

Original Research Article

Analysing Television Captioning: Production, Readings and Effects

Abstract

~~Captions are important in creating an inclusive television programming for the Deaf and Hard of Hearing people. Captions are essential in removing barriers of communication by giving secondary options of reading rather than listening alone. This treatise stems from an empirical study that assessed the causes and impact of television programmes caption errors. This study was designed to ...~~

The study is grounded in the encoding and decoding model by Stuart Hall, to map a connection between the creators of captions and the audiences who receive them. The study employs a mixed methods approach that takes on a descriptive design to gather data through questionnaires, interviews, and the observation method. The study concluded that there are habitual caption problems in television programmes that emanate from various problems in the human resources and the available technologies. As such, the study recommended strengthening and establishment of programmes editorial units, establishment of quality assurance processes as essential in spearheading the quality of programmes production.

Key Words: Caption, Television Programme, Television Programme Production, and Tanzania.

Introduction

Captions are an important component in television programme production. Substantial information about motion pictures is presented in captions or subtitles. Captions are also called “subtitles” (Monaco, 2000; Armstrong et al., 2015; Gernsbacher, 2016; Sasamoto and Doherty, 2016). In this study, the words “captions” and “subtitles” are used interchangeably. This study has a major objective of finding out the causes of

Formatted: Font: Not Italic

Formatted: Font: Not Italic

Formatted: Font: Not Italic

Formatted: Font: Not Italic

Formatted: Font: Not Italic

Formatted: Font: Not Italic

Formatted: Font: Not Italic

Formatted: Font: Not Italic

Formatted: Font: Not Italic

Formatted: Font: Not Italic

Formatted: Font: Not Italic

Formatted: Font: Not Italic

Formatted: Font: Not Italic

Formatted: Font: Not Italic

~~captioning problems and the effects of these challenges on the produced programmes.~~

The presence of captions or subtitles defines the quality ~~of the programme~~of programme and its accessibility to audiences. Gernsbacher (2016) and Ellis et al. (2019) contend that captions improve comprehension of programme content by viewers and aid in attention retention during programme. Captions benefit viewers of television programmes and they make programmes colourful and easy to understand.

With the undoubted importance of captions in television programmes, Sasamoto and Doherty (2016) reveal that there are many caption errors in television programmes, which have a negative impact on the quality of produced programmes and the viewers. Sasamoto and Doherty (2016) assert that:

Facts, opinions and fiction can all very easily become blurred and distorted due to the wide circulation of online media and social networks where other users can add further changes and interpretationsthis highlights the need for further empirical research on how impact captions can be used effectively (Sasamoto and Doherty, (2016.14).

This highlights the challenges related to captions that bedevils television broadcasting. Errors in captions have been noted in interchanging and giving wrong names, typing errors, misspelling, punctuation errors, illegibility, and comprehension (See, Monaco, 2000; Gernsbacher, 2016; Sasamoto & Doherty, 2016). A research on BBC, R&D focussed on revealing significant diversity in the needs and preferences of users, the impact of captioning, and the optimal use of captions in television programmes also verifies the problem (Shitara, 2011; Armstrong et al., 2015). Studies on caption problems are continuously carried out across the world. Sasamoto & Doherty (2016) contend that,

...the use of impact captions is now widespread across Asia, especially in Korea and China. There has been sparse research conducted on impact captions on TV and the media industry continues to use such captions in an ad hoc manner as their Asian counterparts (Sasamoto & Doherty, 2016.3).

The increase in studies concerning the caption component in television programmes production is a hint of the emergency of caption tribulations as a problem in television

programmes and this study has been designed to explore it and how caption use affects programme production and users.

It has been noted in preliminary studies that there is a recurring problem with captions in television programmes. In Tanzania, the caption problem is notable and there have been complaints from viewers, media practitioners, and professionals about the mistakes in captions appearing in television programmes. A lot of television programme producers have normalised caption errors and have not come up with solutions to save the situation. However, there are few studies conducted about the captioning problems yet researchers have taken up the film and broadcasting area and a lot of publications have been distributed. Despite the captions' predicaments, some broadcasters continue to overlook caption problems as one of the setbacks in television production.

This study is premised on the media encoding and decoding model by Stuart Hall (1979). The model classified the reception of media messages into three (3) categories. Hegemonic reading, oppositional reading and negotiated reading. Media audiences were proved to be active recipients of messages that come even in a linear way. David Morely (1980) then comes ~~in to add~~ an aberrant reader classification to the audiences, to classify those who have no comprehension of media messages. In the wake of caption production for broadcast media, the encoding and decoding model sets in well in appreciating how texts for the screen are created and analyse how the effects of the readings. The interactions within caption production booths are put to test by the quality of communication that is then broadcast and how the audiences receive the messages. This study is thus grounded in the creation of media messages and their readings thereof.

