pester pow-

er” principle which Procter and Richards coined from pressures that children mount on their parents or adults to buy them goods and services they desire to have after being exposed to them through television adverts. The average child views more television (Gunter 2004). Purposive sampling was employed in this paper because the nature of this work required that only deaf students who understand and use sign language participate in it.

Research Instruments/Data Collection

Television adverts and structured interview questions were used to collect data. Three adverts were selected based on most frequently run television adverts in Ghana from the mobile telephony, banking and consumer goods industries (Commonwealth Network 2012). To ensure that participants were exposed to different television advertising techniques, the three adverts come in the following forms: [advert 1(Ad1) is a commercial from a bank and it employs off-screen narration with subtitling technique. Advert 2 (Ad2) is from a mobile phone company and it uses direct speech. Finally, Advert 3 (Ad3) is from a food processing organisation and whose content is lyrical]. The pre-test adverts were without sign language, while sign language was embedded into the posttest adverts. To produce the posttest adverts, the exact word content of all the three different adverts were extracted separately and translated into a sign language by a professional interpreter, who was also a teacher from the same school for the deaf. During the signing process, video shoot was taken. The clips were then exported onto a computer and using Adobe Premiere CS6 (Video Editing Software), embedded in each advert as an overlay and saved as Audio Video Interleave (AVI) format. This was to ensure that the video runs on any computer with a player software installed. The participants viewed the three different television adverts lasting 1:02 seconds, 1 minute and 0:48 seconds on a projected screen. To determine impact of the stimulus, participants were asked to identify the *product* being advertised, the *advertiser*, explain content of the advert (*understanding of the message*) and the *use of the product* before and after the introduction of sign language. Television adverts without sign language were run first but exposed *twice* to the participants to ensure that they have a chance

to understand the advert content. The same adverts with sign language interpreter embedded in them were subsequently played. To ensure that participants are not pre-informed about the adverts prior to exposure, they were confined in a spacious and comfortable room and adverts were played for five participants who sat sparsely at a time. Structured interview with closed-ended questions was conducted to examine how each participant understood the content. This exercise was done at two levels. Interviews were conducted separately immediately after every five participants have been exposed to advert category 1 to ensure they do not forget the content. The same five participants were exposed to advert category 2 and proceeded with an interview using the same questions. Since all participants were deaf, the professional interpreter (referred to above) whom the participants were familiar with was engaged to sign to individual participants using the designed interview questions and responses were communicated to the researchers to be recorded.

Data Analysis

Data was organised and analysed using Microsoft Excel (Version 2010) to extract frequencies, percentages and generate tables.

Ethical Consideration

The paper was approved by the Takoradi Polytechnic but the permission to conduct the study was granted by the principal of the Sekondi School for the deaf. Prior to the encounter with the students, the researchers submitted all the research instruments (the video adverts and the structured closed-ended questions for assessment by the authorities of the school to ascertain that it is fit for consumption. Participants were informed that their participation was voluntary and they could withdraw from the study at any stage of the interview, if they wish, without any consequences. The participants were served some candies after their participation.

RESULTS AND DISCUSSION

This study was conducted to determine whether inclusion of sign language in existing corporate adverts in Ghana would improve and enhance the understanding by the deaf. We

found that the inclusion of sign language improves the understanding of television advertisement content. Specifically, participants were more likely to identify the product being advertised, know the corporate entity running the advert, understand the message being communicated, and the use of the product being advertised when sign language were included in advertisements. These findings are summarised in Table 1.

On the question of whether the deaf community knew the name of the *corporate body* (advertiser) whose advert was run, the study showed (as depicted in Table 1) that before the introduction of sign language in Ad1; only 30 percent of the respondents correctly identified the *name* of the advertiser. Also, in Ad2 and Ad3, 53.3 percent and 40 percent of the respondents respectively could figure out the name of the adverts. However, after respondents viewed all the adverts (Ad1, Ad2, Ad3) with sign language interpreter now embedded, there was a significant change in correctly identifying the name of the advertiser in Ad1(70%) and Ad3 (60%). However, the change in Ad2 (46.7%) is less because more respondents (53%) captured advertiser name prior to introducing interpreter into the advert. This was attributable to the nature of the original advertising content which was a telecom advert and its name was clearly visible. This prompts advertisers to adopt McLuhan’s idea of ‘hot media’ that makes the viewer to participate less to understand the meaning of a media content to widen easy comprehension of all communities. Thus, with the introduction of sign language into the adverts, the percentage of deaf respondents who hitherto could not capture the

