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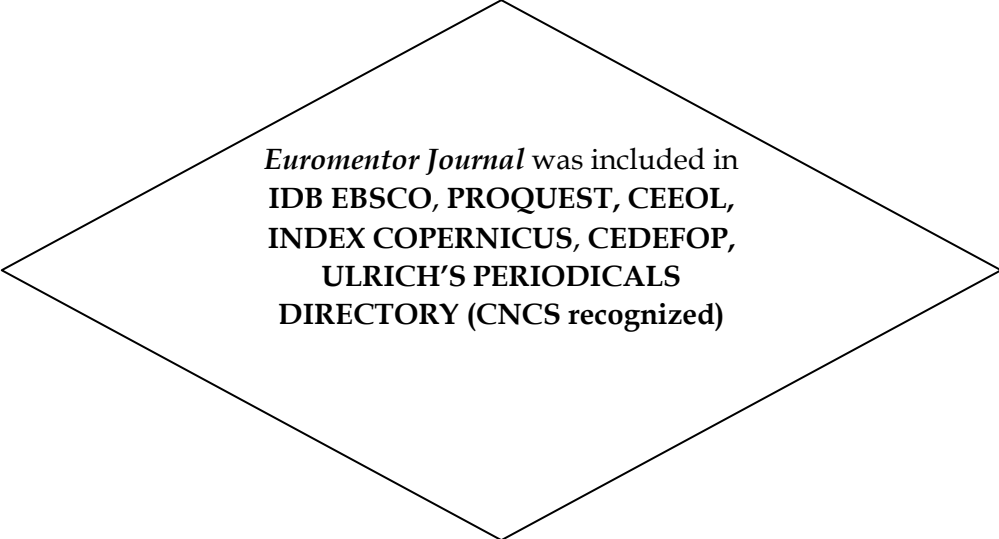
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THE VALUE SYSTEM IN RELATIONSHIPS WITH OTHERS AS SPECIFIC KOREAN AND JAPANESE ORIENTAL CULTURAL FACTORS

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ABSTRACT: *As oriental cultural factors in the conversational process, the article analyzes the oriental cultural value system in the relations between people of mother-tongue speakers, Koreans and Japanese. Oriental religion Confucianism influenced on their value system in communication. Korean and Japanese culture develop a complex linguistic system, both grammatically and pragmatically, for expressing politeness, which is related by Confucianism. These factors relate to etiquette, respect for the vertical axis of the social hierarchy, intimacy in the relationship with parents and loyalty to the emperor or master. This cultural and social value system manifest at the community level, causing inter-human relations to be greatly influenced by Confucianism.*

KEYWORDS: *Communication, Confucianism, oriental cultural factors, oriental value system.*

In both cultures, in Korea and Japan, Confucianism is a religion that has had a great influence on the value system in the relations between people. Confucianism gave the ideological foundations of the Cho-Sun (조선) dynasty that lasted 500 years (1392-1910) in Korea and the E-Do (江戸) dynasty 265 years (1603 - 1868) in Japan, were particularly influential religion. Based on Confucianism, ethical and social principles have been composed, principles that apply in all areas of traditional Korean society. The foundations of these principles are as follows:

三綱 五輪 (Three fundamental principles and five relational principles)[1]

三綱 (The three fundamental principles)
　父 爲 子 綱 - It is essential for a son to support his father.
　君 爲 臣 綱 - It is essential for an official to support his emperor.

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[1] 朱熹 (Confucius) 小學, 明倫篇 (Anthropology)

夫 爲 婦 綱 - It is essential for the wife to support her husband.

五 倫 (The five relational principles)
君臣 有 義 - There must be a right relationship between an emperor and an official.
父子 有 親 - There must be an intimacy between a son and a father.
夫婦 有 別 - There must be a limiting relationship between a husband and a wife.
長幼 有序 - There must be a priority relationship between an adult and a child.
朋友 有 信 - There must be a trusting relationship between friends.

These 5 types of relationships originate in ancient China, in the five teachings of Mencius. Mencius summarizes his five principles thus: "if a man only cares to eat well, to dress warmly, to live comfortably and to disregard the basic teachings, he does not differ from an animal. If he wants to follow the essential teaching (path, 道), a wise man will care about the value system in his relationship with people. This philosophy has also spread to oriental regions in Korea and Japan, over time becoming the basis of the moral principles of these people.

Also, Confucianism emphasized the concept of "family." According to this system of thinking, the family was to be led by the head of the family (father) by a well-defined hierarchical order, and its cohesion was to be strengthened through the commemoration of the ancestors. The happiness of each member of the family could have been sacrificed for the happiness of the family. Thus, much emphasis was placed on family cohesion, blood relatives. The concept of relationship is strengthened, and based on this concept, the notion of "our house" is born, a concept based on genealogical bases and structured based on a strict hierarchy. This concept will have wide applicability and will be applied to other types of groups, for example, to the neighborhood, the company, the school. There will be differences between those belonging to the group and those outside it.

This concept of "our home" divides people into those who are mine and those who are not mine. There will be a different attitude towards the members of these two groups. There is a belief that those who are "mine" will help and strengthen us that we will respond to their action. On the other hand, in the case of those who are not mine, there will be a tendency to ignore them leaving them aside. These two different aspects, which

involve association, respectively rejection, imply the existence of two different communication systems. Thus, there are opened a lot towards the group members, on the contrary, restraint towards that outside.

The Korean culture is based on a collectivist approach, respecting the hierarchies and social positions, it grants a specific status to each position. Much attention is paid to the feelings of others and their favor is expected humbly. Respect the public image of others, develop compassion (情:Jǎng), respect for human nature. All this makes the Koreans is more humble, more respectful towards others in communication. This is why the Korean languages have greatly developed the language of politeness.

Also, in Japan, Confucian education was received in schools which, for this purpose, were established in all areas of Japan. Confucian education was the essence of education. Of these schools, one of the most famous was the school in Ashikaga (足利), whose founder was Yoshikane (足利義兼), during the Muromachi period (室町) (between 1336-1573). Neo-Confucianism (宋明理学) was adopted as the main political ideology during the Edo (江戸) period (between 1603-1868).

During the period when Bakuhu (幕府) had governed, in the case of soldiers, warriors, much emphasis was placed on cultivating the military spirit, Bushido (武士道). During this period, the subordinates were asked: "Offer all the loyalty (devotion) to the master, without sparing your own life! Be devoted to death! You love the military spirit, and be brave! Don't be greedy! Be led by a spirit of honor! Follow the rules!" The educational system based on Confucian thinking has been promoted by several personalities of public life, such as, for example, Tokugawa Ieyasu (徳川家康). After the Meiji restoration (明治維新), Confucianism became a spiritual power, constituting the essence of moral education, cultivating in people the spirit of devotion to the Emperor and patriotism. The main ethical reference that Chinese and Koreans emphasize is respect for their parents, Hyo 효 (孝). Instead, the main ethical landmark of the Japanese is the devotion (loyalty) to the master, Chung (忠), which implies respecting the rules imposed by the bureaucratic system and carrying out tasks with their forth. Seonbi (선비), those wise and virtuous people from Korea, and Samurai (武士), warriors from Japan, represented the political elites who, in both cases, led the Confucian-based society, both from a community and a cultural point of view. They represented the ruling class and, in this respect, benefited from certain privileges, but at the same time they had to obey certain rules. Their behavior was strictly regulated, based on firm

principles. In the case of the Samurai (武士), their value system was based on their devotion to their master, Chung (忠)[2].

Confucianism is based on norms of behavior, conformity to certain behavioral manners; the Confucian value system was formulated over a long period, during which Confucianism exercised a strong cultural influence. The first behavioral element regulated based on these norms was the greeting, which takes place at the moment of the meeting between two people. The Japanese and Koreans, based on their Confucian culture, gave the interlocutors differentiated respect, depending on their position in the social hierarchy, making a difference between those who belong to the same category as the speaker and those from a lower or higher category. Confucianism differentiates people by position, age, reputation and so on, to maintain the vertical social hierarchy of the community. This hierarchy, which refers to its category to other categories, establishes the vertical axis of the society, based on which the social relations are constituted. For example, it distinguishes between adults and young people, teachers and disciples, superior and subordinates, men and women, etc. The need to respect those with a higher hierarchical position (ex: father, mother, bosses) has led, in both cultures, to elaborate a linguistic system of politeness, to manifest both at the level of the grammatical rules of the language and the level of the rules pragmatic.

Based on compassion (情: Jăng), Japanese culture has cultivated respect for human nature and group consciousness. This perspective is different from the selfish attitude of Europeans. However, like any good norm applied improperly, so too the adoption and application of Confucian ideology in an excessive way led to negative results, which were far from the initial purpose of these norms. For example, the fundamental norms of social behavior, that is, the three fundamental principles and the five relational principles (三綱 五 輪) emphasize the attitude towards the superior people from a hierarchical point of view and treat with certain neglect those with a lower condition. Also, the values are predominantly patriarchal, the woman being treated as inferior. All these norms have led to exaggerated discrimination of class and gender.

Ideology and morality is a product of a period, so it is inevitable to change the conditions that led to their adoption. This is how, when the conditions changed the adoption of Confucianism and its norms took

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[2] 小川誉子美·前田直子(2003)

place in completely different forms than initially. It is necessary to distinguish the essence of Confucian root idea from the corrupted forms under which this teaching was adapted in society, at a certain period. In their original form, the three fundamental principles and the five relational principles (三綱 五 輪) did not lead to the neglect of those located on the lower levels of the social hierarchy, but they preached compassion and mutual respect.

In conclusion, the social and cultural factors that determine that both Korean and Japanese culture develop a complex linguistic system, both grammatically and pragmatically, for expressing politeness, are related to the influence that Confucianism exerted on social values and culture of both peoples. These factors relate to etiquette, respect for the vertical axis of the social hierarchy, intimacy in the relationship with parents and loyalty to the emperor or master. This cultural and social value system is as manifest as possible at the community level[3], causing inter-human relations to be greatly influenced by Confucianism. There was a need for a method of expressing respect, intimacy or loyalty, depending on the different specific situations, and, as a result, the whole system of linguistic politeness was developed. The linguistic expression of politeness is realized on several levels, taking into account the vertical axis of the social hierarchy. Thus, those oriental two languages Korean and Japanese express politeness both at the level of its grammatical structures and at the level of pragmatic rules.

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PROSODY OF ENGLISH TELEVISION ADVERTISING: SOCIOLINGUISTIC FEATURES AND PRAGMATIC POTENTIAL

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ABSTRACT: *The article addresses the issue of linguistic, particularly phonetic factors affecting the perception of speech. It draws on the findings made in the course of the auditory analysis of the commercials under consideration. The paper analyses sociolinguistic factors influencing the choice of linguistic means in English television commercials to ensure the effective impact of advertising texts on the addressee, as well as the interaction of the pragmatic potential of oral informational texts with their prosodic organization. It proves that sociolinguistic features and pragmatic potential alongside with the prosody of television commercials contribute to the maximum influence on the addressee.*

The article substantiates the classification of structural components of English television commercials, which is used as a theoretical basis for further experimental phonetic study of prosodic means interaction in the analyzed texts. The research elaborates the matrix of alternative variants of structural-algorithmic schemes of linguistic means interaction of the television commercial content. Abstracting from the specifics of the text content, it allows theoretically to predict and experimentally trace both general changes of its prosodic organization, and the peculiarities of prosodic parameters interaction at structural boundaries.

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KEYWORDS: *auditory analysis, perception, pronunciation features, prosodic means, pragmatic function, sociolinguistic features, television commercial.*

Introduction

In a wide range of contemporary issues of intercultural communication it can be considered a common assertion that mass communication system becomes a dominant factor in modern culture. Mass media shape a person's outlook, his/her values, concepts, and stereotypes. Media texts reporting on the realities of socio-cultural communities or directly addressing to a foreign audience play an active role in intercultural communication both as a means of reaching a target audience and by the power of communicative influence.

In view of this, the participation of mass media in intercultural communication is an urgent scientific and social problem. Its study allows the researcher to thoroughly investigate problems of understanding, interpretation of analyzed texts, their communicative impact.

Modern linguistics is increasingly turning to in-depth and comprehensive analysis of speech, which is connected with the increasing amount of information we receive via radio and television. In this context, the evaluation of the influence effect of oral informational text on the recipient in mass communication occupies an important place among the problems of the study of speech.

Numerous studies of different types of communication (Baron[1]; Dyer[2]; Floor & Van Raaij[3]; Holliday[4] et al.) indicate that intercultural communication may result in a number of obstacles, not only on a personal level but on the media one as well Leontovich[5] assumes that the reason for communication obstacles can be the addresser, the addressee, or the environment, that affects the perception of audio and visual communicative signals. The linguist divides the obstacles caused by the

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[1] Baron, N., *Always on: Language in an online and mobile world*, Oxford: Oxford University Press, 2008.

[2] Dyer, G., *Advertising as communication (Studies in culture and communication)*, London – New York: Routledge, 1982.

[3] Floor, K. & Van Raaij, F., *Marketing communicatie strategie (Marketing Communication Strategy)*, Houten: Stenfert Kroese, 1993.

[4] Holliday, A., Kullman, J. & Hyde M., *Intercultural communication*, Third edition, London – New York: Routledge, 2017.

[5] Leontovich, O., *Russians and Americans: Paradoxes of intercultural communication: Monograph*, Moscow: Gnosis, 2005, p. 229.

participants of communication into physiological, linguistic, behavioral, psychological, and cultural ones. Due to the purpose of our study, we pay special attention to the linguistic factors: phonetic, lexical, grammatical errors; violation of the presentation logic, difficulties in the perception of speech; misinterpretation of semantic linguistic units; misunderstanding of grammatical constructions; inability to perceive the text in the whole, etc.

However, cognitive methods of research and interpretation of media discourse allow us to distinguish two blocks of factors that influence the recipient's perception of information: factors related to the addresser (personal, informational and technical) and factors related to the addressee (personal: worldview, cultural, national, religious, age, gender, social, political and economic, territorial, informational and technical, etc.). Of particular interest to scholars who study mass media texts, in particular advertising, is the second group of factors.

The aim of the paper is to analyze the phonetic factors affecting the perception of English television commercials, their sociolinguistic, communicative and pragmatic peculiarities.

The material under analysis is represented by English TV commercials, recorded from satellite television channels from 2014 to 2019, lasting for two hours. The total amount of the experimental material is 1603 advertising utterances.

Television commercials as a form of social influence on the addressee: its basic features and pragmatic potential

In terms of modern pragmalinguistics an advertising text is a speech form of social influence on the addressee. This speech action, i.e. the influence of verbal information on the recipient's behavior, is formed through the interaction of a number of verbal and non-verbal factors, which constitute the communicative act. Under these conditions, expressiveness of the advertising text is obligatory, since it depends on how the communicative and pragmatic functions of advertising are implemented.

The difference between the advertising text and other texts of the imperative type (orders, decrees, instructions, invitations, etc.) is that the impact on the addressee is achieved through the formation of attitudes, desires, beliefs, i.e. the addressee's action planned by the advertiser takes place only on condition of appearance of certain incentives to this action,

since the desire, for example, to make a purchase arises in a person only when the advertised object has a certain value for him.

The specific feature of advertising texts and TV commercials in particular is their dynamic nature, which results in the realization of these texts from the beginning to the end without interruption. Accordingly, a functional feature of TV commercials is connected with the need to persuade the addressee to make a purchase or use the service, i.e. the need to maximize the effect of a small text within a short time.

Many scholars (Fletcher[6]; Harte[7]; Kanner[8]; Wiedemann[9]) emphasize the fact that TV commercials should attract attention to the advertised product in a short period of time, evoke the viewer's interest, maintain it, arise the desire to test a new product and encourage to make a purchase. This circumstance and the limitation of the duration of television advertising determine the specificity of its structure, which acquires typical features of the small text.

A characteristic feature that helps to distinguish television advertising from other types of information is its emotional impact, which contributes to the formation of a particular image in a person's mind. The purpose of advertising is to evoke positive emotions with the help of this image that may become an incentive and encourage a person to make the purchase of the advertised product or use the service offered.

Analyzing the mechanism of advertising influence, it should be stated that it is achieved through the appeal to the emotional, subconscious sphere rather than to the rational one. Moreover, it presupposes the appeal to desires, feelings of a person; its purpose is to increase a sense of need in a particular product or service. Thus, we should draw attention to the fact that due to the prevalence of emotional argumentation in advertising texts, the dominance of its form over the subject-content components is observed. The influence of TV commercials is usually amplified by expressive means and stylistic devices that appeal to the addressee: lexical (idioms, tropes), phonological (rhyme, alliteration), and syntactic (compression, redundancy, rhetorical question, inversion).

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[6] Fletcher, W., *Powers of persuasion: The inside story of British advertising: 1951-2000*, Oxford: Oxford University Press, 2008.

[7] Harte, L., *TV advertising; Business, technology, and systems*, Fuquay Varina, North Carolina: Althos, 2010.

[8] Kanner, B., *The 100 best TV commercials: … and why they worked*, New York: Random House, Crown, 1999.

[9] Wiedemann, J., *Advertising now. TV commercials*, Cologne: Taschen Gmbh, 2009.

Hence, the effectiveness of TV commercials realization is measured by its ability to create a positive attitude of the recipient to the advertised product or service by stimulating the interaction of the emotional and pragmatic in his/her mind. In other words, the influential function of TV commercials must be determined by its emotional and pragmatic potential, the action mechanism and features of actualization of which is thoroughly researched by Kalita[10]. Accordingly, the study of the specificity of English TV commercials perception is carried out taking into account three levels of emotional and pragmatic potential of the analyzed texts: low, medium, and high.

Sociolinguistic factors influencing the choice of linguistic means in mass media texts

The analysis of sociolinguistic peculiarities of English TV commercials actualization allows us to conclude that a lot of factors play an important role in the choice of linguistic means to ensure the effective impact of advertising texts on potential consumers. They are as follows: adequate prediction of the mass audience, age difference and psychological peculiarities, recipients' mood at the moment of perception of information, as well as their beliefs, views, tastes, hobbies, wishes, and habits.

Since the effective choice of linguistic means of any text largely depends on taking into account the status of communication participants and their role relations, then, the results of a series of sociolinguistic studies (Brownlow[11] et al.; Goffman[12]; Mallinson[13] et al.; Schweitzer[14]) prove the need to predict in mass media texts the recipients' social status or occupation, their education, etc. Thus, the social groups of advertising consumers are defined according to the following criteria: social affiliation, age, gender, preferences for goods, pastime etc. Role relationships are interpreted as the relationships of the communicative act

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[10] Kalita, A.A., *Energetics of speech: Monograph*, Kyiv: Kafedra, 2016, p. 94.

[11] Brownlow, S., Beach, J.C. & Silver, N.C., How social status influences ''Affect language'' in Tweets. In *Psychology cognitive science. Open journal*, 3 (4), p. 100-104. DOI: 10.17140/PCSOJ-3-130, 2017.

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[13] Mallinson, Ch., Childs, B. & Van Herk, G., *Data collection in sociolinguistics: Methods and applications*, New York: Routledge, 2013.

[14] Schweitzer, A.D., *Modern sociolinguistics: Theory, problems, methods*, Moscow: URSS, 2012.

participants, which are determined by the social situation and can change together with it.

Accordingly, for pragmatic intention realization of TV commercials, i.e. engaging in advertising communication, evoking potential customers interest in the advertised product or service, an advertising text should simulate a conversation that allows establishing the most trustworthy relationship with the addressee, bring him closer, reach mutual understanding with him. The main tools of achieving this result are mediated by the means of transmission, communication channel, conditions of transmission and perception of the source of information, their content, as well as communicative and meaningful context.

In the context of the present study the statement that the most significant difference between personally oriented communication and socially oriented one lies in the nature of the recipient of the message is particularly important. It should be emphasized that to organize speech influence, the communicator must have certain information or a set of data that allow him to outline the generalized image of the addressee. The complexity of predicting the addressee image in TV commercials, which differs fundamentally from the image of the recipient in personally oriented communication, does not deny the probability of its creation, since the generalised image of the addressee consists of social attributes shared by a particular audience.

Under these circumstances the main social attributes are considered to be partial personality roles or individual role segments (national, cultural, age, professional, family role (Desheriev[15]; Chambers[16]; Wardhaugh & Fuller[17]), which, although impoverish the recipient's image, still to some extent solve the problem of its formation in the process of mass media texts creation.

According to Rossiter and Percy[18], potential consumers should be characterized by the following features: geographical (area of residence, type of locality, climate), psychographic (traditions, political queries,

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[15] Desheriev, Yu.D., *Social linguistics: Basics of generic theory.*, Moscow: URSS, 2019, p. 193.

[16] Chambers, J.K., *Sociolinguistic theory: Linguistic variation and its social significance*, Hoboken, New Jersey: Wiley-Blackwell, 2002.

[17] Wardhaugh, R. & Fuller J.M., *An introduction to sociolinguistics*, 7th edition, Hoboken, New Jersey: Wiley-Blackwell, 2014.

[18] Rossiter, J.R. & Percy, L., *Advertising communication and promotion management*, Sydney: MCGraw-Hill, 1997.

habits), behavioral (lifestyle, spiritual queries), demographics (gender, age, marital status).

The need to take into account the above mentioned features is due to the fact that through advertising in the media the communicator "appeals" to everyone, however, he does not affect a certain role set of personality, but individual role segments, common to all individuals that make up a specific audience. Thus, social interaction is carried out, which is a manifestation of the joint activity of communicants in the structure of certain social relationships, capable of imposing restrictions on the social activity, since they force the communicants to reveal their social roles.

In terms of predicting the response to the information provided it is necessary to pay particular attention to the factors associated with the addressee, since the perception of the same information may be different. Besides, the amount of information perception variants depends on the number of addressees and it is rather difficult to predict their reaction, which will differ as well. However, if the factors (age, gender, nationality, outlook, social status, etc.) coincide, the positions of the addressees and their reactions to perceived information may converge.