Comment [1]: This should come under theoretical framework

[Statement of the Problem](#)

[Objectives of the Study](#)

[Research Questions](#)

[Literature Review](#) **Background of the study**

Captions were first introduced in the film industry as “subtitles”, and they were mainly used in film production (Monaco, 2000). As television programmes production

developed, subtitles were gradually adopted under the popular name of captions (Monaco, 2000; Shitara, 2011). In the USA for example, captions were introduced through film production (Rosenthal, 2002), and by then, they were used in the interpretation of content. Shitara (2011) contends that [NHK](#), which is the main Japanese public broadcaster, revealed the rapid change that happened in impact captioning between the 1960s and the 2000s. Likewise, Shitara concluded that very few captions were used in the 1960s. In the 1970s caption use was generally limited for reference purposes.

According to Armstrong et al (2015), captions were used as an access service were first [broadcast](#) on BBC Television in 1979 while live subtitles were first broadcast in 1984.

Captions have been adopted by most if not all television programme producers with some using computer generated closed captions that are prone to errors that can lead to non-intelligibility of the content. Shiota (2011), in Sasamoto and Doherty (2016), asserts that there has been an increase in caption usage since the 2000s with more detailed and elaborate staging. Shitara (2011) argues that technological advancement has propelled the development of impact captioning as evidenced by the increase in captioning as television production spread to various parts of the world.

Captions Production and Usage

The preparation of captions for television programmes is a responsibility of various professionals behind the scenes of a television programme. These include visual editors, graphic designers, and television programme producers. This activity also involves decision-makers like production editors (PE), news chief editors (CE), directors of both live and pre-recorded programmes, production managers, and technicians (Zettl, 2012; Owens & Millerson, 2008; Howell, 2013; Whittaker, 2017; Owens, 2020). In most cases, captions are produced during live production or during the editing of programmes. They are produced through a purposeful design or creative model by graphic designers or sometimes by video visual editors. Howell (2013) asserts that:

Subtitling for pre-recorded programmes is usually prepared in advance, which allows it to be synchronized to images, edited to a reasonable reading speed, and checked for errors. In general, therefore, pre-prepared subtitling is of good quality, though transmission problems sometimes occur (Howell, 2013.1).

This implies that captions can be produced live or during editing depending on the nature of the programme. Producers are involved during initial stages when they provide shooting and editing scripts of the production. They provide details of programme titles, lower thirds or character names, figures, data, and ideas to editors and graphic designers. In some incidents, graphic designers operate like operators who receive orders from producers, directors, or production managers to handle caption responsibilities. However, some captions are solely created by editors and graphic designers.

Captions appear different on the television *mise en scene*. production. They have different styles and formats as noted by Reckdahl (1997) that caption formatting can be customised, allowing users to modify the style, width and font. Caption styles include normal, centre, flush-left, flush-right and centre last. Therefore, producing captions involves several individuals who are guided by decision-makers towards their usage in both news stories and other programme production.

Captions Quality

Studies show that captions must have good quality in their production and usage (Reckdahl, 1997; Shitara, 2011; Howell, 2013). The quality of captions is mainly based on accuracy and legibility. For this reason, caption production needs close supervision and control. Thus, the Australian Communications and Media Authority (ACMA) was established in 2013 with the responsibility of regulating and enforcing caption quality and consistency (Federal Register of Legislation, 2013). The quality of captions is determined by accuracy, readability, and comprehensibility (Sasamoto and Doherty, 2016). Caption readability is determined by colour, font, good grammar and aesthetics associated to their creation. Accuracy of captions is determined by the ability to interpret or translate the spoken word as a motion picture is presented. It is also important to note

the speed of change, and the choice of words and their simplicity to aid audiences with sight challenges, different reading abilities and those with interest without knowledge of the spoken language. (Reckdahl, 1997; Shitara, 2011; Howell, 2013 Sasamoto & Doherty 2016; Merchant at el., 2017).

Caption production and usage have been influenced by technological advancement. Technology has greatly ~~impacted caption~~~~impacted on caption~~ impacted design and usage. There are notable differences of captions from 1980 and the contemporary set. There has been a positive development of live closed captions that need minimal human interference and pick the voice to modify it to text. This captioning method was created in 2016 by Ericsson and the BBC and was aimed at minimising “the delay between live captions and the audio (Ericsson, 2016). There is also an emerging set of audiences for the contemporary captioning shift, there are special captions appealing to social media users which are auto generated on *Facebook, Instagram, YouTube* and *Twitter* (Ellis, 2019). Hence, the technological advancement in producing and using captions has had both positive and negative impacts on caption production and usage. The review of literature above reveals several problems regarding the captioning of television programmes; some of them include the disconnection between broadcasters and the needs of audiences like those who are deaf or have hearing loss, the accuracy of captions, as well as improper production and usage of the captions (Downey, 2008).