name of the advertiser now identified it easily. This finding contrast with Ofcom’s position that television advertising plays a vital role for mass market advertisers and it is the door to delivering messages speedily to a large audience *across all demographic groups* (Select Committee on Communication Report 2011) because this study shows that sections of the deaf community, who forms part of the of society do not even know the identity of some firms that advertises on the television despite viewing them. This defeats the main aim of advertising which involves awareness creation, making brand images, forming positive associations and encouraging consumer behavior (McQuail 2000). Exclusion of the deaf is evident and advertiser exposure is lost to larger degree. Beyond low comprehension of television advertising content by deaf people as shown in the current study, fear and concerns of businesses being deemed as charities especially in the UK informed why disable actors generally were not featured in commercial advertising (Haller and Ralph 2001). Furthermore, the contention surrounding disable people generally is that: “advertisers have a challenge to include persons with disabilities because it appears to be a no-win situation. If advertisers include a person with a disability, they open themselves up to criticism created by hurt and sensitive feelings. If advertisers do not include person with a disability, they are criticised for their lack of inclusivity” (Ganahl and Arbuckle 2001). Thus, this work proposes that embedding signers into corporate television advertising give viewers the choice to determine element(s) in the content to focus without excluding and/or stigmatising any group of people.

Table 1: Pretest-posttest comprehension of television advertising by the deaf community

Television adverts	Name of advertiser		Product advertised		Product use/Function		Understandingad message	
	Before	After	Before	After	Before	After	Before	After
Ad 1								
Percent (%)	93 0	21 70	51 6.7	2583.3	1446.7	1653.3	620	2480
Ad 2								
Percent (%)	1653.3	1446.7	310	2790	26.7	2893.3	310	2790
Ad 3								
Percent (%)	1240	1860	1446.7	1653.3	1446.7	1653.3	1136.7	1963.3

In finding out whether the deaf community were able to identify the *product / service* whose advert was run, the study (as depicted in Table 1) revealed that prior to the introduction of sign language in Ad1, only 16.7 percent of the respondents identified the *good or service* after exposure. Also in Ad2 and Ad3, 10 percent and 46.7 percent of the respondents respectively could exactly figure out the good or service advertised. However, after respondents viewed all the adverts (Ad1, Ad2, Ad3) with sign language interpreter embedded, there was a significant change in correctly identifying the products advertised in each advert, with Ad1 (83.3%), Ad2 (90%) and Ad3 (53.3%). The wide difference of 10 percent and 90 percent between pretest and posttest in Ad2 is attributed to a *guess work* which further suggests that most part of the deaf community do not understand advert content. Ad2 was a telecom advert, and that most participants responded that *mobile phone* was the product being advertised instead of *electronic transfer of money using mobile phone*. Also, scenes like cleaning, eating biscuits and sipping (drinks) in Ad2 content influenced some respondents to produce these responses. Similarly, Ad1 produced a wide difference of *before* (17%) and *after* (83%) because the respondents picked some scenes in the advert and applied them wrongly. For instance, instead of *internet banking* most respondents identified *computers* as the advertised product. Thus, with the introduction of sign language interpreter into the adverts, the percentage of deaf respondents who hitherto could not identify the advertised products later identified them correctly.