Scholars (Armstrong[19]; Bignell[20]; Dominick[21]; Hanson[22]) agree that the most important characteristic of any statement in the media is the attitude of the communicator to the audience which is expressed through the use of special semiotic techniques and linguistic means (phonetic, lexical, stylistic, etc.) that predict or imitate the audience's reactions. These means include direct and indirect appeals, rhetorical questions, expressive intonation, rhythm, gestures, spoken elements in vocabulary (Biocca[23]; Dyer[24]; Kozub[25]; Valigura[26]).

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[19] Armstrong, J.S., *Persuasive advertising. Evidence-based principles*, New York: Palgrave Macmillan, 2010.

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[25] Kozub, L., The role of prosodic means in realizing the pragmatic effect. In *International journal of philology,* vol. 10 (2), Kyiv: NUBIP, 2019, pp. 45-50.

The correlation of intonation and pragmatics in the study of TV advertising

Despite a number of studies on various aspects of oral media (Cook[27]; Rodman[28]; Vivian[29]; Wolff[30]), the least researched in mass media communication is the intonation organization of the communicator's speech. This problem is closely related to the notion of the intonation dominant, which is the realization of the corresponding semantic and modal dominants. Due to the intonation system in general and the intonation dominant in particular, oral speech becomes specific depending on the purpose of communication. One of the variants of such communication is television communication, the linguistic basis of which is a language defined by the author as spoken. It is also emphasized that the "colloquiality" of speech arises not only from the proper text organization, but it largely depends on the way the text is presented by the communicator. Orientation to a certain text presentation or interpretation is formed as a result of preliminary analysis of the message content, goals, audience, etc.

In order to facilitate the task of adequately communicating the material to the addressee, as well as creating an appropriate speech colouring, it is necessary to develop a system of techniques for prosodic organization of the teletext. This text, in contrast to the written (for example, newspaper) one should meet the requirements of appropriateness of sound reproduction and auditory perception. In this respect, intonation plays an important role, it structures the sound stream that carries socially relevant information. It plays the role of a psychological tool aimed at emotional influence while perceiving the message.

In the study of oral speech it is important to consider an assessment of the influence effect of oral informational text on the addressee in terms of

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[26] Valigura, O., Bilinguals and linguistics of creativity: The case of Ukrainians speaking English. In *Language – literature – the arts: A cognitive-semiotic interface*, Frankfurt am Main, Bern: Peter Lang, Vol. 14, 2017, pp. 261-277.

[27] Cook, G., *The discourse of advertising*, London – New York: Routledge, 2001.

[28] Rodman, G., *Mass media in a changing world*, 4th edition, New York: McGraw-Hill Publishing, 2012.

[29] Vivian, J., *The media of mass communication*, 12th edition, London: Pearson Education, 2016.

[30] Wolff, M., *Television is the new television: The unexpected triumph of old media in the digital age*, New York, Portfolio, 2017.

mass communication. Having learnt something new about a fact, a person changes his/her attitude to it and accordingly, in case of necessity, can make a decision that governs his/her behavior. The main pragmatic rule of any verbal informational message is a targeted impact on the addressee in accordance with the sender's intention that presupposes influence on the addressee's thoughts, feelings, and behaviors in order to convince him/her of the truthfulness of the information provided and, as a result, cause him to react.

One of the most important factors that determines the success of TV advertising influence is the prosodic organization of a text. It helps to recognize the message, improves remembering and understanding, increases the influence effect and perception.

Exploring the role of prosody in the implementation of the influence function of the oral informational text, it is important to note that pragmatically oriented text is a message whose content, in addition to informing, is intended to influence the emotional and volitional psyche of the recipient of information. At the same time, the influence of texts at the prosodic level takes into account such a component as expressiveness, that is manifested in the specifics of the speech segments prosody, which in terms of understanding and text influence are the most important segments. Thus, understanding of the text content is determined by the selection of certain actualizers (keywords or phrases), which, as the semantic centers of phonopassages, localize the maximum meanings of prosodic parameters.

Analyzing the interaction of the pragmatic potential of oral informational texts with their prosodic organization, it is worth mentioning that the influence function of prosody is not an abstract notion. Considering this function one should mean appealing and modal functions of prosody, as well as expressive means of their actualization. Therefore, the process of implementing the influence function of TV commercials should be considered as a result of the integrated interaction of emotional, evaluative and appealing means used to influence the addressee in the process of communication to persuade, cause a particular reaction, induce actions.

Potapova and Potapov[31] assume that prosodic means of realization of speech influence in mass media include such intonation components as

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[31] Potapova, R.K. & Potapov, V.V., *Language, speech, personality*, Moscow: Languages of Slavic culture, 2006, p. 209.

speech range, melodic intervals, tempo, pauses, etc. Optimization of speech influence, according to these scholars, can be achieved by means of maximum values (melodic interval in the nucleus, slow tempo in a particular syntagm, length of syllables, pauses, etc.), and by means of minimum values (level of melodic contours, loudness, duration, etc.). However, the maximal degree of speech influence is created by a combination of minimum and maximum values of the specified parameters.

Hence, analyzing the prosody of English television commercials, it is worth taking into consideration their sociolinguistic features and pragmatic potential that contribute to the maximum influence on the addressee. To achieve the purpose of the research it is insufficient to consider the lexical diversity of the analyzed texts, their syntactic constructions and intonation patterns, since it is more important to study the correlation between the above mentioned components and the extralingual factors that help to achieve the necessary effect and provide the impact on the recipient of information.

Television commercials structure: basic components and their functions

Focusing on the classical structure of the small text one can differentiate the following components in the analyzed TV commercials: the beginning, the main body, and the end. Within this division, the beginning appeals to potential consumers and attracts their attention to the advertized object. The main body motivates the addressee and contains the most important information, which is often summed up in a slogan. This part is aimed at stimulating the subconscious, i.e. evoking interest in the proposal, maintaining the interest of the addressee in the advertised product or service, deepening this interest, and therefore, transferring the existing problem to the realm of personal. The end as a structural component of an advertisement, that contains reference information (contact information), echo phrase, and coda, encourages the viewer to make particular decisions by encoding his consciousness, i.e. suggesting actions aimed at solving the existing problem.

Considering the structure of TV commercials we draw special attention to direct coda, one of the final elements of advertising, which helps the consumer make the ultimate decision to buy the advertised product or use the service. The direct coda is an imperative sentence, which encourages to perform some action beneficial to the advertiser.

Examples of direct coda from the analyzed TV commercials are as follows: *See for yourself; Profit from it; Don't leave home without them; Share your experience; Do it now; Call Hill House Hammond today… and ask for low cost Home and Contents Insurance.*

As for the indirect coda, it is expressed through affirmative sentences and induces the addressee to take some action with respect to the advertised item. It carries the message about the price, quality, novelty, uniqueness of the advertised product, i.e. the parameters that affect the addressee's final decision to purchase, use the service, etc. *This is the only place to experience movie's passion and interaction; Now all BTCellnet customers can use their mobiles abroad.*

One of the main components of TV commercials is slogan, that can often be used as a separate text to maximize the impact of the advertising message. It is one of the main means of drawing attention, and in the absence of other structural components of the advertising text, its role is greatly increased. It is characterized by the following features: concise, clear, memorable, appealing, emotional, repetitive, as well as associative taking into account the needs and interests of consumers. The main functions of slogans are to identify the company, promote product awareness, express the main concept of the advertising campaign in an easy-to-remember original phrase.

The study of TV commercials structure proves that slogan is repeated in many messages, thus playing the key role in the advertising campaign, it becomes a permanent feature of TV advertising and alongside with the trademark identifies the company and its products: *Apple. Think different; Nescafe. One thing leads to another; The Vauxhall Astra SRI. Handles life beautifully; Imodium Plus. To stop diarrhoea before diarrhoea stops you; Tomas Sanderson. A little luxury, a lot of pleasure; CNN. Be the first to know.; Adidas. Impossible is nothing.; Nike. Just do it.; Whiskas. Feed their curiosity.*

The use of each of these components in a TV commercial depends on the tasks set by the advertiser. Moreover, in case of the absence of one or more components in the advertising text structure, it becomes necessary to strengthen it with prosody. This reinforcement helps to ensure the proper impact on the recipient, to evoke particular associations, to make him/her guess what has not been said in the advertisement.

One of the most important methodological requirements for experimental phonetic study of the text prosodic organization is the necessity of correlation of prosodic means interaction with the specifics of structural peculiarities of the text under study. Due to this there appeared

a necessity of substantiating the classification of structural features as a theoretical basis for further experimental phonetic study of prosodic means interaction in English TV commercials.

The analysis of a number of advertising texts showed that all features related to their structure can be classified into at least two hierarchical levels, since the notions of "beginning", "main body", "information block", etc., characterize the structural features of the text, and the notions of "coda", "slogan", "echo phrase", "reference information" should be attributed to linguistic means of text content.

Moreover, the notion of "information block" is capable of performing a transition function from the structural part of the block to the semantics of its linguistic means. Based on these considerations, we substantiated a two-level scheme of systematized structural elements and linguistic means of the TV commercials content, illustrated below in Table 1.

Table 1: Generic structural block scheme of TV commercials
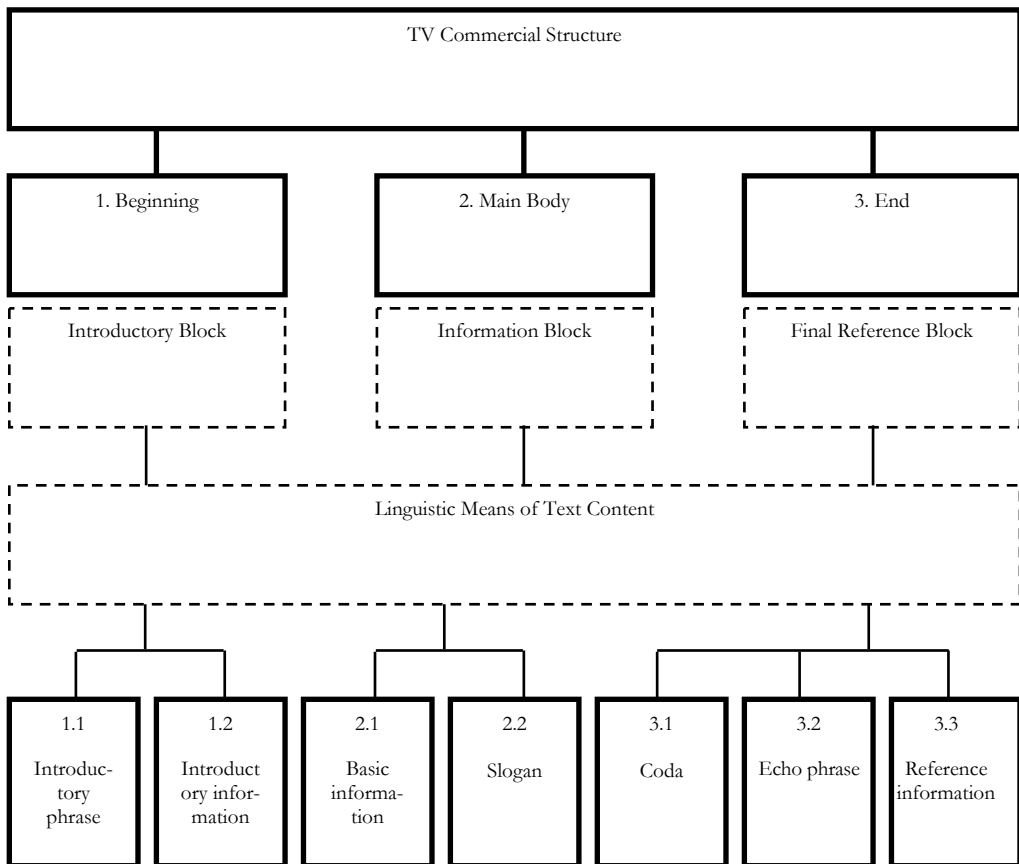
At the top of the scheme's hierarchical level the traditional minimum of structural elements of the advertising text is shown: 1. beginning, 2. main body, 3. end. The linguistic blocks which reflect the content of the structural elements mentioned above are indicated below the rectangles given by the dashed line. The second layer includes specific linguistic means used in the formation process of each block's content.

Thus, the introductory block can be formed by at least two alternative means: an introductory phrase or introductory information consisting of more than one phrase. The information block can also consist of one or two types of linguistic means: basic information and slogan. As for the linguistic means of the final reference block content, their nomenclature covers coda, echo phrase, reference information. The purpose of echo phrase is to repeat the slogan or the main thought of the advertising message in order to make it memorable to the listener. Reference information, which usually ends an advertising text, indicates the company address, its contact numbers, benefit terms, etc.

Generic structural block scheme proves that all English advertising texts are based on a well-defined number of linguistic means of text content. It is worth mentioning that in English, as in other foreign language advertisements, many of its specific meanings are conveyed mainly by means of alternative combinations and the interaction of particular expressions, phrases and words meanings as structural elements, which should be placed at the corresponding lower classification levels, as seen in Table 1. However, their enrollment in the scheme is superfluous, since to determine the invariant models of the prosodic organization of the texts under study it is sufficient to consider linguistic means of text content provided at the lower classification level.

Matrix of alternative variants of English TV commercials structure

In order to reduce the volume of experimental phonetic research, provided that the necessary results are ensured, we need to determine the optimal minimum of the most typical variants of English TV commercials structure. To solve this problem, we considered all theoretically possible schemes of variants of linguistic means interaction of the TV commercial content, a set of alternatives, which are shown in Table 2.

It becomes obvious from the table that the basic linguistic means of the TV commercial content is the basic information that is presented within the information block. In general the variation of other linguistic means of the TV commercial content will depend on its duration,

pragmatic potential, type of the advertised product or service, etc. Taking into account these conditions as an additional, restrictive feature or criterion for defining a standard TV commercial, we substantiated the appropriate scale of English TV commercials duration.

The results of a typical structural-algorithmic scheme of linguistic means interaction showed that the second most frequently used of TV commercials structural elements after basic information (42.79%) is an introductory phrase or introductory information (15.81%). Coda usage (12.56%), reference information (11.63%), and slogan (10.23%) are less frequent. Echo phrase has the lowest (6,98%) frequency of occurrence.

For further analysis of alternative variants of TV commercials structure in terms of their duration, it is important to emphasize that the most frequently used are commercials of average duration, defined on the following scale: short (5-20 sec.), average (20-40 sec.), long (40-60 sec.). All other texts over 60 seconds in length have been removed from the analysis as being available in rare forms of TV commercials: advertising programs, advertising films, etc.

The present study suggests that the most typical structure of medium-length English commercials is formed on the basis of the algorithmic linguistic means interaction of the type "introductory information → basic information → coda → reference information", which is indicated by variant 20 in Table 2. In addition, the basic information of the information block is sometimes reinforced by the slogan, or replaces it. The alternative variants 1-6 and 7-12 of the structural-algorithmic interaction of the TV commercial linguistic means are used in small-length texts, and variants 25-28 — in long ones. Variant 28 reflects the most complete structure of the TV advertising text.

Thus, the structural and semantic features of the advertising texts described and substantiated above can be the basis for the further experimental phonetic study of the prosodic organization of English TV commercials.

Table 2: Matrix of alternative variants of structural-algorithmic schemes of linguistic means interaction of the TV commercial content

Variants number	Introductory phrase	Introductory information	Basic information	Slogan	Coda	Echo-phrase	Reference information
1	■	□	■	□	■	□	□
2	■	□	■	□	□	■	□
3	■	□	■	□	□	□	■
4	■	□	■	■	■	□	□
5	■	□	■	□	□	■	□
6	■	□	■	■	□	□	■
7	□	■	■	□	■	□	□
8	□	■	■	□	□	■	□
9	□	■	■	□	□	□	■
10	□	■	■	■	□	□	□
11	□	■	■	■	□	■	□
12	□	■	■	■	□	□	■
13	■	□	■	□	■	■	□
14	■	□	□	□	□	□	■
15	■	□	■	□	□	■	■
16	■	□	■	□	□	■	□
17	■	□	■	■	□	□	■
18	■	□	■	■	□	■	■
19	□	■	■	□	■	■	□
20	□	■	■	□	□	□	■
21	□	■	■	□	□	■	■
22	□	■	■	■	■	■	□
23	□	■	■	■	□	□	■
24	□	■	■	■	□	■	■
25	■	□	■	□	■	■	■
26	■	□	■	■	■	■	■
27	□	■	■	■	■	■	■
28	□	■	■	■	■	■	■

Auditory analysis results

An experimental phonetic study of English TV commercials perception was carried out by two groups of informants (native and non-native speakers of English), as well as experienced phoneticians. The first group consisted of eight native speakers from the United Kingdom and the United States (aged 25 to 65), who had the philological training and the practice of oral texts audition. The study of the analyzed texts revealed that both groups of the experiment participants had difficulties in their perception.

The auditory analysis proved that the reasons for the difficulties mentioned above for native English speakers were fast speech tempo, high volume, especially the combination of fast tempo with high volume, the use of accents, as well as lack of subject matter knowledge. So, if an informant is not a sports fan, not interested in the trends of contemporary music and is unaware of the peculiarities of some technical devices functioning (for example, not a programmer), such advertising in combination with the prosodic means described above causes difficulties of the perception.

It should be noted that the use of local and foreign accents is quite common to British and American TV commercials. Native speakers, who acted as informants of the research, stated that the use of the accent as a sociolinguistic feature of TV commercials was due to the need to direct the influence of the advertising message to certain social groups of recipients. Such use is intended primarily for foreigners (Mexicans, Spaniards, Hindus) who reside in the United States and the United Kingdom. The greatest commercial success is achieved with the use of accents in TV commercials of different lengths addressed to recipients with medium social status, however, accents are not observed in TV commercials addressed to recipients with high and low social status.

The following short advertising text is an example of the use of an accent as one of the ways to increase the impact on the recipient:

– ˈWhy on ˎearth ⇒ do they aˈllow that ˈbloke on the ˌcourse?⌢
– ˈMr. ˌKipling? ⌢ˎWell,⊕he ˈdoes ·make exˈceedingly ˈgood ˎcakes.⌢

The analysis of the pronunciation of the second speaker, a native of one of the local English accents, shows that the sonorous backlingual sound /ŋ/ in the surname *Kipling* and in the word *exceedingly* changes to the frontlingual /n/, and in the words *make*, *cakes* diphthong /eɪ/ is pronounced as /aɪ/. According to the informats, these pronunciation

features are characteristic of the Cockney accent, which is commonly associated with the East End of London. For the speaker this accent is obviously a native one.

More complex interaction of one of the English accents with other prosodic means is observed in the following example of a short advertising text:

\Hi, there.⌒ ‿Now, |I'm \sure ⇒ you'll be |wanting to |fill |in your \tax re|turn,⇒ /won't you?⌒ If you |get it ʲin ⇒ before the |30ᵗʰ of Sep/tember,⊕ those |lovely /tax people ⇒ will |calculate your |tax \for you.⌒ So |go \on.⌒ |Fill it \in…⌒

The peculiarity of this TV commercial actualization is the realization of /ɪ/ as long vowel /iː/ in the words *fill* [fiːl], *in* [iːn], *it* [iːt]; softening of /l/ in the words *fill, lovely, people, will, calculate*; pronunciation of /e/ as /je/ in the word *get*, /ϴ/ as /oː/ in the word *on* [oːn]; approximation of /θ/ to /t/ pronunciation in the word *thirties* [∀t3ːtɪz].

The prosodic organization of the analyzed TV advertisement proves its high emotional and pragmatic potential. Thus, the beginning of the text that addresses to the potential consumers is marked with a high falling tone:

\Hi, there.⌒
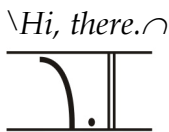
In the first syntagm of the main body, the average low tone is observed, which in the following three syntagms is changed into the average high tone:

1 ‿Now , **2** |I'm \sure ⇒ **3** you'll be |wanting to |fill |in your \tax re|turn,⇒ **4** /won't you?⌒

In the same utterance one can also trace the use of different kinetic tones: from mid level in the first syntagm to the mid falling in the second and third and the mid rising in the fourth.