Comment [2]: Add relevant empirical studies to your work
Formatted: Font color: Auto

Methodology

This study follows a realistic knowledge system that bases itself on a practical interpretive research philosophy. The study embraces a mixed methods ~~design approach~~ that accommodates both quantitative and qualitative methods. (Creswell, 2012). The choice of the mixed methods ~~design approach~~ enables an opportunity for using multiple data gathering and analysis tools. The mixed method design ~~allows the~~~~allows the simultaneously in order the~~ study to adequately address its objectives (Neuman & Robson, 2005; Cresswell, 2007; Leavy, 2017). While the quantitative approach has been used to quantify the variables of the study such as the extent of caption errors and the

demographic details of respondents, the qualitative methods give an opportunity to explain and justify choices while suggesting the way forward.

The ~~is~~ study used questionnaires, interviews and observation ~~as instruments for methods of data collection~~ ~~ng data~~. The selection of these ~~instruments methods~~ was based on the data needed. Qualitative and quantitative data give a complete picture of the issues in discussion. The questionnaires used had both closed and open-ended ~~questionsquestion~~ to increase the reliability and validity of the data collected. Nsubuga (2000) argues that open-ended questions permit participants to freely answer questions. The questionnaires were administered to producers, graphic designers, and video editors. The study interviewed news chief editors, video editors, graphic designers, chief editors, television managers and viewers. All the interviews were face-to-face, and their minutes were recorded by the researcher.

The observation method was used to study video editors, graphic designers and producers during the process of caption creation. Denzin and Lincoln (2000) argue that observing respondents in their natural environment limits behavioural influences that can distort the truth. Covert observation was employed in this study. To observe the research subjects in their natural setting, a field attachment was organised and the researcher ~~becamebecome~~ part of the crew when they carried out their tasks. The researcher randomly previewed 45 on-air programmes, during which tracking sheets were prepared to record captions errors (See Table 3). The researcher prepared two categories of observation schedules. Category A was for observing producers, editors and graphic designers in their production places while Category B was used to preview programmes (see Table 4).

This study targeted key operators involved in the cycle of caption production and usage. The researcher sampled television programme producers, visual editors, graphic designers, news chief editors, production managers and the audiences. The placement of each respondent in the production process was a major consideration for this study.

The study had 87 respondents (see Table 1). These came from various television stations and production houses. In all sampled television stations and production houses, three graphic designers, video editors, and producers and 1 manager were selected. The study also purposefully selected ten viewers based on age and gender in each of the three regions in Mainland Tanzania and Zanzibar. See the summary below for more information.

Table 1: [Summary of Population Respondents of the Study](#)

S/n	Category	Number of Respondents	
		Projected	Actual
1.	Television programme producers	15	15
2.	News chief editors	3	3
3.	Visual editors	15	15
4.	Graphic designers	15	14
5.	Television production managers	5	3
6.	Programme pre-viewers	5	3
7.	Television programmes viewers	40	34
Total		98	87

Source: Field data (2022)

Three television stations and two production houses were selected for data collection based on their history and period of existence, ownership, nature and type of employment and the availability of equipment used for television production. The study involved publicly owned television stations believed to have qualified and experienced producers, graphic designers, and editors. Privately-owned media houses were also selected and are believed to have advanced and modern television production equipment. These stations also have production houses with independent [caption captions](#) producers who work under a liberal model of supervision. Hence the study involved two public and two

private television stations, and one production house. The names of the stations have been withheld for ethical reasons.

This study was conducted in four regions in Tanzania Mainland, that is Dar es Salaam, Morogoro, Mwanza, [and Zanzibar](#)~~and in Zanzibar~~. The selection of these places was [based on the](#)~~based the~~ long history of having television stations as compared to other regions. Zanzibar had its first television in 1974, Dar es Salaam in 1994, Mwanza in 1994, and Morogoro in 1999. In contrast, TCRA statistics indicate that some regions did not have any television stations until the year 2020. Some of these regions are Shinyanga, Singida, Manyara, Tabora, Katavi, Simiyu, Rukwa, Kigoma, Kagera, Mara, Lindi, Mtwara and Ruvuma. Also, the selected regions have higher television viewership as compared to others (Mwakalinga, 2010; Mwaffisi, 2013; TCRA, 2021).