In determining whether the deaf knew the *use of the product* being advertised, the study (as depicted in Table 1) revealed that prior to the introduction of sign language in Ad1, only 46.7 percent of the respondents knew the use of the *good / service* when they were exposed to the advert. In Ad2 and Ad3, 6.7 percent and 46.7 percent of the respondents respectively correctly figured out the use of the good / service advertised. However, after respondents viewed all the adverts (Ad1, Ad2, Ad3) with sign language interpreter embedded, there was a significant change in correctly identifying the use of the advertised products in each advert, with Ad1 (53.3%), Ad2 (93.3%) and Ad3 (53.3%). Thus, with the introduction of sign language into the adverts, the percentage of deaf respondents

who hitherto could not correctly identify the use of the product now do so. The wide gap in Ad2 (6.7% and 93.3%) is attributed to the reasons cited above in the immediate paragraph for Ad2 disparity. Considering the fact that some deaf people struggle to identify *advertised products* and to determine their uses, these findings support the assertion that when buyers are unaware about your product or what benefit(s) it can offer them, they will not purchase and several products fall into this category. Though more than 90 percent of goods supplied to the market are sold within 24 months, several others fail due to the following reasons: (a) most buyers did not hear about them or (b) most buyers did not hear a persuasive message ... irrespective of the plethora advertising campaigns run (Austin 1999). By this, the assertion that 'a business that does not advertise is operating in the dark' do not hold because a section of the society labeled as deaf are completely unaware about who the advertiser is, its products and their use despite advertising constantly. The findings in this paper show that exclusion of the deaf is evident because information is held from them and brand awareness which is central to advertising is lost.

On the question of whether the deaf *understood the entire message* in television advertising, the study (as depicted in Table 1) showed that prior to the introduction of sign language in Ad1, only 20 percent of the respondents understood the content of the advert. In Ad2 and Ad3, 10 percent and 36.7 percent of the respondents respectively understood the adverts. However, after respondents viewed all the adverts (Ad1, Ad2, Ad3) with sign language interpreter embedded, there was a significant change in the level of understanding in each advert, with Ad1 (80%), Ad2 (90%) and Ad3 (63.3%). Thus, with the introduction of sign language interpreter into the adverts, the percentage of deaf respondents who hitherto could not fully understand the message in the adverts in its entirety could do so now. This is consistent with the position of Pedlow (2008) who established that deaf people whose primary language is signing are currently restricted in their access to programming that does not offer sign translation.

Beyond the administration of the pretest-posttest television advertising through the inclusion of sign language interpreters, this work also conducted interviews prior to the introduction of sign language to find out how the partic-

ipants generally perceive television advertising. The results are depicted in Table 2.

Deaf viewers determine whether a television advert is embedded with background music through various means. The study revealed that 10 percent of the participants indicated that they rely on *facial expression* of the characters in the advert, *instruments* (13.3%), *dancing* (13.3%), *subtitling* (3.4%), *ask parents/siblings* (10%) with half (50%) of them *don't know* (See Table 2, Row 2A). This shows that most deaf persons have a high chance of misinterpreting the content of television adverts because Ad3 for instance is a lyrical formatted advert, however, facial expressions did not indicate highly ecstatic mood and there were no display of musical instruments and dancing. This implies that corporate television adverts whose content is entirely lyrical are not able to convey messages effectively to the deaf community. Moreover, emotions triggered by music in motion pictures (advertising) are not experienced by them. On this basis, consumer loyalty that corporate bodies expect from the entire society is denied and exclusion of the deaf is evident. Cambra et al. (2014) established that the auditory condition of

both the hearing and deaf does not show significant relationship to their level of attentiveness to sub-titles. This is consistent with the current study that argues that because the auditory domain of deaf people is completely shut, they sought for other elements / variables in advert such as facial expression, musical instruments, dancing of actors and sub-titles to determine the presence of background music but among these, subtitling was the least (3.4%) they relied on.

As to whether respondents were able to read sub-titles embedded in television adverts, the study revealed that 20 percent indicated that they read them *always*, 33.3 percent read them *sometimes* while 46.7 percent were not able to read the captions with the reason that *text changes too fast* (See Table 2, Row 2B). Generally, subtitling improves the level of comprehension of motion picture viewers (Lewis and Jackson 2001; Debevc and Ko•uh 2015). In another study, it showed that deaf people have difficulty accessing information even under the voice, sound and caption conditions, not only due to their level of reading ability but also to the speed of caption presentation when oral content is literally transcribed on the content screen in its entirety (Cam-