Further, the intonation drops from mid pitch level of the last syntagm of the first sentence of the main body to low level of the next sentence and then gradually rises from low to mid and then to high pitch level:

If you |get it ʲin ⇒ before the |30ᵗʰ of Sep/tember,⊕ those |lovely /tax people ⇒ will |calculate your |tax \for you.⌒

The last syntagm of the main body of the analyzed text ends with low level, i.e. the use of high falling terminal tone, which states the fact and emphasizes the effectiveness of the service offered. The intonation of completion, which is indicated by two falling tones, is even more convincing in the following fragment:

So ˈgo \on.⌒ ˈFill it \in...⌒

Quite different is the accent usage in the commercial of long duration addressed to the recipient with middle social status:

There are ˌpeople ⊕ who ˈconquer \mountains ⊕ while the ˈrest of us ˈsimply \watch ⌒... And there are ˈpeople who ˈclaim a \different ˌmountain ⊕ ˈevery \day,⊕ who ˈgo that ˈextra ˈmile with ˌcourage,⊕ deˈtermi\nation ⊕ and \hope...⌒ Will ˈyou ˈgo that ˈextra \mile with them ⇒ toˌday?⌒ Will ˈyou ˌcall ⇒ ˈ0 ˈ8ˌ00 ⇒ ˈ3ˈ1ˌ6 ⇒ ˈ4\000 ⊕ and ˈgive ˈ£ ˈ2 a \month ⇒ to Imˈperial ˈCancer Reˈsearch \Fund.⌒ So ˈwe can ˈbring ˌhope ⊕ to ˈmore ˈpeople with \cancer ⊕ because our ˈscientists and \doctors ⇒ are ˈgoing that ˈextra ˈmile \too,⊕ ˈworking with \others ⇒ to ˈfind ˈnew \ways ⇒ to preˌvent,⊕ ˌtreat ⊕ and ˈcure \cancer.⌒ ˈWe're ˈturning ˌscience into \hope.⌒ It ˈtakes ˌefforts,⊕ ˌknowledge ⊕ and ˈmost of ˈall \time...⌒ ·We ˈwon't ˈgive \up.⌒ \Please,⊕ ˈdon't ˈgive ˈup \either...⌒

This TV commercial has the following differences from standard English pronunciation: diphthong /aY/ is pronounced as /EY/ in the words *mountains* [∀maYntınz – ∀mEYntınz], *thousand* [∀θaYz≅nd – ∀θEYz≅nd], *pounds* [paYdnz – pEYdnz]; diphthong /≅Y/ is pronounced as /oY/ in the words *hope* [h≅Yp – hoYp], *going* [∀g≅Yıŋ – ∀goYıŋ]; in the diphthong /eı/ nucleus /e/ is pronounced as /je/ in the words *today*, *ways*. Auditory analysis of the advertising text reveals the absence of contrast between /Θ/ i /≅Y/ in the words *most* [most], *don't* [dont], *won't* [wont], *doctors* [∀doktors] and vowel /3:/ by using the postvocalic /r/ in the word *turning* [∀t3:nıŋ – ∀ternıŋ]. Deviation from standard pronunciation is also an extension of /i:/ in the word *three* [θri:i:]. According to native English speakers, the pronunciation features in the analyzed piece of the TV commercial are characteristics of Scottish English. In addition, the soft timbre of the speaker's voice, moderate

tempo and loudness of voice make the text more convincing and authoritative.

Specificity of intonation organization and the use of accent in the TV commercial of medium duration can also be traced in the following example:

/Basically,⊕ it /grabbed me ⊕ and ˈtook /hold of me.⌒ ˈCancer \spreads ⊕ and it deˈvelops ⊕ \fast,⊕ my /lung was ⊕ inˈfested with ⊕ an\gio/ma.⌒ I was /told ⊕ that it was maˈlignant.⌒ I had to \have ⊕ a ˈmajor ope/ration ⊕ ˎand ⊕ that I've ˈtaken a ˈlonger \way.⌒ And ˈthis is /all ⇒ ˈdue to /smoking. ⌒ ˈThat ˈwhite ˈlittle /stick ⇒ that you ˈput in your /mouth. ⌒ And at ˈ3/4 ⇒ you're /thinking ⊕''I ˈshouldn't be ˈgoing through /this''...⌒

One of the peculiarities of the text is the dominance of the rising tones (in 17 out of 26 syntagms), by which each subsequent syntagm indicates that the speaker doubts, hesitates and doesn't want to be categoric in his statements. However, in most syntagms one can observe the absence of a scale or it may consist of only one stressed syllable. The text is full of short and extra short pauses that emphasize the speaker's strong emotions, worries and anxieties. Quite specific is the intonation of the first two utterances:

[1] /Basically,⊕ [2] it /grabbed me ⊕ [3] and ˈtook /hold of me.⌒ [4] ˈCancer \spreads [5] and it deˈvelops ⊕ [6] \fast,⊕ [7] my /lung was ⊕ [8] inˈfested with ⊕ [9] an\gio/ma.⌒
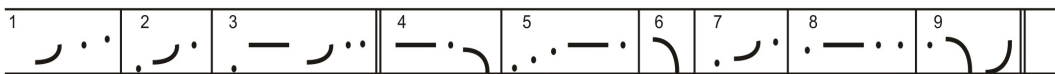
According to the tonogram, the rising terminal tones are the only stressed syllables in the first two syntagms, in the third one the rising terminal tone is preceded by a level mid scale. In addition, in the second and third syntagms the stressed syllable is preceded by one unstressed syllable, which forms a positive interval at the boundary of the unstressed beginning and the first stressed syllable. Besides, the first and third syntagms are ended with the rising tone movement in the tail, and the fourth one begins at the same level as the end of the previous one, signaling their semantic dependence.

The speaker's strong emotions are conveyed by the dull timber of voice, as well as the splitting of one syntagm, which could be observed in a less emotional context, into two short ones with two kinetic tones (five and six, eight and nine). In this case, the pronouncing of the word *fast* with falling tone and a particular emphasis, as well as separating it into a separate syntagm indicates that the speaker is aware of the seriousness of

the situation he is in. At the same time, the use of rising tone in the following seventh syntagm, falling rising in the ninth and two rising tones in the next sentence (*I was ˌtold that it was maˌlignant.*) shows that the speaker does not lose hope of recovery.

Cutting of the melodic contour and changes in the composition of rhythmic groups play the role of prosodic means of attracting and holding the viewers' attention. Numerous interruptions of the grammatical structure in the second sentence, slow tempo, falling, rising and falling-rising tones, the use of intonation groups consisting of one nucleus, also reflect the degree of emotional tension in TV commercials.

Means of ensuring the realization of emotional and pragmatic potential of the analyzed TV commercials also include the accent, which is observed in the pronunciation of the diphthong /aʏ/ as /≅ʏ/ in the word *mouth* [maʏθ – m≅ʏθ]. Functionally predetermined is the phrase *my lung was* realization, which is pronounced as [mɪ ˌlO:ŋ w≅z], where the diphthong /aɪ/ is used as /ɪ/ in the pronoun *my*, and vowel /ʌ/ as /O:/ in the word *lung*. Quite specific is the pronunciation of the medical term *angioma* [%{ndZɪ∀≅ʏm≅] as [≅∀dZɪm≅]. According to native speakers, who participated in the survey, these pronunciation features are characteristic of the Cockney accent, although the statement requires a larger context and further analysis.

In addition to British accents, we observe French, Spanish, Indian ones in TV commercials, as well as Caribbean accents. This is evidenced not only by the data obtained during the analysis, but also by the verbal support and visual picture of advertising texts. The specificity of the accent is that, being not quite clear, it requires a certain focus and attention or causes a need to watch a commercial over and over again, and thus, performs the emotional and pragmatic function.

Among the factors affecting the perception of English TV commercials non-native English speakers mentioned the variation of tempo and loudness, particularly the alternation of normal, slow and fast tempo and normal, increased, and low loudness. Variation of tempo and loudness is noted not only throughout the text, but also within particular syntagms. Besides, it is worth mentioning that the accelerated speech tempo usually sounds quite emotional, conveying the emotions of admiration, confusion, determination, however it creates obstacles to the overall procedure of a text analysis.

Thus, the variation of tempo, loudness, timbre, and pitch range, which according to informants, affect the perception of information, is traced in the following advertising text:

Well, it's a ⌐big ⌐day to⌿day.⌢ ⌐People've got \new homes to ⌐go to ⌢ ⁻Now, ⊕I'm \not the ⌐best at ⊕ ⌐good-\byes.⌢ But ⌐you're gonna \give people ⇒ ⌐all ⌐sorts of a⌐mazing \things ⇒ on their ⌐T\Vs: ⊕ ⌐interactive ⌿sport ⇒ and a ⌐huge ⌐choice of \/movies, ·even ⌐help them ⌐e-⌐mail their \friends.⌢ \Oy, ⊕ you ⌐can't ⌐stay ⌐in ∧there ⊕ be>cause⊕ ⌐you are ·going to ⌐get this \family ⌐something ⌐really im\portant.⌢ ⌐We're ⌐going to ⌐enter\tain them.⌢ You \see.⌢ ⌐That's \why ⇒ ⌐more \people ·going ⌐digital ⌐choose \Sky.⌢

One of the features of this TV commercial is primarily the alternation of normal, slow and fast tempo and normal, increased and low loudness. Variation of tempo and loudness is also observed within particular syntagms:

[1]*But ⌐you're gonna \give people ⇒* [2] *⌐all ⌐sorts of a⌐mazing \things ⇒* [3] *on their ⌐T\Vs: ⊕* [4] *⌐interactive ⌿sport ⇒* [5] *and a ⌐huge ⌐choice of \/movies, ⊕* [6] *even ⌐help them ⌐e-⌐mail their \friends.⌢*
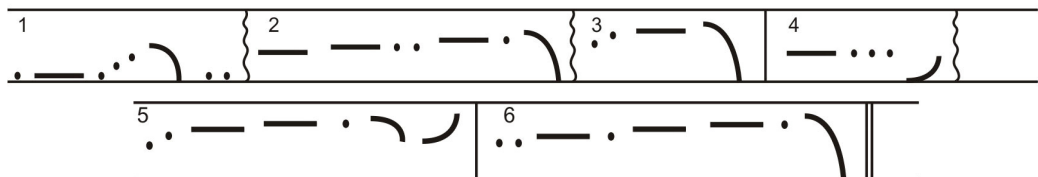
In the example above, one may observe a variation of tempo from normal to accelerated and loudness from normal to increased in the sixth syntagm. In addition, it is possible to trace the use of low and high tones within the whole sentence, in particular the alternation of a variety of kinetic tones: mid falling in the first and second syntagms (mid low in the first and mid high in the second), high falling in the third and sixth, low rising in the fourth and high falling-rising tone in the fifth intonation group. In addition, these tones are combined with normal, extended, and wide pitch ranges and are accompanied by timbre changes.

The study proved that the information presented in the form of an informal conversation by several people who often interrupt each other and speak in a low voice can be an obstacle to the perception of information. In this case, on the one hand, the sentences sound trusting and emotional but, on the other hand, low loudness combined with fast or accelerated tempo of several people impedes the understanding of the advertising text. Example:

– I |really \like her.⌢ I just |don't |know what to \do, ⇒ |don't |know what to \say.⌢

– Just be \calm.⌢

– I'm |always \calm ⊕ and \cool.⌢ |Calm and \cool.⌢ I can \do that.⌢ I can \do that.⌢ \Definitely.⌢

– Then \go there.⌢

– |There she \is.⌢

– |Don't be |too \keen.⌢ You'll |scare her \off.⌢

– |Play it \cool.⌢

– Just re\lax.⌢

– \Hi.⌢ |I'm \Ben.⌢

– \Hi.⌢

– |Do you |want |some of ⸝this?⌢

– |Why |two of \this!⌢ \Muppet!⌢

|Cadberry's |dairy \milk ⊕ so \good.⌢ |Some ·times it's |too |good by \half.⌢

The TV commercial above is a good example of the variation of tempo and loudness, assimilation and modification of sounds, the use of emotional vocabulary, repetitions, one-member sentences, etc.

Another factor affecting the perception of advertising texts is the prevalence of low tones in some texts, accompanied by music and extra noise. In some cases, the noise in the background can be much louder than the text itself. The analysis revealed the use of extra-low pitch at the end of several texts. They were identified as rare and not typical for English TV commercials, but, on the other hand, they were an example of a marginal (in the direction of decreasing the pragmatic potential) variant of prosodic organization of the advertising text actualized within the average emotional and pragmatic potential, as the particular elements of its prosodic organization are used within the structural components of more frequent TV commercials.

TV broadcasting is also characterized by different types of assimilation. For example, in a statement I |don't \know ⇒ whether I could \do that.⌢ the final consonant /t/ in the word don't undergoes elision [∀d≅Ynt \n≅Y – ∀d≅Yn \n≅Y]. A similar loss of phoneme /h/ occurs in the initial position: Do you ⸝think ⇒ we should have |got to |think of um\brellas? ⌢ [Σ≅d h≅v ∀gΘt – Σ≅d ≅v ∀gΘt]. Quite frequent are cases of incomplete regressive assimilation when [d + j] i [t + j] change to [dZ], [tΣ]:

Would you ˈlike that to ˌgo? ⌢ [w≅d jY – w≅dZ Y]; …*or* ˈtune to ˈchannel ˈ4ˈ3\3 ⇒ *for* ˈmore \details ⌢ [tju:n – tΣu:n]; *In*ˈcredible \value,⊕ ˈ8 ˈC\Ds,⊕ *over* ˈ8 \hours ⇒ *of* ˈchill \tunes ⊕ *but* ˈthat's not \all⌢ [∀tΣıl \tju:nz – ∀tΣıl \tΣu:nz]. Moreover, the words *tune* i *chill* in the last sentence due to assimilation pronounce with the same initial sound.

Specific means of providing emotional coloring of texts with medium and high emotional and pragmatic potential are modification of individual sounds, as well as the use of reversed parallelisms, play on words that form a peculiar, often staccato rhythmic pattern: *He* ˌread it ⇒ *he* ˈdidn't ˈread it ˌwell ⇒ *and it* ˈwasn't ˈworth ˈreading \anyway.⌢ (a scene from British parliamentary debates); ˈRock \chick.⌢ ˈChicky \rock.⌢ (Palmolive); ˈNo \battery ⇒ *is* ˈstronger \longer. ⌢ (Duracell); ˈMy \cat ⇒ ˈloves \Whiskas ⊕ *and* ˈI \love ⇒ ˈmy \cat. ⌢ (Mars, Inc.).

It should also be noted that the use of grammatical constructions *couldn't have been bought, would have been able to* in expressions that have medium emotional and pragmatic potential, combined with accelerated tempo and low loudness is another factor that complicates the perception of TV commecials:

ˌThen ⊕ *amongst* ˈother ˌthings ⊕ *he'd have had the* \choice ⇒ *of* ˈall the \networks.⌢ *He* ˈcouldn't have been ˈbought \cheaper.⌢ ˉAnd ⇒ *he'd have been able to* ˌchoose ⇒ *from a* ˈthousand ˈdifferent a\ccessories.⌢

Conclusions

Thus, the effectiveness of TV commercials is significantly influenced by a form of oral presentation, which is characterized not only by the text variation, but also by the variety of its intonation organization. Choosing the right tone (harsh, soft and trusting, ironic, friendly, etc.) is crucial in this case.

It is the variation of the tone range in correlation with particular communicative situations, morphological, lexical, rhythmic, and speech melody parameters that allows us to develop a system of typical methods of linguistic text structure, which are commonly called channel standards. Intonation plays an important role in the channel standard organization, it structures the sound flow in accordance with the requirements of convenience of audio presentation and auditory perception of teletext. Under such conditions, the invariants of prosodic models of TV commercials realization become the leading means of channel standard organization.

Thus, when analyzing the English television commercials perception peculiarities by native and non-native speakers, as well as the specifics of media communication, it is insufficient to study the lexical composition or the lexical diversity of the text, ways of its syntactic construction and intonation, as it becomes more important to find some correlation between the above mentioned components and linguistic factors, which play an important role in the understanding and interpretation of the texts. The research can serve as a basis for further study of television commercials and the role of the media in intercultural communication.

Used phonetic symbols

/ ˈ /	put before the syllable with main stress
/ ˌ /	put before the syllable with secondary stress
/·/	put before partially stressed syllable
\m	the Low Fall
\m	the High Fall
⸝m	the Low Rise
⸍m	the High Rise
∧m	the Rise-Fall
∨m	the Fall-Rise
⸖m	the Mid Level
⇒	perceptual pause
⊕	short pause
∩	long pause

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APPRAISAL OF THE PRINCIPLES AND PRACTICE OF CULTURE OF PEACE IN SCHOOL SETTING: THE CASE OF SELECTED PUBLIC AND PRIVATE PRIMARY SCHOOLS IN HOSSANA TOWN, SNNPRS, ETHIOPIA.

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ABSTRACT: *This research is concerned with assessing the principles and practice of culture of peace in school setting with particular emphasis to selected public and private primary Schools in Hossana Town, SNNPRS. It tried to discover the aims assessing the main principles of peace culture in the study area and to scrutinize whether the school communities are practicing the basic principles of peace culture to promote harmony with themselves and others and finally to identify associated factors that affects promotion of peace culture in school setting. To meet the above objectives, this research used more of quantitative case study approach. Both primary and secondary data sources were used in collecting relevant information. In additionally in order to triangulate the data Interviews were carried out with national policy makers and local school authorities to generate data on peace education policies. Result of the study indicates that peace education has been indirectly institutionalized into the school curriculum, although peace culture activities were yet to be made a vital part of the school life. Results further revealed that public and private schools do not differ significantly in the institutionalization of peace education and peace culture at post primary school level. Arising from the findings, it was recommended that activities to augment peace*

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education and peace culture should be encouraged in the school system in order to produce peaceful citizen in the country.

KEYWORDS: *Institutionalization, peace education, peace culture and post primary school.*

1. Introduction

Schools are uniquely positioned to deliver the quality education that is the right of every child. They offer children the opportunity to cultivate their creative talents and critical thinking, gain life skills, develop self-esteem and social relations, and grow with dignity as individuals. They also serve as important resources for the development and dissemination of values of non-violence, cooperation, tolerance and respect, not only among pupils and staff, but also beyond, in the wider community (UN Committee on the Right of the Child, 2001). Education includes teaching about the challenges of searching and achieving peaceful relationships, developing non-violent skills and enhancing attitudes towards peace.[1] The United nations defined the culture of peace as a set of values, attitudes, modes of behavior and ways of life that reject violence and prevent conflicts by tackling their root causes to solve problems through dialogue and negotiation among individuals, groups and nations.[2] The Ethiopia Education and Training Policy of 1994 recognize the role that the education plays in term of the development of society. With regard to education for peace and conflict prevention, one of the general objectives of the policy is to "Bring up citizens who respect human rights, stand for the well-being of the people, as well as for equality, justice and peace, endowed with democratic culture and discipline''. In line with this, FDRE Ministry of Education has developed Civics and Ethical studies aimed to produce effective and active citizen School is where many of us spend most of our time us children, and if we can bring the knowledge, skills, attitude for creating a culture of peace into the formal and curriculum and school life, imagine the change that we could make.[3] This indicates that

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[1] Cabedo-mas, "Challenges and Perspectives of Peace Education in Schools : The Role of Music."

[2] UN Committee on the Rights of the Child, CRC/GC/2001/1, "General Comment No.1 (2001). Article 29(1): The Aims of Education."

[3] Dawit Lemma, *Perception of Teachers & Students Towards Civic & Ethical Education & its Practice in Selected Preparatory Schools of South West Shoa Zone,* unpublished. AAU: MA thesis, 2006.

integrating peace education principles in our classroom practice and daily life is the way that we can make an important contribution to promoting a culture of peace for the world in general and for our country in specific.

2. Origins of Peace Education

Peace education has developed as a means to achieve these goals. It is education that is "directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms". It promotes "understanding, tolerance and friendship among all nations, racial or religious groups" and furthers "the activities of the United Nations for the maintenance of peace." (Art 26, UDHR). In other words, peace education is an integral part of the work of the United Nations. Through a humanizing process of teaching and learning, peace educators facilitate human development.

Originally, peace educator aimed at eliminating the possibility of global extinction through nuclear war, but currently it address the broader objective of building a culture of peace. In this global effort, progressive educators worldwide are teaching the values, standards and principles articulated in fundamental UN instruments such as the UN Charter, Human Rights documents, the Convention on the Elimination of All forms of Discrimination Against Women (CEDAW), the Convention on the Rights of the Child (CRC), the World Declaration on Education for All and many others.

2.1. Conceptual and Theoretical Frameworks

A culture of peace should be understood in the broader sense. Such understanding is formulated by several UNESCO documents. The Recommendation on Participation by People at Large in Cultural Life, 1976, explains 'that culture is not merely an accumulation of works and knowledge which an élite produces . . . but is at one and the same time the acquisition of knowledge, the demand for a way of life and the need to 'communicate'. Similarly the World Conference on Cultural Policies (1982) stressed that the term 'culture' was understood by the delegates as 'ways of thinking and organizing people's lives'. Therefore 'culture' is not only a knowledge of certain values but also an adherence to them and a readiness to defend and follow them in everyday life. Thus a culture of peace should be understood as the creation of peaceful, nonviolent behavioral patterns and skills. The presence of conflict is definitely the absence of peace, which in general terms, is referred to as simply not being

indifferent to the next person. Some scholars argue that peace is a psychological state, while others opine that it is of logical and normative value.[4]

As the culture which we are discussing here is that of peace, there is a need to elucidate this notion. The word peace has a variety of meanings in different contexts. In international affairs, it is employed to denote relations between states. Elsewhere, it is associated with internal conditions in a country, in a society, between groups, organizations and social structures or between man and his natural environment. In ethics or morality, the word 'peace' is used to characterize human relationships and attitudes or to determine an individual's frame of mind, often quailed as 'inner peace'. Given its various applications, the term is polysemantic, by its very nature avoiding a univocal definition. In the law of nations, 'peace' denotes the contrary of war, which is most frequently defined as a resort to armed struggle and hostilities. A war is a factual state, an attempt to solve disputes and conflicts and to achieve domination through armed force and violence[5].

In general there are two understandings of peace: the 'negative', narrow understanding, reducing peace to a mere absence of war; and the 'positive', defining peace as a lack of war often enriched by further elements and guarantees which make peace constructive, just and democratic. In its second sense, peace is not a static state but a dynamically conceived aim of international and national communities. A culture of peace is intimately linked with a culture of human rights and democracy. Peace cannot be preserved if the basic rights and fundamental freedoms of individuals or groups are violated and when discrimination and exclusion generate conflict. Therefore the protection of human rights and the promotion of a culture of democracy which imply, *inter alia*, the formation of well-informed, democratically-minded and responsible citizens become important elements for the construction of internal and international peace.

As the diagram shows, peace can be categorized into positive and negative phases. In the negative phase, we can see the absence of direct violence such as wars and terrorism as well as the absence of indirect

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[4] Ubogu, "Peace Education in Secondary Schools : A Strategic Tool for Peace Building and Peace Culture in Nigeria."