The researcher observed ethical issues in this research including seeking permission from interviewees and relevant authorities, such as organisations and individuals. The research has ensured the anonymity of the programmes and the media houses involved. However, while this was observed, some images have been used in this study as evidence or visual elaboration where necessary. The few images and plates that appear to accompany various descriptions need not necessarily reflect or be directly associated with the ideas or information collected from field research.

Findings and Discussion

This study confirmed that television captions carry a lot of errors. The researcher checked the overall comprehension and accuracy of the captions and concluded that there are a lot of loopholes that need plugging. As noted above, some noted loopholes include; carelessness on the part of producers, visual editors and news editors; lack of the relevant knowledge and technical expertise by editors and graphic designers; and lack of supervision for the processes of caption production.

To capture the causes of problems with captions, the researcher interviewed and observed the television programme producers, graphic designers, video editors, production managers and news chief editors, and attended the production of the captions in

previewing rooms and transmission rooms. The data collected is presented below through subsections that will follow.

Skills gap and its effects on caption production

There are few persons professionally trained as visual editors and graphic designers. This shortage of editing professionals is higher in television stations than production houses. For example, there were only 7 graphic designers and 6 visual editors for a station with 3 shifts, these worked in 2 departments (production and news) during their shifts. According to one television programming manager and chief editor, the optimal number of these professionals for three shift ranges between 18 and 20. News chief editor 1 spoke about this and said,

I can tell you that sometimes the caption errors are caused by the small number of visual editors and graphic designers we have. During peak hours, they are loaded with work in such a way that they lack concentration. Sometimes one has to work double shifts. Imagine one has to work from 10:00hrs to 21:00hrs when our news bulletin ends (News Editor 1: Field notes, 14/02/2021).

News Editor 1 quoted above shows that the shortage of graphic designers and visual editors results in lower concentration during caption creation, which opens the door for errors. This view was also shared by visual editor 3 who said,

Sometimes it is very difficult to be efficient. Look here, we are only two for this shift. I edit promos and programmes and my producers are in a long queue of similar tasks. At the same time, I am supposed to be on live programmes two hours from now. In these surroundings, it is easy to make mistakes (Visual Editor 3: Field notes, 20/02/2021).

What is strikingly similar in these testimonies is the pressure filled working conditions for the caption creators that lead to errors and inaccuracies in the end product on the television *mise en scene*. With the limited numbers of trained graphic designers, the few available have limited time to carry out tasks.

This study concluded that time is a major determinant of problems associated with captions on television. Editors and graphic designers in analysed programmes and news stories had insufficient time to preview stories to determine shot arrangements, names of sources, main stories and locations where applicable. This was articulated by visual editor 3 as indicated who noted that,

In our station, stories are produced by editors and subeditors. Sometimes the captions are brought to us thirty minutes before we go on air. In this circumstance, you cannot go through programmes thoroughly to find what is wrong so as to edit (Visual Editor 1: Field notes, 20/02/2021).

This can be related to unavailability of professionals in the editing suits for television stations. With limited human resources, late submission of programmes is expected and thus affects the quality of work produced. The importance of time in television programme production has also been noted in published literature as a major determinant for caption quality failures (e.g. Owens & Millerson, 2008; Owens, 2020)

Caption production is notably marred by avoidable mistakes. The staff members involved are seen to make careless mistakes due to lack of professional~~lack professional~~ knowledge. They notably were preoccupied with various other activities during caption production times thus a lot of mistakes were made. The production crew observed during the study were noted to be chatting on their mobile phones, sharing off the job jokes amongst themselves, coming to the studios and production sites late, and going back and forth demonstrated lack of seriousness that resulted in limited concentration on programme production. Television managers and chief editors interviewed during the study showed that they had knowledge of such tendencies by their workforce. In some cases, producers and news editors failed to provide scripts to video editors and in some instances the provided scripts did not have information like the names of sources, places and events. This created extra work for some visual editors who had to find these details by themselves on the internet and most likely got the wrong information used for subtitles and lower thirds. After prolonged analysis, the researcher noted that most of these editors who made careless mistakes did not work with professional training

experience, but as self-trained editors who lacked theoretical knowledge of the ethics of the job and the value of aesthetics in the field. Studios are thus stuck with untrained people who do have knowledge of the effects of avoidable errors in caption making.

Aesthetical challenges were noted on the observed captions. The skills to edit and produce properly arranged visuals seemed to be rare. Poorly arranged visuals lead to incomprehension of captions by the audiences. The study noted that during broadcasts, some images were oversized and overlapped with other characters taking away the expected television aesthetics. Some shots overlapped into the next shot. The picture changed on the screen but the lower thirds and description spoke a different image that is yet to come or that was shown previously. Timing and beauty become compromised. The participants of this study seemed to be aware of this problem as confirmed by visual editor 1 who noted that,

Some of our stories are edited by journalists from upcountry. Some of them are not competent in editing, and it's very difficult to control the overlapping of names with other shots, especially when the shots are cut into only three seconds (Visual Editor 1: Field notes, 20/02/2021).