Table 2: General issues: Deaf and television advertising without sign language

Type of question asked	Response options	N=30	Percent (%)
2A. How do you know whether TV advert has music in it or not?	Facial expression	3	10
	Instruments	4	13.3
	Dancing	4	13.3
	Subtitling	1	3.4
	Ask parent/siblings	3	10
	Don't know	15	50
2B. Are you able to read sub-titles in TV adverts?	Yes, always	6	20
	Yes, sometimes	10	33.3
	No, texts change so fast	14	46.7
2C. What is the best means to understand TV adverts?	Guessing	13	43.3
	Read lips	0	0
	Study gestures	6	20
	Ask Others	2	6.7
	Don't understand	9	30
	Yes, Always	16	53.3
2D. Do you feel marginalised when adverts are aired and you do not understand?	Yes, Sometimes	10	33.3
	No	4	13.4
	Parent/siblings	19	63.3
2E. Which of the following sources informs you to buy/use product?	TV adverts	3	10
	Friends	6	20
	Teachers	2	6.7
	Sub-title	0	0
	Signing	19	63.3
2F. What should be added to a TV advert to help you understand easily?	Sub-title/Signing	11	36.7

bra et al. 2009). Thus, different content types are ideal when formatted at different speeds (Sandford 2015). This appears to be reason(s) that deaf representatives in the Netherlands for instance have complained that some information is withheld from them through captioning. This suggests that the issue of communicating messages effectively through television adverts is beyond the insertion of captions only and that interpreter embedment should be sought for. Considering the best means through which deaf people understand television advert, the study revealed that 43.3 percent of the respondents relied exclusively on *guessing* to interpret the meaning of television adverts, 20 percent *study gestures* of actors in the advert, 6.7 percent *ask others* and 30 percent indicated that they *don't understand* the content completely. None of the respondents indicated that they use *lip-reading* to understand television adverts (See Table 2, Row 2C). Consistent with the current study, deaf viewers pay little attention to sub-titles or lip-reading (Wehrmeyer 2013). Contrary, a study showed that deaf and hearing children focus more on images especially the lips of a character's face (Cambra et al. 2014) but as to whether attentiveness to lips enhances understanding is not known. Due to the fact that a good number of the respondents relied on variables such as *facial expression*, displayed *musical instruments* and *dancing* to determine that an advert comes with background music as shown in Table 2, Row 2A, but in their pretest-posttest assessment of Ad3 which was a lyrical advert, none of the respondent identified any of these variables mentioned above. This explains that most deaf viewers interpret television adverts through the *lens of guessing*. However, the consequences of misinterpreting television advert by deaf people who happen to form an integral part of the consuming population is not good for the corporate world taken into consideration issues of viral marketing and intergenerational influences.

As to whether respondents feel marginalised when television adverts are run and they do not understand, the study revealed that 53.3 percent indicated that they feel marginalised *always*, 33.3 percent experienced marginalised feelings *sometimes* with only 13.4 percent being indifferent (See Table 2, Row 2D). Marginalisation is evident from the viewpoint that radio, which is currently the most consumed medium by Gha-

naians (Kafewo 2006) has completely neglected the deaf community due to its only *auditory* feature and this situation is further compounded by television's *audio-visual*; the only hope of the deaf is broadcast without embedding sign language to a market composed of both the hearing and the deaf. It is to counteract these practices that the deaf association in Ghana is working to mobilise members, remove communication barriers, create awareness on deaf issues, and advocate for equal opportunities (GNAD 2013).

In determining information sources that informs deaf people's purchase or use of a product, the study revealed that 63.3 percent of the respondents indicated they rely on their *parents/siblings* for information, *TV adverts* (10%), *friends* (20%) and *teachers* (6.7%) - (See Table 2, Row 2E). Over-reliance on parents/siblings and others like friends and teachers for information to enable deaf people to make decision(s) on whether to buy/use a product explains that the current television advertising format is not able to convey messages to society effectively because the deaf community is excluded. In the new millennium, advertisers are recognising that disable people purchase soap, milk, socks, jewelry, makeup, home improvement goods, use travel services, live in houses and appreciate nice home furnishings (Quinn 1995 cf Haller and Ralph 1996) and the corporate world needs to recognise that currently the language of transmitting messages to the consuming populace is incorrect because it excludes the deaf.