[5] Gosa SetuTafese and Desta Tamrat Desta. The Roles of Civics and Ethical Education in Shaping Attitude of the Students in Higher Education: The Case of Mekelle University Volume 4, Issue 10, October 2014 ISSN 2250-3153.

violence such as poverty and hunger. Another negative phase is the absence of personal, social or institutional violence, that is, assault, rape and bullying. In the positive phase of peace we see well-being, social justice, gender equity and racial equality as well as a guarantee of fundamental human rights.

2.2. Statement of the Problem

Peace means being one with life itself. Having no fear or bitterness. Peace is more than merely sitting still or in silence. Peace therefore, is a state of mind. Tagore rightly said "Where the mind is without fear and the head is held high, into that kingdom of freedom my father Let my country awake".[6] Peace Serious ethical problems that have been aggravated these days in people are mainly due to improper cultivation of citizens during their schooling. The ministry extends that educational institutions have not been able to produce young people, who can recognize their country's problem, their own citizenship responsibility and desirable code of conduct[7]. Also, when it observed in every corner of Ethiopia there is lack of peaceful ways of living skill and attitudinal change among the society. Similarly, Fenat, in Aschale, (2009: 43) pointed out altruism, integrity, cooperation spirit, etc. seems to decline when compared to the past. Fekade (2003:15) has suggested similar problems. He noted that the Ethiopian young people are in moral crisis. Therefore, this study will attempt to assess the principles and practice of peace of culture in School setting since School is the place by which the societies prepare their young for the future.

2.3. Objectives of the Study

2.3.1. General objective

The main objective of this research is to assess the principles and practice of peace of culture in School setting with emphasis to selected public and private primary second cycle Schools in Hossana city administration, Hadiya zone, SNNPRS.

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[6] Nair, "CONFLICT RESOLUTION IN SCHOOL."

[7] MoE (Ministry of Education), "The Federal Democratic Republic Of Ethiopia Education Sector Development Program 2005/2006 – 2010/2011."Program Action Plan, 2005.

Specific Objectives: -
- To assess main principles of peace culture in the study area
- To examine whether the school communities are practicing the basic principles of peace culture to promote harmony with themselves and others
- To identify associated factors that affects promotion of peace culture in school setting

Research questions
- What are the main principles of peace culture in the study area?
- How does the school communities are practicing the basic principles of peace culture to promote harmony with themselves and others
- What are the factories that affects the promotion of peace culture in school setting

Significance of the Study
- Create awareness on the factors that promote peace of culture among school community
- It Inform to overcome the factors which hinder practice of peace of culture particularly in school setting and in general in the Society.
- It may give an input for policy-makers for further improvement of policies concerning to ensuring lasting peace, democracy and development that would characterize building a prosperous country.
- Furthermore, it may initiate others who want to make study in the relating issues

Scope of the Study
- This study is delimitated only in Hossana town administration in 2 selected primary second cycle schools from both public and private.

Limitation of the Study
- The study is limited in its scope since it has not been conducted at a macro level.
- In addition, Lack of punctuality among the research colleagues, positive unwillingness of school community or the respondent were faced.

3. Research methodology
3.1. Research design
- The study focused on assessing principles and practice of peace of culture in both selected public and private primary Schools of Hossana town Administration.

- Basically, this study is a Descriptive survey study which followed a mixed-approach both a quantitative and a qualitative portion.

3.2. Sources of Data

Both primary and secondary source of data was used to gather relevant information on the issues under the study.Primary data gathered through field work using different tools while the secondary data obtained from other pertinent worldwide unpublished and published materials related to the topic under the study.

Sample size and Sampling Techniques

No	Name of school	Respondent	Population	Sample	%	Sampling Techniques
1	Alemu W/Hanna public primary School	Teachers	50	25	50	Judgmental
		Principals	2	2	100	Census
		Students	4500	150	6	Randomly
2	Hossana Vision academy private primary School	Teachers	30	15	50	Judgmental
		Principals	1	1	100	Census
		Students	2500	150	6	Randomly
	Total		7,000	Student = 300 Teachers = 43	7	

3.3. Methods of Data analysis

The data gathered from primary sources by using designed tools of data gathering first was organized, coded, condensed, and then analyzed in to sub-sections based on the their nexuses. The results summarized and

presented using basic descriptive statistical tools. In addition the qualitative data triangulated with quantitative data by a narration fashion

4. Result and discussion

The researcher developed a 10-item research instrument titled "Peace Education and Peace Culture Questionnaire" The questionnaire consisted of two sections, A and B. Section A was on demographic data, while section B was on peace education and peace culture. The items were structured using a modified 4-point Likert Scale. The questionnaire was validated by using varies mechanism that is trial test was carried out to establish the reliability of the instrument using Cronbach Alpha. The reliability coefficient obtained ranged from 0.86 to 0.93, which was considered good for the instrument. The data collected were properly coded and analyzed using mean and independent t-test statistical tool.

Table 1.**Mean scores of peace education as part of the school curriculum**

No.	Item	Mean	Rank	Remarks
1.	There are exemplary and respected teachers in our school that I consider them as a role model	3.67	1st	Agreed
2.	Both men and women in our school respected without any discrimination and stereotype	3.45	2nd	Agreed
3.	My teacher encourage me to participate in voluntary activities	3.22	3rd	Agreed
4.	Teachers respect students always	3.08	4th	Agreed
5.	Since the school directors and teachers are democrat they encourage us to participate in decision making process	2.86	5th	Agreed
6.	Teachers in our school respect student equally	2.80	6th	Agreed
7.	All students in our school respect the rule and regulation of the school	2.75	7th	Agreed
8.	Accountability and transparency are prevailed in our school	2.45	8th	Disagreed
9.	The school directors and teachers are free from corruption	2.30	9th	Disagreed
10.	All teachers and administrative staffs in our school are transparent	2.15	10th	Disagreed

From Table 1, results indicate that 7 out of 10 items indicators of peace education as part of the school curriculum had a mean score between 3.67 and 2.75 which is above the acceptance point of 2.50, while the remaining three items had below 2.50. These results show that peace education is directly and indirectly is included in the curriculum. Peace education does not always mean learning about conflict and how to resolve them peacefully. It should also involve participation of young people in expressing their own ideas and cooperating with each other in order to eliminate violence in our individual lives in our community and in our society.

To what extent is culture of peace as education as part of the school life?

Table 2. Mean score of peace culture activities

No.	Item	Mean	Rank	Remarks
1.	I had been a victim of conflict occurred in the school.	3.87	1st	Agreed
2.	I love and respect the cultures of others.	3.24	3rd	Agreed
3.	We learn about human dignity and differences.	3.12	4th	Agreed
4.	I appreciate differences	2.94	5th	Agreed
5.	I will play with my friends peacefully and cordially	3.43	2nd	Agreed
6.	We learn about tolerance and peaceful co-existence	2.86	6th	Agreed
7.	I respect the rule and regulation of the school	2.82	7th	Agreed
8.	I will help those students found in difficulty	2.78	8th	Agreed
9.	I do have a culture of resolving conflict peacefully	2.68	9th	Agreed
10	When I face a problem I will consult my teachers without any hesitation	2.46	10th	Disagreed

Results in Table 2 indicate that nine out of the ten identified peace culture activities in the school system scored above the criterion mean of 2.50, while only one scored below 2.50, which means that peace culture activities are part of the school life. Results of the analysis in Table 3 show that, the calculated t-value for peace education (0.111) and peace culture activities (1.428) are both less than the critical t-value of 1.965 at 0.05 level

of significance with 461 degrees of freedom. This indicate that public and private primary schools do not differ significantly in the way in which peace education and peace culture are practiced. However as the interview and observation indicates relatively speaking student at private school is more ethical and respectful than government school.

4.1 Discussion of findings

Results from the research question one showed that nine out of 12 identified aspects of peace education as part of the curriculum had a mean score of between 2.53 and 3.53, which were above the acceptance mean point of 2.50. From the result, aspects of peace education that had a mean score above 2.50 were. Not significant at 0.05; df = 461; critical t. = 1.965 peace education as topics in some school subject (2.75) like civic and ethical education; availability of peace books in the library (2.56); love, peace and harmony as significant part of school subjects (2.65); essay competition on peace education (2.53); teaching of respect for human dignity (2.95); accepting each other's' religion (3.53); civic responsibilities (2.72); collaborating learning projects (2.53) and observation of peace day (2.56).

Results of the analysis in Table 3 show that, the calculated t-value for peace education (0.111) and peace culture activities (1.428) are both less than the critical t-value of 1.965 at 0.05 level of significance with 461 degrees of freedom. This indicate that public and private primary schools do not differ significantly in the way in which peace education and peace culture are practiced. However as the interview and observation indicates relatively speaking student at private school is more ethical and respectful than government school.

Variable	Institution	N	Mean	Standard Deviation	t.cal
	Public	150	38.94	6.02	0.111
Peace Education	Private	150	38.07	5.93	
	Public	150	39.04	5.46	1.428
Culture activities	Private	150	36.75	4.33	

These findings suggest that peace education is indirectly institutionalized as part of the school curriculum. The finding is in line with the postulation of Adesina and Odejobi (2011) who maintained that bits of peace education can be seen in school subjects such as social studies, history, religions studies and moral education in the Nigerian school. The finding of the study reveals that peace education is not taught using pedagogical strategies such as role play (2.32) which is very significant in helping students to internalize the lessons learned. Another important aspect of this finding is that peace is not taught as a subject in both primary and secondary school (1.03) in the study area. The study also found out from research question two, that seven out of twelve identified peace culture activities were yet to be institutionalized as part of school life. This could however be explained that peace culture activity is an emerging theme that needs to be properly integrated into the school life because of the current spate of violence that is being experienced in various parts of the world. This finding supports Wisdom and Imo (2010) who noted that the curriculum content appears inadequate and argued for the integration of co-curricular activities into school programs. The finding may be explained by the fact that both public and private schools implement the same curriculum as given by the relevant government agency, and as such there are no significant differences. The finding supports an earlier study by Aladejana (2007) who found that some peace related topics such as social environment, co-operation, conflict, responsibility, civic obligation, culture, were evident in the social studies curriculum.

4.2 Conclusion and recommendation

Any major societal change requires that schools to play key role, as they are a major players of socialization. It is essential to develop peace education in the educational system, that would redirect the new reality that has evolved and prepare the next generation to life in a reality of peace: The same way that society should learn how to live in an intractable conflict, it should also learn how to live in a non-violent conflict that can be resolved through cooperation and negotiation, and eventually – how to live in the framework of peace. Therefore, peace education, as part of peace culture construction should be a part of the educational enterprise in both private and secondary school. This finding suggests that formal peace education shall be integrated into the existing school curriculum.

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FINANCING EDUCATION: A ROUTE TO THE DEVELOPMENT OF A COUNTRY

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ABSTRACT: *Everybody knows that education is the backbone of a nation. The countries which have realized that motto and invested a lot for a long time for sustainable development of the education sector of the country, they are now forerunner in innovation, world influence, employment, innovative thinking, world-class health care service, technology, ideological influence, and even military advancement. They have diverse education investments that have had defused the progress in all sectors. On the contrary, there are many countries that are wealthier than many developed countries, but for creative ideas, educational advancement, climate change and even for major decisions, they rely on some specific advanced countries. These countries cannot ensure sustainable development of their own as they rely on others. Moreover, some countries mostly depend on natural resources which are now facing constraints for plummeting the price of those assets due to worldwide economic depression or the invention of an alternative option. The countries which have the best education in the world, they have more researchers and diversified world-class education system and creativity to cope with the changing world circumstances. Regarding this issue, Odoom (2015) says that investing in education leads to higher rates of productivity, better prospects of employment and higher earnings. Finally, a variety of employment opportunities which leads to the reduction of the crime rate of a country — consequently, leads to the sustainable economic development of a nation.*

KEYWORDS: *Education financing, history of education investment, strong economy, quality of education, diversified investment*

Introduction

Education is not stagnant; it is diverse and ever-changing. Education changes the view of schooling and the concept of anything or any issue.

Proper education and educating people with the updated edification are connected with the development of a society and obviously a country. Regarding the development of a country or society, Mercan and Sezer (2014) say that differences in education level are one of the main reasons

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for economic performance differences between developed and developing countries. To keep the education level up-to-date, educational financing is very important for a nation-state. Becker (1962) treated education financing as a capital investment. Educational investment helps a society not only to educate its people but also to contribute to the overall progress of its citizens and social changes. Better-educated people are thought to form more accurate expectations and pursue their aspirations more efficiently than poorly educated people (Vila, 2005). Wha (2014) also talks in the same way; he says that Education is a fundamental driver of personal, national and global development. He also articulates that,

> the educational expense of a country is interconnected with economic development. Countries with higher per capita income…invest more in children's education. The…efforts to promote more inclusive economic growth and improve education systems can raise enrollment among young people in developing countries and reduce disparities between genders and among social groups.

Therefore, in this article the researcher intends to clarify that education investment does not mean developing infrastructure, using updated technology, filling the university library with outdated and useless books, buying expensive devices just for good world ranking of the university, but planning sector-wise educational investment, launching time-oriented new courses for all levels of education, training teachers properly based on the quality of students and teaching environment, making availability of the latest most important books in the library, and providing government scholarships to highly qualified post-graduate student for studying abroad with the assurance of their return to their native land.

Importance of education investment for a country
Education investment works as a catalyst for preparing next-generation efficiently for the economic, social and cultural progress of a country. Economists consider that the time and money invested in education pay returns and that these have a positive net effect on the possibilities of satisfying human needs (Vila, 2005). Developed countries finance more on education specifically on education research. Regarding education investment, Barshay in 2017, in a newspaper article wrote that "the world's developed nations are placing a big bet on education

investments, wagering that highly educated populaces will be needed to fill tomorrow's jobs, drive healthy economies and generate enough tax receipts to support government services." All countries have increased their education financing remarkably recently. For instance,

> over ... 2010 to 2014 period, education spending, on average, rose 5 percent per student across the 35 countries in the OECD (The Organization for Economic Cooperation and Development). In some countries, it rose at a much higher rate. For example, between 2008 and 2014, education spending rose 76 percent in Turkey, 36 percent in Israel, 32 percent in the United Kingdom and 27 percent in Portugal (ibid).

The interesting factor is that though education budget within the mentioned time frame was squeezed in the USA, there per primary and secondary school allocation is higher than all countries. Barshay (2017) also talked about this issue in her newspaper column. She wrote that "even with the decline in spending, the United States still spends more per student than most countries. The United States spent $11,319 per elementary school student in 2014, compared with the OECD average of $8,733, and $12,995 educating each high school student, compared with an average of $10,106 per student across the OECD". In contrast, the opposite circumstance prevails in the Middle-East countries. According to Statista (MacCarthy, 2015), within the first twelve highly education invested countries, there is no country from the Middle East, though there are some countries in this region which are among the richest countries in the world. Oil has a big influence on this squeezing education investment in this region. In a resource-rich economy, capital and labour tend to move away from the manufacturing sector to the booming sector, and this movement can, in turn, cripple all other sectors – a process they called 'resource movement effect' (Odoom, 2015). This affects the significance of other sectors especially education. The following table shows that there is no country from the Middle East among the most educational invested countries.

Which Countries Invest The Most In Education?
Expenditure on education as a % of total public expenditure in selected countries*

Country	%
New Zealand	21.6%
Mexico	20.5%
Brazil	19.2%
South Korea	16.5%
Switzerland	15.7%
United States	13.6%
United Kingdom	12.2%
Germany	11.0%
Russia	10.9%
France	10.2%
Japan	9.1%
Italy	8.6%

@StatistaCharts   * latest available year   Source: OECD   statista

Source:https://www.statista.com/chart/3398/which-countries-invest-the-most-in-education/

Middle-East countries mainly focus more on tertiary education rather than school education; though school education is important for giving students a solid basic education. This wrong step has a derogatory influence on the confidence, enthusiasm, encouragement and required knowledge on a subject to study at the university level, as they find a big difference between the school education system and university education structure. According to the information on Education Performance Index (EPI) provided by Akkari (2004) that

> despite their financial resources, several countries in the Middle East have been unable … to convert national wealth into extended opportunities for basic education … Among the bad performers are Kuwait (54 places lower), Saudi Arabia (48 places lower), Qatar (38 places lower), and Oman (36 places lower).

**History of education investment of some countries**

Akkari (2004) says that during the second half of the twentieth century, education has been taken very much as an investment in human capital, with long-term benefits both to the individual who is educated and to the public at large.

Primarily, it is seen in all countries that government financing is the main sound of the fund in educational development and expansion. During the time of the industrial revolution, 1750-1990, the leading manufacturing countries in the world were the United Kingdom, Germany, France, Russia, Italy, the United States, and Japan. Among the above-mentioned countries, funding of education relied on local, state and federal funding. After the industrial revolution during the years of 1950-70 in America, there was substantial growth in educational expenditure (Roser and Ospina, n.d.). On the other hand, in case of France:

> education spending was initially low and mainly private, then in 1833 funding began growing with local resources after the introduction of a law liberating communes to raise more local taxes for schools, and finally in 1881 the national government took over most of the financial responsibility after the introduction of a new law that abolished all fees and tuition charges in public elementary schools (Roser and Ospina, n.d.).

Apparently, it is thought that North American and European countries every fiscal year have a big budget than other countries. However, World Bank data (2010) reveals that European countries spend more on secondary and tertiary education rather than primary education; they invest more on pre-primary education to make the basis of students solid (Education at a Glance, 2015). Publicly funded pre-primary education tends to be more strongly developed in the European than the non-European countries of the OECD (ibid). It is also experienced by teachers in Middle East countries that due to lack of quality education at the primary school level, students struggle to cope with the education system on the tertiary level. If the basic education of the students is not ensured, it is quite difficult to expect a productive outcome from them on the tertiary level.

It is also revealed in the writing of Roser and Ospina (n.d.) that "the percentage of total education expenditures contributed directly by households in 15 high-income countries and 15 low/middle-income countries". The chart below also proves that both the government and citizens of a country should take the responsibility of educational financing rather than fully relying on the public fund.
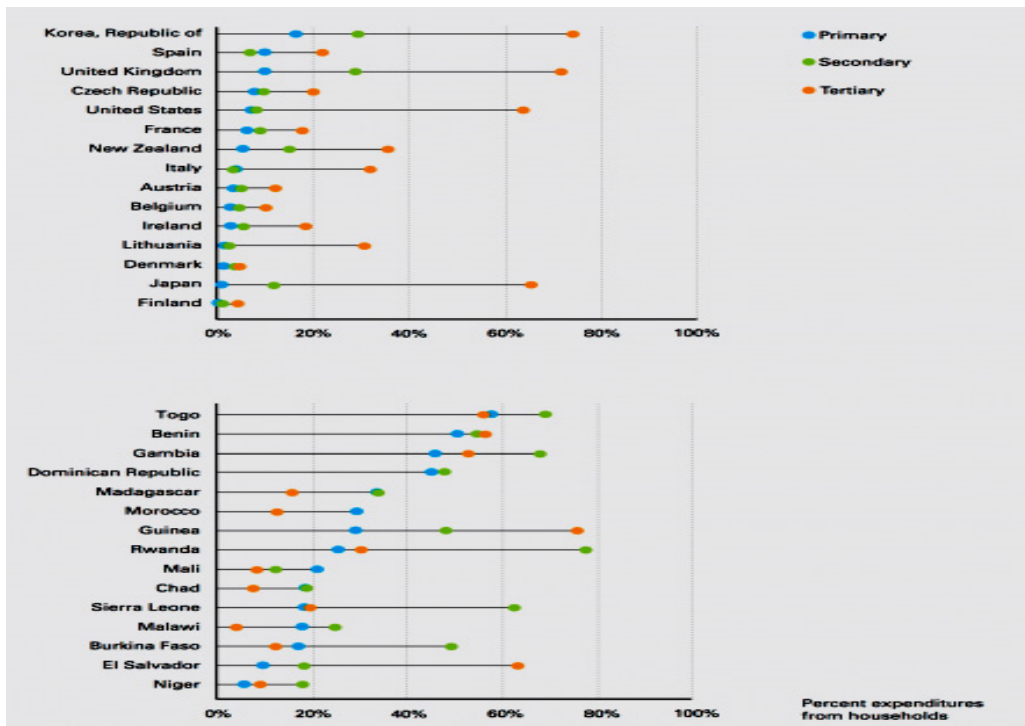
Percentage of total education expenditures contributed directly by households in 30 countries, grouped by country income – Figure 32 in The Investment Case for Education and Equity (UNICEF - 2015) Source: Roser & Ospina (n.d)

Comparing the wealth of countries with education research

According to the *Global Finance* magazine, in 2018, within the top 30 richest countries in the world, 11 countries were from Asia, 16 from Europe, two from North America and one from Australia. Within 11 Asian countries, six are from the Middle East region.

The first 30 richest countries which are mentioned in the Global Finance magazine, according to the statistics of UNESCO Institute of Statistics (n.d.), there is no data on Macao, Hong Kong, and Taiwan as they are autonomous regions of China. Excluding them, Qatar, Singapore, Brunei Darussalam, the United Arab Emirates, Kuwait, Saudi Arabia, Bahrain, and Oman are from Asia. The interesting factor is that except for Singapore, all other richest countries from Asia spend less than 1% of their GDP for research and development (R&D) and there are less than 605 researchers per million inhabitants. In contrast, countries which are comprised within North America, Europe and Oceania regions, except for Malta, the other seventeen countries invest more than 1.3% of their annual

GDP for R&D. Besides, among per million inhabitants of those seventeen countries, more than 4233 people are researchers.

It is explicit in the aforementioned data that regarding R&D, Asian countries are far behind the countries of other regions; even economically bailed out Greece has more investment in research, and the number of researchers is more than most of the Asian richest countries. That means Asian countries should focus on R&D for stable economic and educational advancement.