This hints that the items on screen are not given breathing space to allow readability thus captions take the fall as they appear as the smallest characters on television. In this sense, it is possible for one caption to be seen in two different shots. This problem results in a complication described by Howell (2013) as follows,

.....the speed of subtitling (as measured in 'words per minute' ("wpm")) has an impact both on the levels of comprehension, and on the amount of time viewers are able to watch what is happening on screen, as opposed to reading subtitles. Human beings cannot read as fast as they speak (Howell, 2013:12).

Similarly, Ellis et al. (2019) argue that caption display must have sufficient time for reading purposes. The plates below show examples of overlapped captions that were noted by this study.



Plate A: Overlapped Caption



Plate B: Overlapped Caption

Source: Field Data (2022)

Plate A shows a caption that shows the name and title of a person while the shot it is on shows a dam. Similarly, Plate B has a caption showing a person's name title but the shot shows a road. These captions are obviously on wrong shots, which can be attributed to poor editing. In professionally edited shots, the space between two shots is at least six to ten seconds, which allow captions to fit on one shot. Such errors could be attributed to having editorial duties assigned or carried out by non-professionals who do not cross check the product before broadcasting.

Demonstration of skills gap

The study utilized questionnaires to get numerical data on the level of professional expertise that exist in caption production roles. The data obtained has been computed into the results in Table 2.

Table 2: The Education Level of the Producers, Editors and Graphic Designers

S/N	Category	Level of Education	Frequency	Out of	Percentages
1.	Producers	Certificate	3	15	20
		Diploma	4		26.6
		Advanced Diploma	1		6.6
		Degree	7		46.6
2.	Editors	Certificate	6	15	40
		Diploma	5		33.3
		Advanced Diploma	0		0
		Degree	4		26.6
3.	Graphic Designers	Certificate	1	15	6.6
		Diploma	6		40
		Advanced Diploma	0		0
		Degree	8		53.3

TOTAL			100
--------------	--	--	------------

Source: Field Data (2021)

These results show that 55.5% of the sampled caption creators had certificates and diplomas. This composition of caption creators based on education suggests that these individuals are not qualified enough to create quality hence the presence of errors and lack of professionalism. As observed during production sessions, caption editors with the certificate level of education were not able to analyse various caption issues on their own. Some of the issues concerned were names and titles of the leaders, names of cities outside Tanzania and, in particular, outside Africa. They also failed to paraphrase policy issues into compact statements for subtitling. Highlighting this challenge, one television programme manager said,

I can say confidently that the level of education matters. I had two editors that I was forced to work closely with. Several caption errors have been associated with them. This is not common for editors with diplomas and degrees (Manager of television 3: Field notes, 27/02/2021).

This highlights the value of education in ensuring caption quality. This was also dwelt upon by Mitchell (2009), who argues that a high level of education in television production matters because it is associated with better skills (doing, reasoning and operating) among producers.

Caption Errors in Television Programmes

To find out the magnitude of the caption errors in television programmes, an observation schedule and a tracking sheet were used during programme broadcasting to capture caption errors. This observation produced the following findings:

Table 3: Observation Errors Score Sheet

Category	Errors observed	Frequency	Percentage

1. Legibility	Typing errors	11	24.4
	Improper colour of captions	6	13.3
	Wrong front size of captions	8	17.7
2. Accuracy	Misspelling	5	11.1
	Incomplete information	6	13.3
	Captions length	4	8.8
3. Comprehension	Jargons	6	13.3
	Too much details	3	6.6
	No captions at all/plain programmes	5	11.1

Source: Field Data (2022)

Legibility

The study shows that legibility is a considerable caption problem and typos (24.4%) are a major part of it. During observation, screenshots of typos aired programmes were taken and below are examples.



Pic 1. Wrong Caption A

The word EFU is a typing error. The correct word is ELFU, which means one thousand. EFU is not a word in Kiswahili. The producers of this caption left the letter “F” out.



Pic 2. Wrong Caption B

The word MWANAFUNI is supposed to be MWANAFUNZI, which means student in English. In this word, the letter “N” is missing.



Pic 3. Wrong Caption C

The word MASHART is a typing error. The correct word is MASHARTI, which means conditions in English.



Pic 4. Wrong Caption D

The word USHIRIKIN is another typing error. The correct spelling is USHIRIKINA. The producers of this caption left the letter “A” out.

Source: Field Data (2021/2022)

The errors cited above show that the message meant for the audiences was distorted thus disturbing the encoding and decoding process. Difficulties associated with captions were also discussed by Armstrong et al. (2015), who posits that programme captions can make it difficult for audiences to follow programmes.