In finding out what should be added to television adverts to help deaf people to easily understand, 63.3 percent of the respondents indicated that the embedment of *sign language interpreter* would help achieve this objective with 36.7 percent of the respondents opting for the merger of *subtitling / sign language* in television adverts (See Table 2, Row 2F). For instance, Debevc and Ko•uh (2015) found that the embedment of sub-titles into a sign language interpreter video background enhances comprehension of HOH and deaf community, none of the respondents in the current study indicated that embedding *only sub-title* in the main television advert was an option to help their understanding of the content. This is consistent with the study that a sub-titled video improves better message transmission than sub-title alone. It reinforces position of the GNAD, who have com-

plained of total exclusion from television programming and have requested all television stations to embed both subtitling and sign language interpreter into their content (Sackey 2011). Furthermore, the current study re-echoes the findings of Wehrmeyer (2013) which revealed that deaf viewers predominantly focus on the interpreter and secondarily access picture material, but focus less on sub-titles or lip-reading. It is in line with this that Carmen Jones of EKA Marketing (1997) says: "Few companies have enjoyed the profitability that results in targeting the consumer who happens to have a disability. . . . I believe if the business community were educated about the size and potential of the market, then advertising programmes with the disabled consumer in mind would be created" (Haller and Ralph 2001). Also, there is evidence that with the use of the hands, language can be expressed through the visual system by people who are deaf through the visual system. With this in place, there is an added advantage for deaf signers who have the ability to identify non-language activities better than their hearing counterparts who lack knowledge of a sign language (Corina 2012).

LIMITATIONS

The size of the sample was not large enough due to the nature of the research which required that a stimulus in the form of television advert is run to determine how respondents understand its content. Moreover, this study was conducted using the only deaf school in the Western Region of Ghana, and therefore the findings of the present study to some extent lack generalisation to all deaf people in Ghana. Despite these limitations, this is one of the first studies to examine the efficacy of embedding sign language into corporate television advertising.

CONCLUSION

The notion of embedding sign language and subtitling among others into motion pictures generally is not new but not in the sphere of specifically television adverts. This is necessary because all sections of the society buy and use a product from the same market whose messages tend to be channelled hugely through television as a medium. With this, embedding sign language is a good way to harmonise the deaf and hearing communities while it is supplemented by the existing captioning technology. The

study revealed that though television commercials are run regularly, corporate name, brand (product), use of the brand and most importantly an overall understanding of the messages advertisers want to convey is not known by a greater number of the deaf community which according to the World Health Organisation (WHO) is increasing globally. This defeats the basic purpose of television advertising which is intended to create awareness. Furthermore, the deaf community has a high chance of misinterpreting lyrical television adverts because the variables they use to interpret them such as *facial expression, display of musical instruments and dancing* are unreliable and subjective. While subtitling is not the best way to convey message to the deaf, most television adverts in Ghana do not have them and some advertisers who embed them are not able to communicate effectively due to the fast changing pace of the texts on screens. To understand television adverts, the deaf community relies exclusively on guesses and study gestures of actors which may be wrong. Moreover, most deaf people are marginalised (excluded) by the current state of conveying corporate television advert messages.

RECOMMENDATIONS

The insights from this paper could be explored further in larger deaf community (population) in order to better inform future advertising content regulation and policies. This paper proposes the embedment of sign language and other communication tools and elements and if adopted leaves the television consuming populace and society generally no grounds to make a distinction based on personalities. This communication format ensures inclusivity of the deaf community because advertising message becomes clear and legible to both the deaf and the hearing communities. In this case, the viewer, either deaf or hearing, will have the choice whether to focus on the interpreter, other communication elements on screen or the audible voice of actors. As a social responsibility measure, advertisers are encouraged to adopt this format for their television adverts.