On the other hand, in the current globalized world, technology plays a big role in R&D for communication and availing information, so an efficient workforce is needed for utilizing technology. With reference to ameliorating updated technology and R&D, Vila (2005) says that "technology is generated through the investment in R&D activities, which, in turn, require intensive use of highly educated labour. Hence, higher education influences economic growth not only directly, but also indirectly through the generation and assimilation of new technology".

Relationship between quality of education and economic growth

After the starting of the industrial revolution in 1750, it has been seen that the present leading developed countries like the United Kingdom, USA, Japan, Germany, Russia, Italy, etc. invested a lot for the progress of education sector as this funding was connected with the efficiency of labours at that time.

> In 1993, total expenditures on education institutions in the United States were 4.2 percent of the Gross Domestic Product (GDP) for the primary-secondary grade level, 2.5 percent for higher education, and 6.8 percent for all levels combined. While Canada and France spent a larger fraction for primary-secondary education, of the G-7 countries, only Canada spent a larger fraction than the United States for higher education and for all levels combined (International comparisons, 1997).

Currently, also the educational investment of developed countries is obviously higher than in other countries.

However, a huge amount of educational investment cannot assure quality education, for instance, despite Middle East countries having higher educational investment and education budget every year, for the worldwide advancement of the education sector, they have a little contribution. Here, a deliberate plan focused on educational expenses and

effectiveness of prevalent educational system play decisive roles. Supporting this issue Mercan and Sezer (2014) point out that:

The performance of a country in the development process is closely related to the effectiveness of the educational system. Besides its several positive contributions in social, cultural and political areas, an effective education system increases the competitiveness and contributes to the economic growth by training the qualified labour and productivity increase in economic aspects.

The most important advantage of developed countries is that they have the capacity for the well educated and qualified labor keeping pace with the rapid changes in the manufacturing process and producing high technology. The improvements in educational level affect the economic growth positively by increasing both the labour productivity and the capacity of knowledge production.

Connection between the quality of education with world rankings of countries

Education quality of a country has a significant reflection on the overall ranking of a country. Both of them are almost close. For example, according to the information of U.S. News & World Report 2018 on education ranking, among the top 30 countries, there are 22 countries from Europe, two from North America, two from Oceania and four from Asian regions. It is almost reflected in other sectors. The following table indicates this:

Serial	Name of the country	Education Ranking	Overall Ranking	International Influence	Forward Thinking
1	United Kingdom	1	5	4	9
2	United States	2	8	1	3
3	Canada	3	3	10	8
4	Germany	4	4	5	6
5	France	5	10	6	18
6	Australia	6	7	17	11
7	Switzerland	7	1	16	7
8	Sweden	8	6	22	10
9	Japan	9	8	7	1
10	Nederlands	10	11	21	13
11	Denmark	11	10	29	14
12	Norway	12	14	25	12

13	New Zealand	13	12	31	19
14	Belgium	14	Not ranked	19	20
15	Finland	15	16	35	17
16	Italy	16	15	9	23
17	Ireland	17	16	30	27
18	Spain	18	20	11	26
19	Luxembourg	19	19	36	25
20	Singapore	20	16	28	2
21	South Korea	21	22	13	4
22	Russia	22	26	2	21
23	Israel	23	30	8	22
24	Portugal	24	24	24	32
25	China	25	20	3	5
26	Poland	26	27	38	30
27	Greece	27	29	18	54
28	Hungary	28	38	48	49
29	Czech Republic	29	26	46	56
30	Argentina	30	40	39	41

Source:https://www.usnews.com/news/best-countries/best-education

Among the top 30 educationally ranked countries in the world, 93.33% (29 countries; excluding Belgium) of these countries are within the top 30 overall ranked countries. In addition, 76.67% (23 countries) of the above-mentioned countries are the top 30 most influential countries in the world. Furthermore, 83.33% (25 countries) of these countries are also the top 30 forward-thinking countries. It is clear from the above table that the countries which have the best education in the world, they are advanced in thinking, influence and overall ranking as well.

Therefore, education investment is the best way for the advancement of a country. Education has an impact on social, cultural, innovation and even quality of life as well. If a generation is educated properly with proper education financing, it has a positive effect on the next generations also. Vila (2015) says that evidence of the effects of parents' education on children's health; cognitive development and social behaviour can be found.

Importance of human capital investment

The countries which have natural resources, they cannot enjoy the full benefit of these resources due to the interference and dependency on intellectually advanced and developed countries. For instance, Middle East Asian oil-rich countries and African natural resource-based countries still now rely on countries like USA, UK and other counties for exploring their natural assets. Moreover, in other sectors like education, science, business, innovation, and even advanced military weapons, they depend on a handful of countries. There has been a long tradition in neoclassical economics that the abundance of and dependence on natural resources is a curse, especially for African countries (Odoom, 2015), which is also pronounced by Icelandic economist Thorvaldur Gylfason. He says that an oil boom has deleterious effects on human capital (ibid), as a result of this we do not see any outstanding idea, theory and academic journals on economy, education, military and even sports from Middle East oil rich or African natural resource based countries. [Therefore], capital formation is crucial in the process of economic development (ibid).

Positive side of more education investment

If we observe the developed countries in the world which have more money flow in the education sector; they have less crime rate comparatively, at least, people lead a decent life. More schooling means more possibility to get a job which leads to less criminal activity. About this Vila (2015) states that

> greater education investment is related to a greater stability of social structures. School helps children to understand societal values and encourages them to behave in socially acceptable ways, so educated individuals are expected to be more civilized and tolerant to others. Educated communities are generally more stable and less likely to experience violent social conflicts than societies with a less educated population.

This atmosphere prevails in countries like Finland, Canada, Norway, Denmark, Switzerland, Sweden, etc. If we look at the rating of unemployment of the countries which are mentioned in *U.S. News & World Report* 2018, it will be understandable.

Serial	Name of the country	Unemployment rate with ranking (%)
1	United Kingdom	4.4% (155)

2	United States	4.4% (154)
3	Canada	6.5% (125)
4	Germany	3.8% (172)
5	France	9.5% (85)
6	Australia	5.6% (137)
7	Switzerland	3% (181)
8	Sweden	6.6% (123)
9	Japan	2.9% (183)
10	Netherlands	5.1% (146)
11	Denmark	5.8% (136)
12	Norway	4% (170)
13	New Zealand	4.9% (149)
14	Belgium	7.5% (111)
15	Finland	8.7% (97)
16	Italy	11.4% (71)
17	Ireland	6.4% (129)
18	Spain	17.1% (41)
19	Luxembourg	5.9% (134)
20	Singapore	2.2% (198)
21	South Korea	3.8% (171)
22	Russia	5.5% (139)
23	Israel	4.3% (158)
24	Portugal	9.7% (83)
25	China	4% (167)
26	Poland	4.8% (151)
27	Greece	22.3% (30)
28	Hungary	4.4% (157)
29	Czech Republic	2.8% (184)
30	Argentina	8.1% (106)

Source:https://www.theglobaleconomy.com/rankings/Unemployment_rate/

The aforementioned table demonstrates that among the top education ranked countries in the world, only two countries (6.67%) are below 50 most unemployed countries in the world. Another two countries (6.67%) are within 51-99 groups. Most significantly, 86.67% of countries are ranked 106 and above. It illustrates that if education sector of a country has sufficient funding for a long period and the quality of education can be assured, it impulses positive impact on other areas as well. If the unemployment rate of a country declines, the crime rate will also be

reduced. If the crime rate is controlled then obviously the law and order situation of a country will be stable. The outcome of all positive sides will be extradited to the expansion of the economy of the country.

Disseminate Educational Investment

Education investment should be diversified for balancing educational development because it has an impact on sector-wise steady economic growth. It should cover junior, secondary and tertiary education, as well as medical science, technological, mechanical, scientific and social education. All of them should be connected with overall social, environmental and cultural development. Besides, all these signs of progress are to be updated from time to time with global needs.

The diversified educational investment will also cover domestic and international market needs. It can be patronized by government and non-government organizations which are connected with the economic and educational goals of a country. The result of the educational financing may be reflected within a few years or decades. Regarding this point, Emily Hu talks about the educational investment to ensure quality education in the USA. He says that "the well-established standards and respected education quality evaluation systems in the United States being the key to its world-leading position in the K-12 education industry and its capacity to utilize diversified investments in the sector" (China, 2016)

Diversified educational investment and inter-disciplinary education will also reduce economic risk. China has taken initiatives to produce multi-disciplinary talents. According to Mr. Tan, developing excellent inter-disciplinary talents is the top priority [of China] and the key to allow the widest range of quality social resources to flow into education field and to promote education innovation (China, 2016).

Recommendations

Since the quality of education, development, and influence of the country works simultaneously, the following steps should be followed before thinking about education investment:

▪ Quality of education does not mean the flow of money; if it could be, the countries which are blessed with natural resources, they would have the best schools, universities, research institutes and researchers. Following points should be well-thought-out before financing education sector: enthusiasm, research environment, research fund, transparency, investment of money ascertaining loopholes of the

education system, gain profound knowledge of the current world circumstance, the efficacy of using the latest technology rather than buying them just for a show-off, development strategy and long term vision of the country.

- Basically, the advantage of education investment finally reaches to the students. So, a hardworking, connoisseur, curious and talented generation should be created to get the optimistic end result of this backing.
- The policymakers of a country should consider that educational investment is a long term investment; it may take a few decades to get to see the outcome of this funding. Here Singapore is a good instance.

    In the 1980s, Singapore's economy started to prosper, and the focus of Singapore's education system shifted from quantity to quality. More differentiation for pupils with different academic abilities was implemented, such as revamping vocational education under the new Institute of Technology and splitting of the Normal stream in secondary schools into Normal (Academic) and Normal (Technical) streams. The Gifted Education Programme was also set up to cater to more academically inclined students. In 1997, the Singapore education system started to change into an ability-driven one after then Prime Minister Goh Chok Tong outlined his "Thinking Schools, Learning Nations" vision. Under this policy, more emphasis was given to national education, creative thinking, collaborative learning as well as ICT literacy ("Education in Singapore," n.d.).

- Expand educational outlay depending on the current need and long term demand for the country. It is to be bridged with the efficacy of the manpower, future policy of the country and economic goals.

Conclusion

In conclusion, it can be said that multi-disciplinary education finances and transformation of education drives simultaneously and never-ending. In the current digital world, it is happening rapidly. After every five years, the concerned authority of the government should review the school and university education system; books and course outlines should also be reviewed for updating. Therefore, constant investment is mandatory here. If students graduate with updated and time-oriented courses, it will create an efficient work-force to keep long term contribution to the economy of the country. If the economics of the country is flourished, the job market

will be broadened and ultimately the unemployment problem will be reduced. Regarding this Vila (2015) says,

> Most economic analyses on the value of education have focused on the contribution of formal schooling to increased earning capacity in the labour market. Longer schooling improves the chances of employment (Rivera-Batiz, 1992; Iyigun & Owen, 1999), reduces the duration of unemployment (Kiefer, 1985; Kettunen, 1997) and positively influences income through higher labour market earnings (in Vila, 2005).

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THE EFFECTS OF TREATMENT WITH ACETYLCHOLINESTERASE INHIBITORS AND MEMANTINE ON CAREGIVER BURDEN IN PATIENTS WITH DEMENTIA

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ABSTRACT: *Dementia affects 50 million people worldwide, but we also have to consider their families and caregivers. An appropriate management of dementia makes sure the treatment reaches its purpose both from the perspective of the patient and the caregiver. The tests used in evaluating the patients with dementia included in our study are mostly part of the standard geriatric evaluation which is common practice in all geriatric clinics. In addition, NPIQ test is useful in determining both the severity of neuropsychiatric symptoms and the caregiver distress; caregivers are mostly affected by the behavioral disturbances. In our study the antidementia medication has favorable effects regarding the impact on the caregiver, bringing benefits from the very beginning (the first 3 months), more important in the given order of memantine, combined therapy and acetylcholinesterase inhibitor; the benefits last until 18 months.*

KEYWORDS: *acetylcholinesterase inhibitors, memantine, neuropsychiatric symptoms, caregiver burden, dementia*

BACKGROUNDS

Dementia affects 50 million people worldwide[1], but we also have to consider their families and caregivers. Separately from the effort made to

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[1] Alzheimer's Disease International. 2015. World Alzheimer Report 2015: The Global Impact of Dementia. London: Alzheimer's Disease International.

obtain benefits from pharmacological and non-pharmacological therapy, the treatment of dementia includes a significant domain related to the caring and the surveying of the patient. The caregivers admit to be mostly affected by the behavioral disturbances when looking after patients with dementia[2]; in this study about the Romanian population (city of Bra ov), only 28% non-professional caregivers were familiar and used the medical and social current services. It is therefore essential to find the means to support the caregivers in the case of the patients with dementia. Starting from this data, we have decided to study thoroughly the effects of current pharmacological therapy in dementia concerning the consequences on the caregiver distress.

There is much research nowadays regarding the possibility of discovering an efficient therapy in dementia; even if no new medicine has been developed since 2013. The 3 phase negative studies having compounds for the treatment of dementia call for an improved usage of current therapy in clinical practice. Study hypothesis: an appropriate management of dementia makes sure the treatment reaches its purpose both from the perspective of the doctor and from the one of the patient and the caregiver.

OBJECTIVE: To determine the role of specific antidementia therapy in lessening distress on the caregiver.

METHODS:

Participants were selected from the hospitalized patients in the Geriatrics Clinic of Chronic Diseases Hospital "Sf. Luca", Bucharest. 165 patients were included, diagnosed with 5 types of dementia: Alzheimer type degenerative dementia (AD), mixed dementia (MixD), vascular dementia (VaD), frontal-temporal dementia (FTD), dementia related to the Parkinson disease (DPD) and LBD. They were divided in 4 groups after the pharmacological therapy administered with memantine (NMDA) (17), a treatment with cholinesterase inhibitors (AChel) (40), combined therapy: cholinesterase inhibitors with memantine (57), without a specific antidementia treatment (51).

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[2] Romanian caregivers' perspective on Alzheimer's disease management. Zamfirescu A., Gurgu M., Zgunea S., Chefneux E., Stroie A.M. ,Romila A**.** Bologna: Medimond, Monduzzi, 2012. " 27th International Conference of Alzheimer's Disease International", pp. 39-43.

The dementia diagnosis was put by the investigating doctor or by specialist doctors such as geriatricians, neurologists or psychiatrists, on the basis of neuropsychological evaluation tests and brain imagery (brain computerized tomography), according to the DSM IV or NINCDS-ARDA (for vascular dementia), the Hachinski ischemic scale (for mixed dementia: degenerative and vascular), the Mc Keith criteria (for the Lewi bodies dementia), the Lund and Manchester group criteria (for frontal-temporal dementia). Inclusion criteria: patients diagnosed with dementia who signed the *informed consent* for *inclusion* into the study (participants or their representatives) according to the Helsinki declaration. Exclusion criteria: neoplasm or terminal illness; delirium; psychosis; severe aphasia; major movement deficit which could prevent the neuropsychological testing.

It is an 18-month prospective study, non-randomized, (the medication was administered based on the decision of the investigating doctor according with the recommendations of the current therapy guides), open-label (both the investigator and the participants and their families knew the medical administered treatment). We have observed the effects of the medical therapy, acetylcholinesterase inhibitor and / or memantine for all the 165 participants in the study.

Neuropsychological tests were used: for the evaluation of the cognitive function: MMSE [3](Mini Mental State Examination); Clock Drawing Test Sunderland[4]; for the evaluation of behavioral disturbances NPI-Q (*Neuropsychiatrique Inventory Questionnaire*); for functionality: ADL[5] (*Activities of Daily Living*), IADL[6] (*Instrumental Activities of Daily Living*); for global deterioration: GDS[7] (*Global Deterioration Test, Reisberg)*. The tests used in evaluating the patients included in the study are mostly part of the

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[3] Folstein MF, Folstein S.E., McHugh PR. "Mini-Mental State." A practical method for grading the cognitive state of patients for the clinician", J. Psychiatr Res. 1975; 12:189–98.

[4] Clock drawing in Alzheimer's disease. A novel measure of dementia severity; Sunderland T., Hill J.L., Mellow A.M., Lawlor B.A., Gundersheimer J., Newhouse PA, Grafman J.H., J. Am Geriatr Soc. 1989 Aug; 37(8):725-9.

[5] Katz S., Ford A.B., Moskowitz R.W., Jackson B.A., Jaffe M.W., *Studies of illness in the aged.* The index of ADL: a standardized measure of biological and psychosocial function. JAMA. 1963; 185:914–9.

[6] Lawton MP, Brody E.M., *Assessment of older people: self-maintaining and instrumental activities of daily living.* Gerontologist. 1969; 9:179–86.

[7] Reisberg, B., Ferris, S.H., de Leon, M.J., and Crook, T., *The global deterioration scale for assessment of primary degenerative dementia.* American Journal of Psychiatry, 1982, 139: 1136-1139.

standard geriatric evaluation which is common practice in all geriatric clinics.

The NPI-Q test[8] (Neuropsychiatric *Inventory Questionnaire)* is a version of NPI[9] used in order to evaluate psychopathological and behavioral symptoms associated to dementia from the perspective of the caregiver. 12 domains are evaluated: delusions (DI), hallucinations (H), agitation / aggression (AA), depression / dysphoria (D), anxiety (AX), elation/ euphoria (E), apathy / indifference (AI), disinhibition (D), irritability / lability (IE), motor disturbance (IM), night time behaviors (S), appetite/ eating (AP).

Each of the 12 neuropsychological symptoms is scored according to the perception of the caregiver regarding severity (from 0 to 3) and distress, as the impact on the caregiver (Qingr) (from 0 to 5). Psychological stress (PS), a concept introduced by Hans Selye at the beginning of the 20th century, has two components: distress[10] (an element with damaging effects on the human being) and eustress (an element with favorable effects opposed to distress). The severity NPI-Q score thus displays values from 0 to 60, the higher scores indicating more severe symptoms or higher distress. A study made in a nursing home determined that clinical importance can be observed at a variation of scores of 2.8 -3.2 points for severity and of 2.1-4 points for distress[11]. In our study we have also reported a total NPI Q (the sum of the scores for severity and distress / impact on the caregiver in all 12 domains), with values between 0 – normal and 96 – severely altered. We have also reported NPI Q for each domain (the calculated score being the sum of the severity and distress score in a given domain with values between 0 and 8).

Neuropsychological evaluations were made in dynamics at the inclusion at 3 months, 6 months, 1 year and 1 year and 6 months. We used SPSS 21.0 version (*Statistical Package for Social Sciences*); *P* < .05 was considered statistically significant.

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[8] Kaufer D.I., Cummings J.L., Ketchel P, et al. Validation of the NPI-Q, a brief clinical form of the neuropsychiatric inventory. J. Neuropsychiatry Clin Neurosci. 2000;12(2):233–239.

[9] Cummings et al, Neurology 1994; 44:2308-2314

[10] Distress and eustress- two antithetic biopsychosocial concepts, Iamandescu I., Via a Medicală, 28 iunie 2018.

[11] Mao H.F., Kuo C.A., Huang W.N., Cummings J.L., Hwang T.J,. *Values of the minimal clinically important difference for the neuropsychiatric inventory questionnaire in individuals with dementia*. J. Am Geriatr Soc. 2015; 63(7):1448–1452.

Results and discussions

Descriptive statistic: 165 patients participated in the study among which 111 women (67,3%) and 54 men (32,7%), being between 53 and 94 years old (mean: 78,08, DS= 7,67); 132 (80%) came from the urban area and 33 (20%) from the rural area. The frequency of type and dementia level in our study is represented in figures 1 and 2.
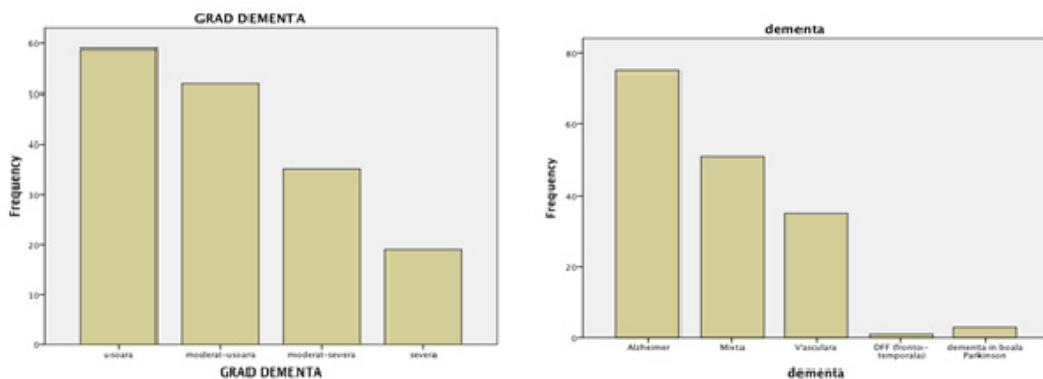
Fig.1 Dementia types in the study group. Fig.2 Levels of dementia in the study group.

For the descriptive statistics for the inclusion scores in the study see table 1.

Scores at inclusion	N	Minimum	Maximum	Average	Standard deviation
MMSE 1	165	6.0	26.0	17.339	5.3970
TCEAS 1	165	.0	10.0	5.721	2.6678
REISBERG 1	165	1.0	7.0	3.697	1.6208
ADL 1	165	.0	6.0	3.758	1.6422
IADL 1	165	.0	8.0	3.721	2.4259
NPI-Q 1	165	.0	45.0	10.133	9.8560

Table 1. Descriptive statistics of cognitive, global, functional and behavioral scores for the participants at the inclusion in the study (T1).