There is concern over poor colour grading for the (13.3%) observed caption production. In this respect, the study found that some captions were faint, such that could not be clearly read by viewers and the colour contrast was not fairly dealt with. Examples of this problem are shown in the plates that follow:



Pic 5. Faint and illegible colours in Captions

Source: Field Data (2021/2022)

This problem was also mentioned by five of the viewers interviewed. For instance, Viewer 9 noted,

Some captions are not well seen. I am 67, and my vision is now not so good. The producers of captions do not consider us (Viewer 9: Field notes, 27/02/2021).

The other issue noted was that some captions that appeared onscreen had font sizes of 21, which made them appear very small on the screen. Others were up to 48 in front sizes, which made them look very big and abnormal. The legible font size is between 25 and

35. The study has also found lack of font size uniformity within the individual stations. Examples of font size failures are shown below.

Inappropriate front size captions



Pic 6. Inappropriate front size captions

Source: Field Data (2021/2022)

Accuracy

This study confirmed that inaccuracy of (11.1%) existed in caption creation. The words that were misspelt included names of regions, people's names and titles. Some of those words include Dar es Salaam, which was written as Daressalam, Mbeya as Mbea, Mbarali as Mbalali, and Urusi as Urussi. The misspelt people's names included

Musseveni instead of Museveni, and Abdala instead of Abdallah. See the examples captured below:



Pic 7. Misspelt Words

Source: Field Data (2022/2023)

Misspelling of words takes away credibility and sense of texts. Some words are polysemic and missing a single article could render a word a different meaning. Words, as semiotic signifiers, need to be accurate in order to carry the intended meaning. Misunderstandings and vagueness emanate from wrongly spelt words as this study has confirmed. Ellis et al. (2019) comments that mixed words, misspellings and omissions in captions confuse viewers of SBS Premier League.

The numerical gauge as carried out in this study shows that incomplete information with regards to word accuracy was 13.3%. It was noted that a single line of caption was ran throughout the programme. This led to disinformation for the audiences who needed the subtitles. In such instances, the Deaf and Hard of Hearing and those who speak a different language and depended on the subtitles are completely side-lined from the information society, thus prioritising those with the spoken language capacity. . Viewer 11 spoke about this as follows,

Other captions are very shallow. You may find a live broadcast with only a one-line sentence. There is no other information like we see from western media like CNN, BBC, and VOA. This must be regulated. (Viewer 11: Field notes, 27/02/2021).

The results also show that caption length (8.8%) is another problem present in the programmes observed. This is contrary to the standard, which requires captions to be short and accurate. Captions are seen to be unnecessarily long instead of paraphrasing and keeping the sense. Armstrong et al. (2015) argue that caption lines should not be too long and must break at points to lengthen the attention span of the audiences.

In this category, the study has also found the problem of interchanging the names of characters. This problem was more noticeable in pre-recorded programmes than in news bulletins and live programmes. See an example below.



Pic 8. Problem of interchanging the names of characters

The caption above shows that the captured shot is of January Makamba, the Minister of Energy in Tanzania. On the contrary, the man is Maharage Chande, managing director of Tanzania Electricity Supply Company (TANESCO) in Tanzania. Additionally, the caption has another error: the word **Nishaji** was supposed to be **Nishati** to infer energy.

Effects of caption errors

The study found that some captions (13.3%) had specific field jargon. This in the matrix of Stuart Hall (1979), and Morely's (1980) nationwide study, the audiences' experiences are considered. The use of technical jargon places the audiences into technical aberrancy where comprehension is next to impossible. These caption errors create room for viewers to come up with polysemic and imagined meanings of programme content. The study noticed the presence of errors in the use of acronyms and abbreviations in captions while some names started with small letters and others had capital letters. Similarly, abbreviations and acronyms had similar challenges of lower and upper cases. Examples of the words that had these issues are *tarura* instead of TARURA (Tanzania Rural Urban Agency), *ccm* instead of CCM (Chama cha Mapinduzi), and *bakita* instead of BAKITA (Baraza la Kiswahili la Taifa). The diction granted dual meanings to some words and at times took away the meaning especially with acronyms. Literature shows that proper use of grammar in language, guarantees the quality of a programme (Cotter, 2010; Eliah 2019). This study has also found that some captions (6.6%) were too wordy and had too many details that confused the interviewed audiences.. Ellis et al. (2019) contend that:

Readability quality is determined by: colour and font; natural linguistic breaks and natural flow and punctuation of a sentence; standard punctuation rules; positioning of captions; and line length (Ellis et al. 2019;11).