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REFERENCES

- Anderson DR, Lorch EP 1983. Looking at television: Action or reaction? In: J Bryant, DR Anderson (Eds.): *Children's Understanding of Television: Research on Attention and Comprehension*. New York: Academic Press, pp. 1-33.
- Austin G 1999. *High Impact: How You Can Create Advertising That Sells*. Scottsdale, Arizona: Halstead.
- Austin AB 1984. Motivations for television viewing among deaf and hearing students. *American Annals of the Deaf*, 129(1): 17-22.
- Baker-Shenk C, Cokely D 1981. *American Sign Language: A Teacher's Resource Text on Grammar and Culture*. Washington D.C: Gallaudet University Press.
- Burnham D, Leigh G, Noble W, Jones C, Tyler M, Grebennikov L, Varley A 2008. Parameters in television captioning for deaf and hard-of-hearing adults: Effects of caption rate versus text reduction on comprehension. *Journal of Deaf Studies and Deaf Education*, 13(3): 391-404.
- Cambra C, Silvestre N, Leal A 2009. Comprehension of television messages by deaf students at various stages of education. *American Annals of the Deaf*, 153(5): 425-434.
- Cambra C, Penacchio O, Silvestre N, Leal A 2014. Visual attention to sub-titles when viewing a cartoon by deaf and hearing children: An eye-tracking pilot study. *Perspectives: Studies in Translatology*, 22(4): 607-617.
- Commonwealth Network 2012. Advertising, Marketing and PR in Ghana. From <http://www.commonwealthofnations.org/business/africa/ghana/advertising_marketing_and_pr/> (Retrieved on 24 July 2013).
- Corina D 2012. Deaf Sign Language Users Pick Up Faster on Body Language. From <http://news.ucdavis.edu/search/news_detail.lasso?id=10107> (Retrieved on 4 September 2013).
- Debevc M, Ko•uh I 2015. *The Effects of Using Captions in Sign Language Interpreter Videos*. Maribor, Slovenia: University of Maribor.
- Downey G 2007. Constructing closed-captioning in the public interest: From minority media accessibility to mainstream educational technology. *Info*, 9(2/3): 69-82.
- Dougherty P H 1986. Advertising: TV Spot for Deaf Viewers. *New York Times*, May 14, 1986, P. D26.
- Egelston-Dodd J, Ting S 2007. Video-tutorials for tech sign vocabulary in astronomy. *Journal of Science Education for Students with Disabilities*, 12(1): 1-15.
- Evmenova AS, Graff HJ, Behrmann MM 2015. Providing access to academic content for high-school students with significant intellectual disability through interactive videos. *Focus Autism and Other Developmental Disabilities* (Online First), 1-13.
- Evra JV 2004. *Television and Child Development*. 3rd Edition. New Jersey: Lawrence Erlbaum Associates, Inc.
- Ganahl D, Arbuckle M 2001. The exclusion of persons with physical disabilities from prime time television advertising: A two year quantitative analysis. *Disability Studies Quarterly*, 21(2): 1-8.
- Gernsbacher MA 2015. Video captions benefit everyone. *Policy Insight from the Behavioural and Brain Sciences* 2(1): 195-202.
- Ghana National Association of the Deaf [GNAD] 2012. A Brief History on the Development of Deaf Education in Ghana. From <<http://gnadgh.com/news/?p=1466>> (Retrieved on 13 August 2014).
- Ghana National Association of the Deaf [GNAD] 2013. Grantee Briefing: Ghana National Association of the Deaf. From www.mwananchi-africa.org/.../Grantee%20briefing%20-%20Ghana%20... (Retrieved on 28 September 2013).
- Ghana Statistical Service 2012. 2010 Population and Housing Census: Summary Report of Final Findings. From <http://www.statsghana.gov.gh/docfiles/2010phc/Census2010_Summaryreport_of_final_results.pdf> (Retrieved on 01 August 2013).
- Golos BD 2010. Deaf children's engagement in an educational video in American Sign language. *American Annals of the Deaf*, 155(3): 360-368.
- Gunter B 2004. *Advertising to Children on TV: Content, Impact and Regulation*. Lawrence Erlbaum Associates.
- Gunter B 2012. The perceptive audience, In: JA Anderson (Eds.): *Communication Yearbook 11*. New York, NY: Routledge, pp. 22-50.
- Haller AB, Ralph S 1996. *Current Perspectives on Advertising Images of Disability*. Washington, DC: Graduate University Press.
- Haller B, Ralph S 2001. Profitability, diversity, and disability images in advertising in the United States and Great Britain. *Disability Studies Quarterly*, 21(2): 1-16.
- Huston AC, Donnerstein E, Fairchild HH, Feshbach ND, Katz PA, Murray JP et al. 1992. *Big World, Small Screen: The Role of Television in American Society*. Lincoln, NE: University of Nebraska Press.
- Jeff D, Grischow DJ 2011. Kwame Nkrumah, disability and rehabilitation in Ghana, 1957-66. *The Journal of African History*, 52(2): 179-199.
- Jensema C 1998. Viewer reaction to different television captioning speeds. *American Annals of the Deaf*, 143(4): 318-324.
- Kacorri H, Harper A, Huenerfauth M 2014. Measuring the Perception of Facial Expressions in American Sign Language Animations with Eye Tracking. In: C Stephanidis, M Antona (Eds.): Springer International Publishing, pp. 553-563.
- Kafewo S 2006. *African Media Development Initiative, Ghana: Research Finding and Conclusions*. London: BBC World Service Trust.
- Kushalnagar RS 2015. Distance between deaf viewers and interpreters. *Journal on Technology and Persons with Disabilities*. J Santiago (Eds.): *Annual International Technology and Persons with Disabilities Conference*, California State University, Northridge, pp. 246-256.
- Linebarger LD 2001. Learning to read from television: The effects of using captions and narration. *Journal of Educational Psychology*, 93(2): 288-298.