Out of the 165 participants at inclusion (T1) 51 patients were lost from the study: 45 deaths, 3 abandons (for different reasons: the lack of accessibility or compliance to therapy, withdrawal of consent, lack of follow-up) and 3 patients were taken out of the study in order to have their treatment modified. The average deaths in the groups with active medication was similar to the one of the groups without treatment. The

abandon average should be considered as little: except for the dead patients, 3.65% of the patients were lost from the study. The average of completing the study at 18 months was 69.9%. It was satisfying in comparison to other medical studies, such as the rivastigmine / donepezil study at 2 years with 52-63 % patients completing the study[12].

The results of the descriptive analyses for NPI-Q scores are presented in figure 3.
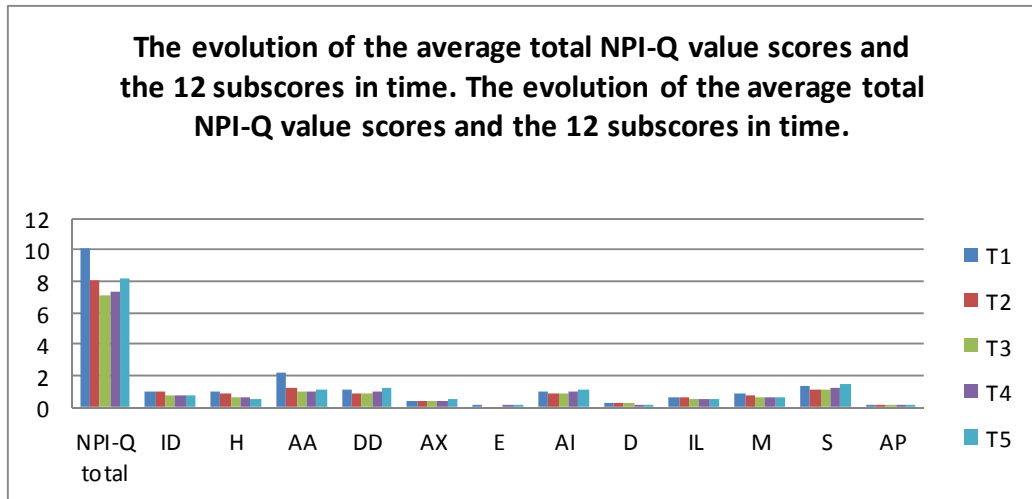
Fig. 3. The evolution of the average behavioral value scores (total NPI-Q and NPI-Q in each symptom) in time –for all participants.

We examined the association between the specific antidementia medication administered to patients (NMDA, ACheI, combined treatment versus no treatment) and the impact on the caregiver in different moments in time during the study. It is supposed that the patients having received the treatment needed less effort from the part of the caregiver, in comparison with the patients who had not been given the treatment. In order to examine this hypothesis, NPI-Q distress score differences have been calculated as marker of the "impact on the caregiver" between the moments of the study. (For instance, between T1and T2, T2 and T3, etc., and also between T1and T5). These differences were used in statistical analyses which compared groups of treatment. It is important to mention the fact that during the study some patients needed a change of the

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[12] Rivastigmine and donepezil treatment in moderate to moderately severe Alzheimer's disease over a 2-year period. Bullok R., Touchon J, Bergman H., Giuseppe G., He Y., Rapatz G., Nagel J., Lane R. 2005, Curr Med Res Opin, p. 21 (8): 1317-1327.

specific medical therapy which was made out of obvious ethical reasons. These patients were however eliminated from the study according to the established protocol as it was thought that they were not similar to the patients to whom a certain type of treatment was administered during the whole study. In order to determine the role of specific antidementia therapy in lessening distress on the caregiver, we initially used descriptive analyses (mean, standard deviations, the minimum and the maximum values) of the transformed scores (namely the score differences of NPI-Q distress) of the impact over the caregiver (marked as Qing) for every separate treatment group. These results are presented in figure4 and table2.

	TREATMENT GROUP	Mean	Standard deviation (SD)	N
Qingr_T2T1	memantine (NMDA)	3.55	1.809	11
	ACheI	2.00	1.063	24
	Combined	3.24	1.442	37
	Without	-.48	1.034	33
Qingr_T3T2	memantine (NMDA)	-.18	.982	11
	ACheI	-.25	.897	24
	Combined	-.49	.692	37
	Without	-1.06	1.088	33
Qingr_T5T1	memantine (NMDA)	1.91	1.814	11
	ACheI	.21	1.351	24
	Combined	.78	2.213	37
	Without	-4.15	2.502	33

Table 2. Evolution of distress NPI-Q score differences (Qingr) for each treatment group by time
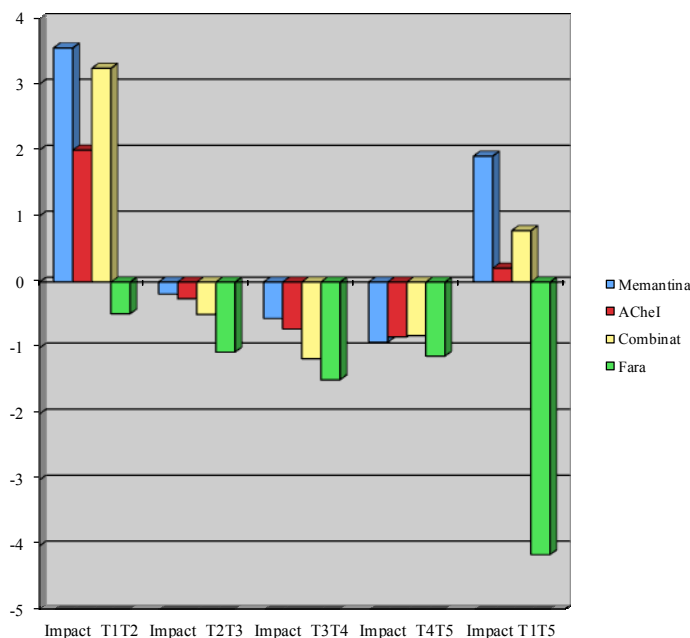
Fig. 4 Time Evolution of distress NPI-Q score differences (Qingr) for each treatment group by time

RESULTS AND DISCUSSIONS:

The multivariate analysis of variance, MANOVA (*multivariate analysis of variance*) has revealed significant differences among the treatment groups [$F_{(12,259)} = 12,54$, $p < .0001$], while the univariate analyses of variance, ANOVA have revealed differences in what regards the change of scores (NPI-Q distress) regarding the impact on the caregiver (Qingr) between T1-T2 [$F_{(3,101)} = 56,94$, $p < .0001$], T2-T3 [$F_{(3,101)} = 4,97$, $p < .005$], and T1-T5 [$F_{(3,101)} = 42,40$, $p < .0001$].The post-hoc analyses revealed the following:

a) Between T1 and T2 there were significant differences (table 3) between the control group (without treatment) and every treatment group: control – Memantine (average difference = -4,03, $p < .0001$), control – ACheI (average = -2,48, $p < .0001$) and control – combined treatment (average difference=-3,73, $p < .0001$); there were also significant differences between the Memantine – ACheI group (average difference = 1,55, $p < .01$), and the ACheI –combined treatment group (average difference = -1,24, $p < .01$). As shown by descriptive statistics (table 2), between T1 and T2 the impact scores on the caregiver for the Memantine

group have grown by 3.55 units, for the ACheI group have grown by 2 units, for the group with combined treatment have grown by 3.24 units, and for the group without treatment have lessened with 0.48 units.

Dependent variable	(I) TREATMENT GROUP	(J) TREATMENT GROUP	Average Difference (I-J)	Sig. P value
Qingr_T2T1	memantine (NMDA)	ACheI	1.55*	.007
		Combined	.30	.903
		Without	4.03*	.000
	ACheI	memantine (NMDA)	-1.55*	.007
		Combined	-1.24*	.002
		Without	2.48*	.000
	Combined	memantine (NMDA)	-.30	.903
		ACheI	1.24*	.002
		Without	3.73*	.000
	Without	memantine (NMDA)	-4.03*	.000
		ACheI	-2.48*	.000
		Combined	-3.73*	.000

Table 3. Evolution of differences in NPI-Q distressed score (Qingr) for each treatment group in the first 3 months (T2T1).

b) There were significant differences between T1 and T3 (table 4) regarding the control group (without treatment) and each group of treatment: control – Memantine (average difference = -0,88, $p < .05$); control – ACheI (average difference= -0,81, $p < .05$) and control – combined treatment (average difference= -0,57, $p < .05$). As descriptive statistics show (table 2), between T2 and T3 impact scores on the caregiver for the Memantine group lessened by o.18 units, for ACheI group lessened by 0.25 units, for the combined treatment group lessened by 0.49 units and for the group without treatment lessened by 1.06 units.

Dependent variable	(I) TREATMENT GROUP	(J) TREATMENT GROUP	Average Difference (I-J)	Sig. P value
Qingr_T3T2	Memantine	ACheI	.07	.997
		Combined	.30	.763
		Without	.88*	.032
	ACheI	Memantine (NMDA)	-.07	.997
		Combined	.24	.753

		Without	.81*	.007
	Combined	Memantine (NMDA)	-.30	.763
		ACheI	-.24	.753
		Without	.57*	.047
	Without	Memantine (NMDA)	-.88*	.032
		ACheI	-.81*	.007
		Combined	-.57*	.047

Table 4. Evolution of distressed NPI-Q score differences (Qingr) for each treatment group between the 3rd and 6th month of study (T3T2).

c) Between T1 and T5 (for the whole study) there existed significant differences (table 5) between the control group (without treatment) and every group of treatment: control –Memantine (average difference = -6,06, p < .0001); control – AcheI (average difference= -4,36, p < .0001) and control – combined treatment (average difference = -4,94, p < .0001). As shown by descriptive statistics (table 2), between T1 and T5 the impact scores on the caregiver for the Memantine group grew by 1.91 units, for the AcheI group grew by 0.21 units, for the combined treatment group grew by 0.78 units and for the group without any treatment lessened by 4.15 units.

Dependent variable	(I) Group treatment	(J) Group treatment	Average Difference (I-J)	Sig. P value
Qingr_T5T1	Memantine (NMDA)	ACheI	1.70	.128
		Combined	1.13	.412
		Without	6.06*	.000
	ACheI	Memantine (NMDA)	-1.70	.128
		Combined	-.58	.727
		Without	4.36*	.000
	Combined	Memantine (NMDA)	-1.13	.412
		ACheI	.58	.727
		Without	4.94*	.000
	Without	Memantine (NMDA)	-6.06*	.000
		ACheI	-4.36*	.000
		Combined	-4.94*	.000

Table 5. Evolution of distressed NPI-Q score differences (Qingr) for each treatment group throughout the study period (T5T1).

A further step in testing this hypothesis presupposed dividing the participants in two groups (without and with treatment) and comparing these general groups concerning the impact on the caregiver in different moments in time. The t-test of comparison was used between the averages of the two groups. These analyses have shown significant differences between the same moments in time, T1-T2, T2-T3 and T1-T5 (table 6).

	T	df	Significance (2-tailed) P value	Average Difference
Qingr_T2T1	-7.836	157	.000	-3.287
Qingr_T3T2	-2.201	141	.029	-1.128
Qingr_T4T3	-1.813	135	.072	-.550
Qingr_T5T4	-1.500	148	.136	-.261
Qingr_T5T1	-11.635	112	.000	-5.017

Tabel 6. Results of t-test concerning the differences between the group without treatment and the group with treatment

In order to assess the efficacy of dementia therapy, it is important to take into account not only the doctor's evaluation (which is mostly done through the intermediary of the evaluation scales applied to cognitive functions, functionality and behavioral disturbances); it is very important to also take into account the patient's or the caregiver's opinion about the evolution of the disease, their objectives varying in many cases. In order to do this we have used and interpreted the NPI-Q subscale of distress regarding the impact of behavioral disturbances on the caregiver (Qingr).

The average of favourable response to treatment for the cognitive function, functionality and behavior correlate with an improved quality of life for patient and a reduced caregiver burden. The quality of life covers three main domains: physical, cognitive and social. Preserving as long as possible the cognitive function and the functionality improves the patients' quality of life, while reducing behavioral disturbances can extend the time until institutionalization.

CONCLUSIONS
In our study the antidementia medication has favorable effects regarding the impact on the caregiver, bringing benefits from the very beginning (the first 3 months), more important in the given order of memantine, combined therapy and acetylcholinesterase inhibitor; the benefits last until 18 months.

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RADIO AWARENESS CAMPAIGN AND PUBLIC ATTITUDES TOWARD FLOOD IN ABUA/ODUAL AND AHOADA WEST LGAS OF RIVERS STATE, NIGERIA

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ABSTRACT: *Flood has continued to threaten some parts of Nigeria, 72 years after the first incident was recorded, and eight years after the contemporary dimension of its surge was recorded in several parts of the country. In the aftermath of the 2012 flood disaster, government and several institutions vowed to intensify campaign against flood in Nigeria. The media (broadcast media in particular) as the most accessible medium to people in Nigeria is, therefore, considered so much for awareness creation on dangers of flood. Consequently, this work studied radio awareness campaign and public attitude toward flood in Abua/Odual and Ahoada West LGAs of Rivers State, Nigeria. It adopted survey methodology to generate data from a sample of 400 respondents. The study, among other findings, unraveled that residents of Abua/Odual and Ahoada West were exposed to awareness campaign in 2019 by radio stations in Port Harcourt. It, however, established that the radio stations seldom carry out awareness campaign, while the residents do not obey messages from the radio stations. In view of this, it is recommended that Radio stations in Port Harcourt should ensure that awareness on flood is carried out often, and through all their programmes. It is also recommend that residents of Abua/Odual and Ahoada West LGAs should obey radio messages concerning flood and embrace them with seriousness, among other recommendation.*

KEYWORDS: *Radio, Awareness, campaign, flood, attitude*

Introduction

The environment is the precursor of man. The continued existence of human beings and animals rests squarely on the persistent verve of the environment. Due to the centrality and importance of environment to the existence of humanity, development cannot be discussed without reference to the purity of the environment. In essence, the environment can be seen as life support system that requires maintenance for its sustainability.

In view of the above, Ite (2016)[1] says environmental sustainability "requires the use of environmental good and services in such a way that

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their productive capacities are not reduced, nor their overall contribution to human well-being diminished" (p.4). However, human beings for whom the environment is created; whose responsibility it is to ensure safety of the biosphere are failing on daily basis to protect the environment from depletion. Consequently, man's actions have continued to cause great damage to the environment. Alarmed by man's action on the environment, Usua (2016)[2] notes that many of the resources that serve as life supports are rapidly disappearing and this has happened mostly as a result of man's attitude towards the resources themselves (p. 235).

More so, our cities are yet filthy with heaps of generated waste littering in all corners while many of our people indulge in unhealthy behaviours including those that render the environment unsafe health-wise (Nwachukwu, 2016, p. 352)[3].

Apart from man's inimical actions on the environment, there are natural occurrences that also affect the environment. One of the environmental challenges confronting man is flooding. Nigeria is still witnessing flooding 70 years after the first incident was recorded. According to Ajaero, Okoro and Ajaero (2016, p.1)[4], the first flood incident in Nigeria was recorded in Ibadan in 1948.

Since then up until now, some states in Nigeria are still experiencing flooding between the months of August and October. In 2012, Nigeria witnessed a great deal of flooding that claimed several lives. The impact of the 2012 flooding in Nigeria was devastating in terms of human, material and production losses. As reported by National Emergency Management Agency, NEMA, in September 2012, many Nigerians were displaced, properties (sic) worth billions of US dollars destroyed and more than 207 individuals lost their lives[5]. In 2018, 12 of the 36 states plus the federal

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[1] Ite, U.E., *Perspectives on self-reliance and sustainable development in Nigeria*, lead paper for 2nd National Conference of Academic Staff Union of Polytechnics (ASUP), Ken Saro Wiwa Polytechnic, Bori chapter, Rivers State, Nigeria, 6th September 2016.

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capital territory also witnessed flooding with catastrophic consequences. Writing about effect of flooding Ochonogor (2016)[6] narrates that:

> Some other man made causes of flooding are the blocking of water drainages with industrial and house hold waste and the erection of buildings on water ways channels. Although it is a natural occurrence, it often leads to disasters as a result of human created vulnerability which is a consequence of human-environment interaction. Nigeria experiences heavy rain falls between May and September each year. The water from the rainfalls have natural run-off channels from which they get into streams and rivers from where they eventually empty to the sea. However, several human activities prevent the natural run-off of rain water, leading to a rise in levels in inhabited areas (65)

Rivers state was one of the states hit by flooding in 2012 and several Local Government Areas were seriously affected. In 2018 and 2019, however, two Local Government Areas of the state, Abua/Odual and Ahoada West were worse hit by the environmental menace. In the aftermath of the 2012 flood disaster in Rivers State and Nigeria at large, Government, Non-Governmental Organizations and other societal institutions like the Media are expected to increase approaches in creating awareness or campaign among the masses about danger of flood and measures that should be taken in curtailing its effects.

Radio, as one of the societal institutions with potentials of ensuring mass information dissemination, societal surveillance and awareness, among others, is expected to maintain its Social Responsibility to the society through its messages (programmes and other services rendered to the society.

Therefore, radio stations in Port Harcourt, months before August and October, being the period of flooding in Rivers State, are expected to create awareness on the causes and consequences of flooding on the people, through news, messages and jingles. Radio stations are equally expected to air publicity from the National Orientation Agency and the

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[6] Ochonogor, I.C., Multimedia communication approach to managing flooding in the river Niger plains of Nigeria, in Soola, E.; Udoudo, A.J. & Ochonogor, I.C. (Eds.) *Issues and trends in environmental communication*. Ibadan: Kraft Books Limited, 2016, 62-82.

Nigeria Meteorological Agency concerning warning and predictions about impending flood disasters. Discussion and interview programmes aimed at educating the people on the dangers of flood and attitudes that should be avoided by the people in order to prevent or mitigate the effects of flood on them, are also expected to be carried out by radio stations in Port Harcourt. Also, attitudes of residents of Abua/Odual and Ahoada West Local Government Areas of Rivers State toward such campaign are very crucial in determining the effect of the awareness campaign. The concern of this work is, therefore, fixed in the above submission.

Statement of the Problem

In the aftermath of 2012 flood menace in Nigeria, it is expected that most people by now should be aware of the danger of flood, its causes and what should be done to avoid it. This followed several approaches that had been adopted to increase people's awareness on the menace. And radio remains one of the means mostly used in reaching out to the people, as government, Non-Governmental Organizations and other groups become more interested in the campaign to ensure that effects of 2012 flood are not witnessed across the country in subsequent years.

In Rivers State where 16 radio stations now exit, unlike in 2012 when 13 stations were operating, it is believed that awareness creation concerning causes and dangers of flood as well as actions to be taken to avoid it, would witness an upswing following the social responsibility function expected to be performed by it.

However, despite warning and the predictions made by the Nigeria Meteorological Agency concerning imminent flooding in 2019, it occurred and wrecked havoc on the people, mostly in Abua/Odual and Ahoada West Local Government Areas of Rivers State. Meanwhile, houses, farmlands and property worth millions of naira were destroyed amid displacement of those affected by the menace. The situation has raised questions concerning the social responsibility function of radio stations in Rivers State relating to awareness creation as well as the residents attitudes toward flood awareness campaign.

Objectives of Study

Broadly, the objective of this study is to ascertain if radio stations in Port Harcourt performed their Social Responsibility functions relating to impending flooding in Rivers Sate in 2019 and attitudes of residents of

LGAs mostly affected by the flood towards such messages. Specifically, the aim of the study revolves around the need to:

1. Unravel the level of exposure of people of Abua/Odual and Ahaoda West LGAs to radio messages,

2. Ascertain whether radio stations in Rivers State carry out awareness campaign on impending flood disaster in 2019,

3. Find out level of awareness campaign by the radio stations,

4. Find out attitudes of residents of Abua/Odual and Ahaoda West LGAs towards the flood awareness campaign.

Research questions

1 What is the level of exposure of people of Abua/Odual and Ahaoda West LGAs to radio awareness campaign?

2 Did radio stations in Rivers State carry out awareness campaign on impending flood disaster in 2018?

3 What is the level of the awareness campaign by the radio stations?

4 What are the attitudes of Residents of Abua/Odual and Ahaoda West LGAs towards the flood awareness campaign?

Theoretical framework and literature review

This work is anchored on two theories; Social Responsibility and

Social Responsibility

Social Responsibility Theory (SRT) emerged following the need to match the liberties enjoyed by the press with societal responsibilities. There had been fear that the liberties enjoyed by the press under the Free Press Theory or Libertarianism, if not exercised with restrain and/or with some levels of obligations to the society, they might be injurious to the society and the mass of its people. As noted by Wogu (2008)[7] the theory owes much to the American Commission on the freedom of the press set up in 1947: the Hutchins' Commission. The commission was set up to ascertain the extent to which the libertarian theory was working. This followed allegations that the concept of free press was a farce because there was no equal access to the media, which had become the preserve of

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[7] Woju, J.O., *Introduction to mass communication theories.* Nsukka: University of Nigeria Press Limited, 2008.

the rich (p. 71). According to Mbazie and Samuel (2015)[8], Social Responsibility Theory was developed as a counterpoint to libertarianism… In his study commissioned in 1942 on the process of press freedom in America, Robert Hutchins listed five functions of the media to society, which encapsulates the media obligations to the society (emphasis is mine):

1. To provide a truthful, comprehensive, and intelligent account of the day's event in a context that gives them meaning;

2. To serve as a forum for exchange of comment and criticism;

3. To provide a representative picture of constituent groups in society; and

4. To present and clarify the goals and values of society;

5. To provide citizens with full access to the days intelligence. Patterson and Wilkins 1998, cited in Mbazie and Samuel (2005, p. 125)[9].