The quotation above implies that text comprehension determines the quality of captions. The study found that some programmes (11.1%) had no captions at all. These programmes are less likely to be adequately understood by viewers. They are bound to favour people who understand the language spoken during that time. Tanzania is a multi-lingual country and broadcast media is boundary less, it is for all in a public sphere, thus content is supposed to be inclusive. Here are examples of uncaptioned programmes,



Pic 9. Aired programmes with no caption at all

Source: Field Data (2021/2022)

Ellis et al. (2019) argue that the quality of the comprehensibility of captions is determined by the ability to identify and distinguish individual speakers, including off-screen or off-camera voices. Ellis et al (2019) further argues that:

However, television captions are increasingly accessed by a much wider consumer cohort, including people from culturally and linguistically diverse backgrounds, those with learning or cognitive disabilities, older people, and children, as well as those viewing television in noisy environment (Ellis et al, 2019;13).

It can be noted that caption errors cause distortions of information, confusion and it causes loss of faith by audiences which might cause financial loss of possible advertising revenue. Howell (2013), contends that caption inconsistencies affect television production, the end product and audiences. Wrong captions distort information. Caption errors negatively affect the flow of information to television audiences. Sasamoto and Doherty, (2016) contend that,

Facts, opinions and fiction can all very easily become blurred and distorted due to the wide circulation of online media and social networks where other users can add further changes and interpretations (Sasamoto and Doherty, 2016;14).

From these views, this study concluded that the intended messages were not delivered to the viewers as expected. Captions aid in the communication process, bridging the language barrier. Any distortions are bound to exclude some groups in the audiences. Active distortion of information leads to poor quality of programmes.

The quality of captions guarantees the quality of programmes in as much as there are other factors to consider when the question of quality arises. (Sasamoto & Doherty, 2016). During an interview session, an informant from MTV 1 had this to say,

I can say poor usage of captions in television programmes leads to poor quality of programmes. Captions are one of the important aspects that make the programmes colourful and credible (MTV 1: Field notes: 02/03/2021).

The connection between caption quality and the quality of television programmes has also been reported by various studies (Rosenthal, 2002; Zettl, 2012; Howell, 2013; Whittaker, 2017; Owens, 2020). Information distortion and comprehension were in this section discussed as the major effects of bad captioning. In the reading of media messages, captions have a bearing in how even the Deaf and Hard of Hearing are included in the information society.

The politics of audience retention for viability

Audiences are very critical for the survival of any media production house. The media depend on selling audiences to advertisers. The reach of any television station determines

the financial profitability and viability. Stations need to protect existing audiences and seek more audiences to widen their reach. Thus captions should not stand in the way of marketers in broadcasting. Opening up the public sphere creates a wider net for marketing. This point was mentioned by all media respondents interviewed. One of the news chief editors said:

Caption errors are an embarrassment. I remember one day we caused chaos when we gave the wrong lower third to a minister and that error went viral on social media. We were really intimidated (News Chief Editor 3: field notes, date 19/03/2021).

The quotation above corresponds with Sasamoto & Doherty's (2016) assertion that:

Captions make viewers vulnerable to the media producer's direct and indirect manipulation or unintended technical errors (Sasamoto & Doherty, 2016; 16).

On the whole, caption errors humiliate the television programme production industry, especially the producers of captions, supervisors and their television stations and production houses. The result of loss of credibility in society and losing viewers' interest. Good quality programmes increase the chances of attracting sponsorship (Ishikawa, 1996; Gross, 2000; Shamir, 2007; Lu & Lo, 2007). According to Armstrong et al. (2015), good subtitles are those that meet the needs and requirements of the viewer. As such, captions need to be readable, correct, and relevant to users.

The study reveals that wrong caption may bring friction between sources of news and programme producers with some demanding retractions. The three news editors and Manager of televisions interviewed had faced complaints from their sources about misspellings, interchanging of names, or giving wrong titles. This affects the flow of finances in any institution, and also lose credibility.

Conclusion and Recommendations

It has been observed in this study that television programmes in Tanzania face caption error problems. Although the frequency of these errors is not high, the extent of the potential impact on the quality of television programmes makes them a serious worry.

Based on the findings, the present study recommends that Programmes Editing Units (PEU) should be established. These should be given the role of previewing all captions before they go on air. All scripts should be approved by news chief editors and MTVs before broadcasting. Television stations must also employ qualified visual editors with minimum education of a diploma. Those with lower education must work under the maximum supervision of chief editors and MTVs. The study also recommends the repetition of previewing of programmes at least three times and by more than three previewers. There should be strictness towards the use of phones during news bulletins or live programmes. Only directors should be allowed to use phones. Editors and graphic designers should orient themselves to the programmes and news contents so as to be familiar with what they are creating. Language experts should be employed to avoid jargon and poor punctuation. Television programme principles should be adhered to, including time management, high concentration, and attentiveness.