- Lewis JSM, Jackson WD 2001. Television literacy: Comprehension of programme content using closed captions for the deaf. *Journal of Deaf Studies and Deaf Education*, 6(1): 43–53.
- Lombard S 2006. *The Accessibility of a Written Bible Versus a Signed Bible for the Deaf-Born Person with Sign Language as First Language*. MA Thesis, Unpublished. Bloemfontein: University of the Free State.
- McQuail D 2000. *McQuail's Mass Communication Theory*. 4th Edition. London, UK: Sage
- Mprah MK 2013. Knowledge and use of contraceptive methods amongst deaf people in Ghana. *African Journal of Disability* 2(1): 43.
- Nyst VAS 2007. *A Descriptive Analysis of Adamorobe Sign Language (Ghana)*. Utrecht: LOT Publication.
- Osei-Hwere E 2011. Children's television policy and content diversity in Ghana. *Journal of Children and Media*, 5(01): 69–85.
- Oteng FS 1988. *Give Them A Name*. Kumasi, Ghana: Catholic Press.
- Pedlow R 2008. How will the changeover to digital broadcasting in 2009 influence the accessibility of TV for Americans with disabilities? *Disability Studies Quarterly*, 28(4): 1-18.
- Sackey E 2011. Including the Concerns of the Deaf in National Development. From <<http://www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=212170>> (Retrieved on 26 September 2013).
- Sandford J 2015. The Impact of Sub-title Display Rate on Enjoyment under Normal Television Viewing Conditions. *IBC September 2015 Conference*. The British Broadcasting Corporation, UK.
- Select Committee on Communication 2011. *Regulation of Television Advertising: 1st Report of Session 2010-11*. London, UK: Parliament House of Lords.
- Schilperoord J, de Groot V, van Son N 2005. Non-verbatim captioning in Dutch television programs: A text linguistic approach. *Journal of Deaf Studies and Deaf Education*, 10(4): 402-416.
- Schmidt LK, Anderson RD, Collins AP 1999. Form and content: Looking at visual features of Television. *Developmental Psychology*, 35(4): 1156–1167.
- The Report: Ghana 2011. *Media and Advertising*. Oxford Business Group: Oxford (Online).
- Wehrmeyer J 2013. Eye-tracking deaf and hearing viewing of sign language interpreted news broadcasts. *Journal of Eye Movement Research*, 7(1): 1-16.
- World Health Organisation 2013. *Deafness and Hearing Loss*. Geneva: WHO.