From the above submission, it entails that the Social Responsibility Theory requires the media or journalists to bring to the audiences pieces of information embedded in facts in a way that they would be understood by the people and help their learning process. It means also that such pieces of information could be criticized by the societal people, especially when the information does not reflect the situations surrounding the people for whom the story is about. More so, the theory stresses the need for journalists to explain, interpret and present the goals of the society and the things that guide the existence of the society. This is why McQuail (2005, p.171)[10] notes that ''the theory of Social Responsibility involved a view of media ownership as a form of public trust or stewardship, rather than as an unlimited private franchise''. This is because "the media institution is essentially concerned with the production and distribution of knowledge in the widest sense of the world. Such knowledge enables us to make some sense of our experience of the world, even if the talking of the meaning occurs in autonomous and very diversified ways. The information, images and ideas made available by the media may, for most

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[8] Mbazie, S & Samuel, O., Ownership influence and cases of editorializing news in the Port Harcourt Telegraph and National Network. *Review of communication and media studies*, 1 (2), 2015, 123-131.

[9] Mbazie, S & Samuel, O., *Ownership influence and cases of editorializing news in the Port Harcourt Telegraph and National,* 2015.

[10] McQuail D., *McQuail's mass communication theory (fifth edition)*. London: Sage Publication, 2005.

people, be the main source of an awareness of a shared past time (history) and of a present social location (McQuail, 2005, p. 81)[11].

Also, Cognitive Development Theory (CDT) propounded by Jean Piaget (1896–1980), who was a Swiss Developmental Psychologist, is adopted. The thrust of the theory is about the nature of knowledge and stages undergone by humans to acquire and use knowledge.

According to Shaffer and Kipp, cited in Ochonogor (2016, p. 75)[12], the theory is concern with the "processes by which human beings acquire and use knowledge to solve problems''. Ochonogor noted that the tenet of the theory is that knowledge is the outcome of the nature and amount of information available to humans and that information is essential in the acquisition of the mental ability to develop human potential…It is the assumption of this theory that information provides knowledge and understanding with which the society directs their efforts to accomplishing desired goals (p. 76).[13]

Cognitive Development Theory recognizes the nature of humans, their desires for positive changes and their information needs. It holds that human beings are susceptible to changes based on information available to them within their environment. They absorb information within their environment and use it based on their perception of the pieces of information. When this happens, it means that they have new knowledge and will willingly let go of previous knowledge that impeded their complete functions within their environment. This is why Reddi, cited in Ochonogor (2016, p. 76)[14] notes that "a citizen who is ignorant or ill-informed cannot make a good living as well participates in the functioning of the government''.

Flooding is a life-threatening and life-taking occurrence. It affects humans and their environment including life-support systems and social intercourse. It requires prevention and mitigation. Prevention usually comes through measures adopted by government and the people, while mitigation is attained when actions are adhered to by the masses. People that are ignorant or ill-informed will be caught up in the web of flood. Therefore, messages that inform and educate the people on the dangers of

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[11] Ibid.

[12] Ochonogor, I.C., Multimedia communication approach to managing flooding in the river Niger plains of Nigeria, in Soola, E; Udoudo, A.J & Ochonogor, I.C. (Eds) *Issues and trends in environmental communication*. Ibadan: Kraft Books Limited, 2016, 62-82.

[13] Ibid.

[14] Ibid.

flood, from government, through the mass media (radio) in particular, are essential in preventing and/or reducing consequences.

The two theories adopted by the researchers are appropriates since they address the information needs of the people as well as adopting deliberate programmes by the media, based on their obligation to the society, to provide and distribute knowledge to the audiences.

Literature review

According to Ottah, (2015, p.81)[15], radio is a medium of mass communication that appeals to the sense of sound only, through the medium, the listening audiences hear programmes and use the "eye" of their imagination to "see" what is said. Unlike the television, radio is everywhere-at home, in offices, in cars, at places of business, in the farms and in the fishermen's canoes to give them company. It is for all ages, from teens to seniors.

Edegoh, Asemah and Nwamuo (2013, p. 21)[16] notes the reach of radio as "a powerful electronic medium that is utilized in bringing political, economic and social news to any community or group of communities faster than other media. Radio is an indispensable medium of communication for achieving development in the rural areas, as issues of development are aired to audiences in the form of various programmes and individuals are exposed to happenings in and around their society, through listening to these programmes''.

Gathigi (2009)[17] maintains that radio gives people a sense of the world they live in. They use radio to get information and news on what is happening within their locality, region, country, and in the world in general. To some listeners, radio is a companion by providing different forms of entertainment and a discursive space about different issues that affect them both as individuals and as members of a group or community.

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[15] Ottah, Gabriel Alhassan, Impact of Radio Kogi's Flood Disaster Awareness Campaign on Residents of Ibaji Local Government Area of Kogi State, *Nigeria International Journal of Arts and Humanities (IJAH) Ethiopia* Vol. 6 (3), S/No 22, July, 2017: 80-97.

[16] Edegoh, Asemah and Nwamuo (2013, p. 21)[16]

[17] Gathigi, G. (2009), Radio listening habits among rural audiences: An ethnographic study of Kieni West Division in Central Kenya, retrieved on December 11, 2019 at https://profiles.uonbi.ac.ke/gathigi/publications/radio-listening-habits-among-rura.

Ajaero, Okoro and Ajaero (2016)[18] did a study on Perception of and Attitude Toward Mass Media Reportage of the 2012 Flood in Rural Nigeria and discovered that "based on the information from the media, the populace engaged in different activities such as the building of silt and runoff collection pits, sand filling of their lands, and the elevation of their buildings to prevent future occurrence of the devastation they experienced". Also, Ottah (2017)[19] carried out a study on "Impact of Radio Kogi's Flood Disaster Awareness Campaign on Residents of Ibaji Local Government Area of Kogi State", and unraveled that the people of Ibaji Local Government Area of Kogi State in Nigeria were well exposed to the Radio Kogi warning on the flood that ravaged the area in 2012 but they did not relocate because of the lack of persuasive power in the content.

In another study by Mercado 2012 cited in Ajaero and Anorue (2018, p. 4228)[20], the media play an essential role in the construction of social reality and consequently knowledge of what is reported in the media is essential to understanding social attitudes towards significant issues. This is why Okon (2014, p. 22)[21] in a study entitled "Voter Education by Nigerian Broadcast Media; a Normative Appraisal of Three Radio Stations in Port Harcourt Metropolis", recommended that Broadcast stations through outreaches (news and current affairs programmes) should synergize their normative function through collaborations with cognate institutions in the Nigerian sociopolitical milieu. This no doubt will engender holistic mass mobilization. 'Cognate institutions' as mentioned by Okon, in this case refers to the people who use the media. Among the people are opinion leaders who diffuse pieces of information from the media to others within their community and environment.

A study by Oyatayo and Mawardin (2016)[22] on "Assessment of people's awareness and perception of flooding in Donga Town, Taraba

[18] Ijeoma D. Ajaero, Nnanyelugo M. Okoro, Chukwuedozie K. Ajaero, *Perception of and attitude toward mass media reportage of the 2012 flood in rural Nigeria,* SAGE Journal, 2016.

[19] Ottah, Gabriel Alhassan, Impact of radio Kogi's Flood Disaster awareness campaign on residents of Ibaji Local Government Area of Kogi State, *Nigeria international journal of arts and humanities (IJAH) Ethiopia* Vol. 6 (3), S/No 22, July, 2017: 80-97.

[20] Ijeoma D. Ajaero1, & Luke I. Anorue1, *Newspaper framing and climate change mitigation in Nigeria and Ghana*, African population studies, vol. 32 (2), 2018.

[21] Okon, G.B., *Voter education by the Nigerian broadcast media: A normative appraisal of three radio stations in Port Harcourt Metropolis.* In Journal of media studies, vol. 28 (1), 2013.

[22] Oyatayo, K.T. & Mawardin, A., *Assessment of People's Awareness and Perception of Flooding in Donga Town,* Taraba State, Nigeria, 2016.

State, lends credence to the above submission as it unravels that "people's educational level does not influence their awareness level of flooding; hence programmes promoting the use of traditional knowledge on forecasting cannot function independently. It needs to be supported by warning methods and a wide range of support and risk management measures. The support comes a great deal from the media because they shape people's view by choosing what events to report on, how much and how frequent to report on a subject and what language to use when describing an event, thus the media can influence public perception (McCarthy and Dolfsman (2014 p. 48)[23]. Mercado (2012) cited in Ajaero and Anorue (2018, p. 2229)[24] asserts that how an issue is characterized in news reports can have an influence on how it is understood by the audience.

In a study by Mu'azu, as cited by Gambo, (p. 574)[25], in Nigeria environmental issued that received significant coverage are those in which government had strong involvement, and they were among the most important issues of major concern.

Flood is a state of being under water; the situation that results when land that is usually dry is covered with water as a result of a river overflowing or heavy rain, Microsoft Corporation, cited in Gambo (2018, p. 573)[26]. According to Few, cited in Gambo a typical of flooding can comprise overflow of rivers produced by prolonged seasonal rainfall, rainstorms, snowmelt and dam-breaks (p. 573)[27]

Methodology
 Survey design and interview were adopted for this study. This is because the study deals with opinions, attitudes and characteristics of people. Ohaja says survey is usually employed in studies of attitudinal and behavioural trends with the researcher seeking to uncover their

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[23] McCarthy, K. J., & Dolfsma, W., *Neutral media? Evidence of media bias and its economic impact. Review of Social Economy*, 2014, 72, 42-54.

[24] Ijeoma D. Ajaero, & Luke I. Anorue, *Newspaper framing and climate change mitigation in Nigeria and Ghana*, African population studies, 2018, vol. 32 (2).

[25] Gambo, S.N., Nigerian newspaper framing of 2012 flooding disaster in Nigeria, in Nnamdi, T.K. (Ed.), *The Nigerian journal of communication, the journal of the African council for communication education, Nigerian chapter,* 2018, vol. 15 (2).

[26] Ibid

[27] Ibid

demographic or psychographic underpinnings (2003, p. 11)[28]. Corroborating Ohaja's view, Ndiyo (2011) asserts that survey research focuses on people, the vital facts of people and their beliefs, opinions, attitudes, motivations, and behaviour (p. 58)[29]. On their part, Ihejirika and Omego (2013)[30] reveal that survey is one of the most popular methods used today to gain knowledge of things, people and events in the natural world. This design involves the study of a sample taken from a population in order to know their major characteristics which can be generalized to the whole population (p. 75). Interview was added because some members of the population are illiterates, and could not respond to questions asked on the questionnaire. Therefore, the people were interviewed in their languages, through the help of research assistants who understand and speak the language fluently.

According to the 2006 National Population Census figure, Abua/Aodual Local Government Area has 283, 410 while Ahoada West Local Government Area has total population of 249, 232. By the population growth rate of 2.5, the population of Abua/Odual LGA would have been 290, 495 by 2019 while that of Ahoada would have been 275, 462. So the population of the two LGAs is now 565957. Taro Yamane Formula was used in determining the sample size, and 400 was arrived at as the appropriate sample size for the study. Accordingly, 204 copies of the questionnaire were administered on residents of Abua/Odual while 196 copies were administered on residents of Ahoada West. One hundred and ninety eight (195) copies of the questionnaire were retrieved successfully in Abua/Odual. This shows 95.6 per cent return rate. On the other hand, 185 copies of the questionnaire were retrieved successfully in Ahoada West. This shows 94 per cent return rate. The research instrument used for this study was the questionnaire. It was designed in clear words to obtain the views of the respondents. Probability sampling technique, specifically, stratified random sampling was adopted for the study. Stratified random sampling was considered "because it assures for more representation of every segment of the population" (Ihejirika and Omego,

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[28] Ohaja, E.U., *Mass communication research and project report writing*. Lagos: John Letterman Ltd., 2003.

[29] Ndiyo, N.A., *Fundamental of research in behavioural sciences and humanities*. Excel Calabar: Excel, 2015.

[30] Ihejirika, W.C. & Omego, C., *Research methods in linguistics and communication studies (second impression)*. Choba: University of Port Harcourt Press Ltd., 2013.

2013, p. 108)[31]. Accordingly, questionnaires were distributed in Arukwo, Okoboh, Obaraany, Oghora and Aminigboko communities of Abua/Odual LGA and Akinima, Oroama, Oneman Country, Mbiama, Joinkrama one, of Ahoada West LGA.. The data was analyzed using simple frequency distribution tables, percentages, weighted mean scores (wms) from Likert-type questions. In analyzing data from the five-point scale likert-type question in the instrument, responses to items will be shown as follows:

Strongly Agree   (SA) = 5 points
Agree   (A) = 4 points
Undecided   (U) = 3 points
Disagree   (D) = 2 points
Strongly Disagree   (SD) = 1 point

From these, the weighed mean score (wms) is 3.00 (i.e. 5+4+3+2+1) divided by 5, using the formula:

WMS = $\dfrac{\sum fx}{\sum f}$

Where

WMS = Weighted Mean Scores

$\sum fx$ = Summation of frequency x score and

$\sum f$ = Summation of frequencies

Demographic data

Table 1 showing sex of respondents

Abua	Sex		Ahoada	Sex	
	Male	109		Male	104
	Female	86		Female	81
	Total	195		Total	185

The above table shows 55.9% of male respondents and 44.1% of female respondents, for Abua Odua Local Government Area. It also shows 56 % of male respondent and 44% of female respondents, for Ahoada West Local Government Area.

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[31] Ihejirika, W.C. & Omego, C., *Research methods in linguistics and communication studies (second impression)*. Choba: University of Port Harcourt Press Ltd., 2013.

Table 2 showing age brackets of the respondents

Abua			Ahoada		
	18-25	37		18-25	36
	26-34	58		26-34	53
	35-40	41		35-40	53
	41-and above	59		41-and above	43
	Total	195	Total		185

From table 2, it is clear that 18.9% of the respondents are within the age bracket of 18-25, while those within age bracket 26-34 constitute 29.7%. Those within age bracket 35-40 constitute 21% as those within age bracket 41-above constitute 30.2 %-all for Abual/Odual Local Government Area. For Ahoada West Local Government Area, those within the age bracket of 18-25 make up 19.5% of the population, those within the age bracket of 26-34 make up 28.6% of the population, those within the age bracket of 35-40 constitute also constitute 28.6% while those within the age bracket of 41 and above make up 23.2%

Table 3 showing age brackets of the respondents

Abua			Ahoada		
	SSSC	90		SSSC	77
	Diploma	35		Diploma	25
	HND	33		HND	40
	B.Sc	37		B.Sc	43
	Total	195	Total		185

From the above table, those who have Senior Secondary School Certificate make up 46.2% of the respondents, those who have Diploma constitute 17.9%, those who have HND constitute 16.9% while those who have B.Sc make up 18.9% of the population for Abua/Odual Local Government Area. For Ahoada West Local Government Area, those who have SSSC make up 41.6%, those who have Diploma make up 13.5%, those who have HND make up 21.6% and those who have B.Sc constitute 23.2% of the respondents.

Research questions one:

What is the level of exposure of residents of Abua/Odual and Ahoda West LGAs to radio awareness campaign on flood disaster in 2019?

To answer this question, two items were used.

Abua

	SA	Responses in Mean Scores A U D SD	WMS	Decision
I listen to radio station always.	65	79 24 16 11	3.8	
Radio stations in Port Harcourt always raise awareness concerning flooding	57	80 28 18 12	3.7	

Ahoada

	SA	Responses in Means Scores A U D SD	WMS	Decision
I listen to radio stations always.	48	63 29 30 15	3.5	Accepted
Radio stations in Port Harcourt always raise awareness concerning flooding.	29	71 40 32 13	3.4	Rejected

From the table above, it shows that residents of Abua/Odual and Ahoada West Local Government Areas of Rivers State are exposed to radio awareness campaign. However, residents of Ahoada West LGA said the radio stations did not always raise awareness concerning flooding.

Research question 2

	SA	Responses in Mean Scores A U D SA	W MS	Decision		SA	Responses in Means Scores A U D SD	W MS	Decision
The radio stations point out the causes of flooding	44	81 30 22 18	3.5		The radio stations point out the causes of flooding	58	47 24 35 21	3.5	Accept
The radio stations also point out the dangers of flooding	60	69 25 21 20	3.6		The radio stations also point out the dangers of flooding	71	41 30 25 18	3.6	
One of the messages on radio is "Stop dumping refuse indiscriminately; clean your gutters to avoid flooding".	59	70 39 19 8	3.7	Accept	One of the messages on radio is "Stop dumping refuse indiscriminately; clean your gutters to avoid flooding".	71	45 29 23 17	3.7	Accept

Did radio stations in Port Harcourt carry out awareness campaign on impending flood disaster in 2019?
To answer this question, 5 items on the questionnaire were used.

Statement	N	Frequencies	Mean	Decision	N	Frequencies	Mean	Decision
Another one is "Stop blocking the water ways to avoid flooding"	41	72 33 26 22	3.4	Reject	73	49 35 13 15	3.8	Accept
Another one is " If your area is prone to flooding when it starts raining leave the area to another place"	29	66 49 27 24	3.2		11	55 34 70 15	2.8	

Residents of Abua/Odual and Ahoada West LGAs agreed that the radio station carried out awareness campaign on impending flood disaster in 2019. They maintained that the radio stations pointed out the causes of flooding as well as the dangers of flooding. Due to their exposure to the radio awareness campaign, they affirmed that the radio stations warned them to stop dumping refuse indiscriminately but to clean their gutters to avoid flooding. The residents of the two LGAs also confirmed that the radio stations asked them to stop blocking the water ways to avoid flooding but disagreed that they were asked to leave any area that is prone to flooding whenever it would start raining.

Research question 3

What is the level of the awareness campaign by the radio stations?

To answer this question 4 items were used

SA	Responses in Mean Scores A U D SA	WMS	Decision		SA	Responses in Means Scores A U D SD	WMS	Decision
20	64 62 37 12	3.2	Reject	The radio stations raise awareness on flooding through all their programmes.	32	46 25 53 29	2.9	reject
10	35 64 72 17	2.7	reject	The awareness campaign on radio stations on the dangers of flood is done everyday	33	40 23 60 29	2.9	reject
37	69 29 35 25	3.6		The awareness campaign on radio stations on the dangers of flood begins during raining season	39	64 41 18 23	3.4	Reject
62	73 36 17 7	3.8		The awareness campaign on radio stations on the dangers of flood ends immediately after raining season.	49	62 22 32 20	3.5	

On the level of awareness campaign by the radio stations as indicated in the table above, residents of Ahoada West and Abua/Odual LGAs said the awareness campaign is done seldom, and also not through all their programmes. Meanwhile, while the residents of Abual/Odual said the awareness campaign begins during the raining season, those of Ahoada West disagreed with the view. However, residents of the two LGAs are in agreement that the awareness campaign on radio stations on the dangers of flood ends immediately after raining season.

Research question 4

What are the attitudes of residents of Abua/Odual and Ahoda West LGAs toward the flood awareness campaign by the radio stations?

To answer this question 2 items were used.

	SA	Responses in Mean Scores A U D SD	WMS	Decision		SA	Responses in Means Scores A U D SD	WMS	Decision
I obey the messages from radio stations on the dangers of flooding.	19	55 43 40 38	2.8	reject	I obey the messages from radio stations on the dangers of flooding.	37	81 23 24 20	3.5	accept
I don't take the messages on radio stations serious because I believe that flooding will not happen in my area.	24	51 46 62 12	3.0	reject	I don't take the messages on radio stations serious because I believe that flooding will not happen in my area	22	26 34 64 39	2.6	reject

On the attitudes of the public toward flood awareness campaign by the radio stations, the above table shows that residents of Abua/Odual LGA did not obey the messages. On the other hand, residents of the two LGAs said they sincerely embraced the messages. In view of this, there is a contradiction on the part of residents of Abua/Odual who said they did not obey the messages from radio stations but noted that they attached seriousness to the messages.

Discussion of Findings

This work is about Radio Awareness Campaign and Public Attitudes toward Flood in Abua/Odual and Ahoada West LGAs of Rivers State, Nigeria. Research conducted has shown that residents of Abua/Odual and Ahoada West Local Government Areas of Rivers State are exposed to radio awareness campaign. It has been established also that radio stations in Port Harcourt carried out awareness campaign on impending flood disaster in 2019, pointed out the causes of flooding as well as the dangers of flooding. Radio stations also warned the public to stop dumping refuse indiscriminately, stop blocking the water ways to avoid flooding. This has shown that the radio stations carried out their social responsibility. These findings have answered research 1 and 2 which are: What is the level of exposure of people of Abua/Odual and Ahoada West LGAs to radio awareness campaign?, did radio stations in Rivers State carry out awareness campaign on impending flood disaster in 2018?

While the findings of this work show that the radio stations in Port Harcourt performed their social responsibility, however, they seldom carry out the awareness campaign. Also, it has been established that the radio stations did sustain the awareness through all their programmes. Deductively, therefore, the residents of Abual/Odual and Ahoada West did not have enough information on the causes and dangers of flooding. This, plus the findings that residents of Abua/Odual and Ahoada West LGAs did not obey the messages, answered research question 3 and 4, and explains the reason for the continued grip of the people in the web of flood. This agrees with the submission of Reddi, cited in Ochonogor (2016, p.76)[1] that "a citizen who is ignorant or ill-informed cannot make a good living…"

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[1] Ochonogor, I.C., Multimedia communication approach to managing flooding in the river Niger plains of Nigeria, in Soola, E.; Udoudo, A.J. & Ochonogor, I.C. (Eds) *Issues and trends in environmental communication*. Ibadan: Kraft Books Limited, 2016, 62-82.

Summary and Conclusion

For radio "to continue to enjoy its pride of place as the post popular, though arguably most influential, medium of mass communication, particularly among predominantly traditional, largely non-literate societies where electricity is in short supply and often erratic (Soola, 2016, p.8)[2], it must render on continuous basis, its social responsibilities (programmes that are directly aimed at improving the living conditions and standards of people within its area of coverage) to the society.