References

- Armstrong, M., Brown, A., Crabb, M., Hughes, J. M., Jones, R. & Sandford, J. (2015). Understanding the diverse needs of subtitle users in a rapidly evolving media landscape. *The Journal of Specialised Translation*. 2(10), 128-143.
- Cotter, C. (2010). *News talk: Investigating the language of journalism*: Cambridge University Press.
- Creswell, J. W and Plano, C. (2007). *Designing and conducting mixed methods research*. Sage Publications.
- Downey, J. G. (2008) *Closed captioning: Subtitling, stenograph and digital convergence of text with television*. Johns Hopkins Press.
- Elijah, V. (2019). *Kiswahili katika vyombo vya habari ndani na nje ya Tanzania*. TUKI.

Ellis, K. (2019). *Disability and digital television cultures: Representation, access, and reception*. Routledge.

Ellis, K., Kao, K., Peaty, G. & Locke, K. (2019). Live caption quality monitoring on Australian free-to-air television. Centre for Culture and Technology (CCAT).

Federal Register of Legislation. (2013). *Broadcasting services (television captioning) Standard* <https://www.legislation.gov.au/Details/F2016C00225>

Gernsbacher, A. M. (2016). *Video captions benefit everyone*. SAGE.

Howell, G. (2013). *The quality of live subtitling: Improving the viewer experience*. Ofcom.

https://www.ofcom.org.uk/__data/assets/pdf_file/0017/45602/subtitling.pdf

Ishikawa, S. (1996). *Quality assessment of television*. John Libbey Media.

Leavy, P. (2017). *Research design: Quantitative, qualitative, mixed methods, arts - based and community-based participatory research approaches*. The Guilford Press.

Lu, X., & Lo, H. (2007). Television audience satisfaction: Antecedents and consequences. *Journal of Advertising Research*, 47(3), 354-363.

Merchant, M., Ellis, K., & Latter, N. (2017). Captions and the cooking show. *Media Culture*, 23(3). <http://journal.media-culture.org.au/index.php/mcjournal/article/view/1260>

Mitchell, L. (2009). *Production management for television*. Taylor and Francis Group.

Monaco, J. (2000). *How to read a film: The world of movies, media, and multimedia*. (3rd Edition). Oxford University Press.

Morely, D. (1980). *The National Audience Structure and Decoding*. Television Monograph No 11. London. British Film Institute

Mwaffisi, S. M. (2013). *Editorial independence in public broadcasting in Africa: A case study of Tanzania Broadcasting Corporation during the multiparty during multiparty presidential election of 1995-2010*. [Unpublished PhD Thesis, University of Dares Salaam].

Mwakalinga, M. N. (2010). *The political economy of the film industry in Tanzania: From socialism to an open market economy, 1961–2010*. University of Kansas.

Neuman, W. and Robson, K. (2005). *Basic social research, qualitative and quantitative approaches*. Pearson.

Nsubuga, E. H. K. (2000). *Fundamental of educational research*. MK Publisher (U) Limited.

Owens, J. & Millerson, G. (2008). *Video Production Handbook* (4th Ed.). Elsevier.

Owens, J. (2020). *Television Production* (17th Ed.). Taylor and Francis Group.

Reckdahl, K. (1997). Using imported graphics in LATEX2. <https://mirror.gutenberg-asso.fr/tex.loria.fr/graph-pack/epslatex.pdf>

Rosenthal, A. (2002). *Writing, directing and producing documentary films and videos*. (3rd Ed.) Southern Illinois University Press.

Sasamoto, R. & Doherty, S. (2016). Towards the optimal use of impact captions on TV programmes. In O'Hagan, M. & Zhang, Q. (Eds.), *Conflict and Communication: A Changing Asia in a Globalising world*. Nova Science Publishers.

Shitara, K. (2011). The change of telops on NHK variety shows. *Bulletin of Mukogawa, Women's University*.

Stuart H, Critcher, C, Jefferson, T and Roberts, R (1979) *Policing the Crisis*. Hong Kong. The Macmillan Press LTD

TCRA (2021). *TCRA quarterly communications statistics*. <https://www.tcra.go.tz>

Whittaker, R. (2017). *Television production: A free interactive course in studio and field*. Cyber Collage and International Campus.

Yuh, S., & Seo, J. (2006). Multilingual machine translation of closed captions for digital television with dynamic dictionary adaptation, *Lecture Notes in Computer Science*, 422-29

Zettl, H. (2012). *Television production handbook* (11th Ed.). Cengage Learning.

Comment [3]: add more recent references