This work unraveled that the residents of the two Local Government Areas that were our focus are exposed to radio. The 16 radio stations in Port Harcourt are also showing their social responsibilities. However, they are not consistent in their programmes and do not also sustain the awareness campaign on flood beyond the raining season. This will bring about breakdown in information consumption of the people.

Recommendations

The following recommendations are made:

1. Radio stations in Port Harcourt should ensure that awareness on flood is carried out through all their programs.

2. The awareness campaign on dangers of flood should be sustained beyond the raining season.

3. Residents of Abua/Odual and Ahoada West and others should obey radio messages concerning flood and embraced them with seriousness.

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[2] Soola, E.O., Noise pollution and the media: a Nigerian perspective. In Soola, E; Udoudo, A.J. & Ochonogor, I.C. (Eds) *Issues and trends in environmental communication.* Ibadan: Kraft Books Limited 1-11, 2016.

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DESIGNING THE MODEL OF PROFESSIONAL DEVELOPMENT OF TEACHERS TAKING INTO ACCOUNT AXIOLOGICAL IMPERATIVES OF CONTINUING EDUCATION

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ABSTRACT: *The need for continuous personal and professional development is explained in essence by the continuous education of teachers. The purpose of the study is to define the content of a model for the professional development of teachers, taking into account the axiological imperatives of continuing education. The article describes the axiological imperatives of 'a person is a subject of continuous education', 'a person is a subject of cultural space of continuous education', 'a person is a self-developing personality', 'continuous education is a semantic activity', and 'strategy of own development in the changing world.' The content of the model is presented on the basis of the contextual approach and foundation positions. As a result, the axiological, pedagogical and organizational components of the model are described and correlated with the axiological imperatives of continuous education. These components have determined the development of actual forms of professional teacher development. These include scenario development, expert panels and a roadmap. Axiological imperatives of continuous education should be taken into account in the design of any model for the*

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professional development of teachers in international practice to ensure the successful implementation of the developed model.

KEYWORDS: *personal and professional development, continuous education of teachers, modeling of professional development, axiological imperatives, forms of professional development*

INTRODUCTION

The professional activity of teachers working in preschools, primary schools, basic general education, and secondary general education assumes constant personal and professional development to meet the requirements of the post-industrial information society. Regarding the basic approaches of development, A. McElearney, C. Murphy and D. Radcliffe refer to collaboration and interactivity, which, by contributing to the improvement of pedagogical activities, can improve the personal achievements of students[1]. These approaches relate to the need to develop the professional skills of educators to design and implement the educational process, as highlighted by S. Kim, M. Raza and E. Seidman, namely feedback, reflective action and continuous improvement[2]. A high level of development of these skills enables teachers to successfully carry out their work in accordance with their professional activities, e.g., general pedagogical function (training), educational activities and developing activities.

The support from high-level professional skills development accompanies teachers throughout their professional activities, which are built into the context of lifelong learning. Continuing education is also interpreted as 'lifelong learning' in international documents certifying formal adult education[3]. The reference to lifelong learning is dictated by the peculiarities of the current stage of the development of society in its

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[1] McElearney, A., Murphy, Ch., and Radcliffe, D. 2019. 'Identifying Teacher Needs and Preferences in Accessing Professional Learning and Support', *Professional Development in Education*, vol. 45, no. 3, 433–55,

https://doi.org/10.1080/19415257.2018.1557241, p. 433.

[2] Kim, Sh., Raza, M., and Seidman, E. 2019. 'Improving 21st-Century Teaching Skills: The Key to Effective 21st-Century Learners', *Research in Comparative and International Education*, vol. 14, no. 1, 99–117, https://doi.org/10.1177/1745499919829214, p. 99.

[3] Coelli, M., and Tabasso, D. 2019. 'Where Are the Returns to Lifelong Learning?', *Empirical Economics*, vol. 57, no. 1, 205–37, https://doi.org/10.1007/s00181-018-1433-8, p. 205.

relationship to education. For a person of the 21st century living in a globalized, post-industrial information society, only continuing education will ensure that their personal needs are met, both in the workplace and in employment opportunities[4]. A.Y.S. Goh emphasizes the meaning of continuous human education, which consists of collective reflexive activity for personal and professional development and the development of the educational organization in which the individual works[5]. This meaning implies that the purposeful development of a person is a subject of activity throughout their life and acts as a means of human self-realization.

The problem of the relevance of education in a dynamically changing world leads to an understanding of the need to identify new priorities for continuing education. In their own context, a person masters reality, shows activity aimed at its transformation, and uses available resources, which must constantly be replenished. The value priorities of lifelong education are based on the demands of society, which reflect the transition from an industrial to a post-industrial information society that nevertheless contains pedagogical conservatism, an insufficient material and technical base, and a regional information and technological imbalance[6].

In the context of continuing education, additional professional programs are offered for the personal and professional development of teachers. These include continuing education (short-term training) and vocational retraining (long-term training). Wide access to continuing education courses is associated with short-term training, which allows teachers to improve their professional skills or improve their professional level within their qualifications. The systematic development of these skills is determined by the growth of the growing use of technology in the basic industries, the free flow of information, and the digitalization of

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[4] Ibid, p. 206.

[5] Goh, A.Yu.S., 'Rethinking Reflective Practice in Professional Lifelong Learning Using Learning Metaphors', *Studies in Continuing Education*, vol. 41, no. 1, 1–16, https://doi.org/10.1080/0158037X.2018.1474867, 2019, p. 1.

[6] Lafisheva, M.M., Kudayeva, F.K., and Taisaev, Dzh.M., 'Informatization of Education in the Context of Post-Industrialization: The Difficulties' in *2017 International Conference 'Quality Management, Transport and Information Security, Information Technologies' (IT&QM&IS)* (2017 International Conference'Quality Management, Transport and Information Security, Information Technologies') (Saint Petersburg, Russia: IEEE), 668–70, https://doi.org/10.1109/ITMQIS.2017.8085912, 2017, p. 668.

society. The need to design models in the context of continuing education contributes to the increase of professional mobility of and competitiveness among teachers in various fields of activity. It is important to integrate precisely those teachers who have professional experience and practical work skills into the labor market[7].

The design of an advanced training model is associated with the study of complex systems (scientific worldview, scientific knowledge system, pedagogical systems, learning process) which are characterized by their multidimensionality, inextricable interconnectedness of elements, and a state of uncertainty arising at some stages of their development. The disclosure of the patterns of development of these systems can be facilitated by the use of a cognitive model, which, offering a holistic view of the content of advanced training, simultaneously forms patterns in its components.

Taking into account the value priorities of continuing education in a model of the advanced training of teachers is a mandatory component of its design amongst modern realities. Internal moral attitudes act as a source for the purpose and meaning of 'education through life' and are interpreted as axiological imperatives of continuing education. These imperatives determine a comprehensive understanding and transformation of the idea of the internal self-development of the individual as well as a consideration of the problems of the meaningful life of the individual.

The axiological imperatives of lifelong education permeate the entire content of the continuing education model, which means that they must be taken into account when designing its forms to meet the needs of personal self-development and, accordingly, the personal and professional development of teachers. The relevance of the implementation of axiological imperatives in the course of the personal and professional development of teachers is reflected in the purpose of the study, namely to determine the content of the teacher development model taking into account the axiological imperatives of continuing education. When conducting the study, the authors proceed from the following assumption, which determines the hypothesis of the study: The identification of the axiological imperatives of the continuing education of teachers and the

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[7] Rybakina, N.A., 'Educational Competence: The Essence and Pedagogical Model of Formation in the Context of Lifelong Education', *The Education and Science Journal*, vol. 20, no. 5, 32–55, https://doi.org/10.17853/1994-5639-2018-5-32-55, 2018, p. 32.

determination of the content of models for improving their qualifications will determine the actual forms of the continuing education of teachers.

LITERATURE REVIEW

The rapid growth of scientific information and its rapid aging as well as the changing requirements for the qualifications of specialists in various fields of knowledge in accordance with the needs of society indicate that a person can no longer gain knowledge for life. This circumstance 'suggests the need to complete the educational ladder with new steps designed for all periods of a person's life.'[8] A continuity of education involves not only the assimilation of knowledge by a person and the acquisition of the appropriate abilities, skills and methods of activity but also the formation of their worldview, cognitive interests, abilities and value orientations. The latter include 'personal, professional, pedagogical, and socio-cultural values that show the richness of axiological culture' of teachers[9].

Continuing education becomes a sense-forming activity subject to a conscious choice and the free implementation of educational intentions, which contributes to a change in the value orientations of the individual. By reflecting, a person is able to determine the strategy of their own existence in a rapidly changing world, realizing the importance of their influence on the surrounding reality. The value orientations of the personality, suggesting a thirst for learning new things and reflective activity, describe the importance of continuing education for the professional activities of educators[10].

The Swedish researcher B. Malm notes that it is important to consider the cognitive, social, and emotional components of personal and professional development, which involve coping with conflict, self-

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[8] Perezhovskaya, A.N., 'Continuing education: goals, objectives, content, functions, development prospects' in *Problems and prospects for the development of education: materials of the VI Intern. scientific conf. April 2015, Perm', Russia* (Perm': Merkurij), 38–41, https://moluch.ru/conf/ped/archive/149/7617/, 2015, p. 38.

[9] Astashova, N.A., Bondyreva, S. K., and Smantser, A.P., 'Development of the Axiosphere of the Future Teacher in the Dialogue Space of Modern Education', *The Education and Science Journal*, vol. 20, no. 7, 32–67, https://doi.org/10.17853/1994-5639-2018-7-32-67, 2018, p. 52.

[10] Heijden van der, H.R.M.A., et al., 'Characteristics of Teachers as Change Agents', *Teachers and Teaching*, vol. 21, no. 6, 681–99,

https://doi.org/10.1080/13540602.2015.1044328, 2015, p. 681.

understanding, empathy, leadership skills, and collaboration skills[11]. Italian researchers have also addressed this issue, which points to the critical understanding and adaptation by teachers of techniques, methods, and educational resources for the implementation of educational innovations, which implies the implementation of online or blended learning[12]. In addition, researchers from Spain have focused on full-time, blended or online learning in the continuing education of educators[13].

During decision-making, teachers as subjects of the cultural space of lifelong education not only learn the existing cultural patterns but also engage in cultural contexts that encourage them to deepen their cultural experience[14]. This process is expressed in the possibility of reading cultural texts, thus acquiring the ability to create new ones. The creation of new cultural texts in the post-industrial information society is associated with the ability to use information and communication technologies in professional activities[15]. Effective decision-making, deepening cultural experience and the ability to use information and communication technologies are impossible without the internal moral attitudes of teachers. Serving as the purpose and meaning in the context of continuing education, they become imperatives or moral precepts. It is axiological imperatives, that is, the internal moral principles, of the continuing

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[11] Malm, B., 'Towards a New Professionalism: Enhancing Personal and Professional Development in Teacher Education', *Journal of Education for Teaching*, vol. 35, no. 1, 77–91, https://doi.org/10.1080/02607470802587160, 2009, p. 77.

[12] Limone, P., and Pace, R., 'Teacher Training and Digital Paths: Revolution in the School – A Project for Lifelong Learning' in Information Resources Management Association (ed.), *Teacher Training and Professional Development: Concepts, Methodologies, Tools, and Applications* (Hershey, PA: IGI Global), 657–75, https://doi.org/10.4018/978-1-5225-5631-2.ch029, 2018, p. 657.

[13] Breddermann, J., Martínez-Cerdá, J., and Torrent-Sellens, J., 'A Model for Teacher Training to Improve Students' 21st Century Skills in Online and Blended learning: An Approach from Film Education' in *Teacher Training and Professional Development: Concepts, Methodologies, Tools, and Applications*, ed. Information Resources Management Association (Hershey, PA: IGI Global, 2018), 399–427, https://doi.org/10.4018/978-1-5225-5631-2.ch018, 2018, p. 399.

[14] Smolcic, E., and Katunich, J., 'Teachers Crossing Borders: A Review of the Research into Cultural Immersion Field Experience for Teachers', *Teaching and Teacher Education*, vol. 62, 47–59, https://doi.org/10.1016/j.tate.2016.11.002, 2017, p. 47.

[15] Cendon, E., 'Lifelong Learning at Universities: Future Perspectives for Teaching and Learning', *Journal of New Approaches in Educational Research*, vol. 7, no. 2, 81–87, https://doi.org/10.7821/naer.2018.7.320, 2018, p. 81.

education of teachers that determine their personal and professional development.

Internal moral attitudes are determined by the idea of entering the cultural space of lifelong education[16], where a person comprehends themselves in the culture and assimilates cultural values, the transfer of which to the internal plane consciously leads to the mastery of systemic thinking. Guided by the fact that axiological imperatives act as a source of the purpose and meaning of lifelong education, they consider a person a subject of lifelong education since the internal impulse to action implies a successful organizing of the start of self-determination. In this regard, axiological imperatives contribute to the appropriation of cultural methods of the cognition of reality as new qualities.

Axiological imperatives are the following internal installations. First, a person manifests himself or herself in the substantiation of their essence only under the condition of freedom of choice. This is how they realize themselves in the world and build an attitude towards themselves in relation to themselves, acquiring a certain freedom in setting the goals to be achieved[17]. Teachers' freedom of choice in setting the personal and professional goals of continuing education in the context of lifelong education determines such axiological imperatives as 'a person is a subject of continuing education' and 'a person is a subject of the cultural space of lifelong education.'

Secondly, the analysis by E. I. Sokolova of the features of continuing education in European countries that are leaders in this field (Denmark, Finland, France, Sweden, the Netherlands) shows people's satisfaction with the standard of living. In this regard, they have a high possibility for competitiveness[18]. In each region of any country, a different socio-economic situation develops in conjunction with which professional skills determining the ability to compete in the labor market become popular. The ability of teachers to be competitive in the labor market, leading to satisfaction with the standard of living, explains the following axiological

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[16] Mokshina, N.G., 'Pedagogical Maintenance of Future Teachers' Practice-Oriented Training', *Indian Journal of Science and Technology*, vol. 8, no. s(10),
 https://doi.org/10.17485/ijst/2015/v8is(10)/84853, 2015.
[17] Bakken, A.S., 'Questions of Autonomy in English Teachers' Discursive Practices', *Educational Research*, vol. 61, no. 1, 105–22,
 https://doi.org/10.1080/00131881.2018.1561202, 2019, p. 105.
[18] Sokolova, E.I., 'European Leaders in Lifelong Learning', *Lifelong Education: The XXI Century*, vol. 18, no. 2, 74–91, https://doi.org/10.15393/j5.art.2017.3506, 2017.

imperatives of their continuing education. These include 'a person is a self-developing personality' and 'lifelong education – meaning-forming activity.'

Thirdly, a person has their own value, which gives them the ability to manage circumstances. Constantly improving, a person acquires a tendency to engage in foresight and confidence regarding professional activities. In addition to the confidence of teachers in the implementation of their activities, A. Iredale also refers to skills based on knowledge of the subject area and a creative approach[19]. So, the axiological imperative 'own development strategy in a changing world' is based on the personal value of teachers' personalities for managing their advanced training.

The investigated axiological imperatives are laid down in the main models of teacher training. One of the existing models is called lifelong learning (LLL), which implies the continuation of the lifelong education of educators in connection with their increasing qualifications[20]. The next model is presented by 'adult education', which refers to the necessity of reintegrating into the adult labor market with a certain professional experience. 'Continuing vocational education and training' describes the next model; this should promote career development skills[21]. The fourth model of teacher training is laid down in the 'professional standard', which describes the qualifications required to carry out a certain type of professional activity[22]. The 'national system of professional growth' introduces the fifth model, which determines the levels of competency and explains the direction of training in a continuing education program to eliminate the identified professional deficits[23].

[19] Iredale, A., *Teacher Education in Lifelong Learning* (Cham: Springer International Publishing), https://doi.org/10.1007/978-3-319-65819-3, 2018, pp. 163-9.

[20] Čepić, R., Vorkapić, S.T., Lončarić, D., Anđić, D., and Mihić, S.S., 'Considering Transversal Competences, Personality and Reputation in the Context of the Teachers' Professional Development', *International Education Studies*, vol. 8, no. 2, p. 8,

https://doi.org/10.5539/ies.v8n2p8, 2015, p. 8.

[21] Steeg, S., and Maier, T., 'Dual Higher Education Study or Advanced Training - What Increases the Chances of Career Advancement?', Federal Institute for Vocational Education and Training (BIBB) - Germany, https://www.bibb.de/en/96430.php., 2019.

[22] Miroshnikova, O.Kh., 'The Teacher's Professional Standard: International Experience and Regional Components', *Internet-Journal 'Science of Science'*, vol. 7, 2015, no. 3.

[23] Malevanov, E.Yu., et al., 'New assessment procedures in the national system of teacher growth based on the grades of past graduates', *Innovative projects and programs in education*, vol. 1, 6–17, 2017, p. 6.

The content of these models is consistent with the ideas of the continuing education of teachers, but it does not disclose how the axiological imperatives studied here of the continuing education of teachers are implemented therein. It is important to constantly update the content of continuing education in the post-industrial information society, taking into account the internal moral attitudes of teachers. Considering the components of the continuing education model will ensure that the modeling process is successful for implementation in the context of continuing education everywhere in the professional activities of educators. Therefore, it is important to emphasize the studied components of the model, reflecting axiological imperatives and relying on international experience to implement it in different countries.

METHODS

Designing a model for the advanced training of teachers is presented in the form of a basic complex of interrelated elements. This complex acts as a methodological tool for the study of pedagogical systems and as a substantive-procedural didactic model in constructing the content of the continuing education of teachers. The creation, based on axiological imperatives, of a teacher development model aimed at achieving the required level of professional skills meets the current social requirements.

The theoretical and methodological basis of the study was composed of two approaches, namely the contextual approach and the provisions of the foundation. The contextual approach highlighted by A.A. Verbitsky provides for professional activities based on modeling the language, the iconic means of the subject field and its social content[24]. In the process of modeling, professional skills are a means of solving the problems concerning the professional activity of teachers. They help to recreate real professional situations and the fragments of the relations of people employed in them, with the aim of understanding labor functions and actions using a system of new and traditional forms and teaching methods. A.A. Verbitsky refers to them as business and educational games (communication games, protection games against manipulation, games for the development of intuition, reflection games, etc.)[25].

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[24] Verbitsky, A.A., 'Context-Competency-Based Approach to the Modernization of Education', *Higher Education in Russia*, vol. 5, 2010, 32–37.

[25] Ibid.

The modeling of professional activity should be considered on the basis of the educational-value model. According to K.D. Kamenova, this model has three main components. The first component is the need for continuing education. On the one hand, it is presented as a continuous and purposeful process of a person mastering professional and other knowledge that allows them to remain creatively active throughout their life. On the other hand, lifelong education is seen as a way of continuously transferring domestic and scientific knowledge. The second component of the model is represented by the subject, that is, a creatively active person directly related to collective activity. The path is defined as the third component of the model; it involves an orientation to approaches that can ensure that the educational paradigm matches a number of the changing determinants of the socio-educational situation[26].

The conceptual provisions of the foundation are substantiated by V. D. Shadrikov and E.I. Smirnov[27]. These provisions indicate that during the training of teachers, the formalization and materialization of cognitive processes take place in the form of specific educational disciplines and forms of educational activity. Cognitive processes form skills that allow them to carry out labor functions. The content of these skills includes motivation, emotions, reflection, self-regulation, self-esteem, choice, intelligence and the creativity of a person.

Fundierung is a process of creating model components to update the professional skills and labor functions of teachers in accordance with the types of professional activities. Fundierung also includes the specification of the content of training, followed by a theoretical generalization of structural units into modules. These modules integrate professional skills and labor functions in the types of professional teacher activities. The fundierung concept of the process of formation of the personality of teachers is an effective mechanism for overcoming professional crises and updating the integrative links between science, professional education, the labor market and the qualification assessment system.

This article reveals the results of the first stage of the study. At this stage, the content of the teacher training model is determined through the analysis and synthesis of the scientific literature. Foreign and domestic

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[26] Kamenova, D.K., 'Continuing education as an educational-value model', *Lifelong Learning: Continuing Education for Sustainable Development*, vol. 8, 2010, 463–67.

[27] Smirnov, E.I., *Funding in the training and innovative activities of a teacher: a monograph* (Yaroslavl: Chancellor Publishing House), 2012.

sources devoted to five models of the continuing education of teachers are analyzed (see the Literature Review and Results section). For the synthesis, the authors compared the selected content of the model with the axiological imperatives of continuing education under study. This comparison allowed the authors to determine the actual forms of teacher training based on the selected components of the model.

These forms are reflected in the implementation of the activities of the Federal Program for the Development of Education for 2016–2020 in the Trans-Baikal Territory as the main region for the current study:

In direction 2.2. 'Improving the quality of education in schools operating in adverse social conditions by implementing regional projects and disseminating their results' in the Trans-Baikal Territory in 2017–2018. The goal of the project is to provide a comprehensive model to manage the processes of improving the quality of education in schools of the Trans-Baikal Territory with low learning outcomes It is supposed to provide continuing education and self-education of teachers in schools operating in adverse social conditions. This should be carried out through managerial, resource, providing conditions and mechanisms aimed at improving the basic indicators of the quality of educational activities.

In direction 5.1. 'Development of a national-regional system of independent quality assessment of general education through the implementation of pilot regional projects and the creation of national quality assessment mechanisms.' The goal of this area is the development of a regional system for assessing the quality of education, including technological, information and methodological support for national and regional systems to assess the quality of education; the creation of regional assessment tools for conducting quality assessment procedures for general education as well as advanced training for specialists ensuring the implementation of these measures.

RESULTS

The design of the content of the teacher development model is governed by its main components. The authors pay attention to axiological, pedagogical and organizational components, among others. The choice is based on the need to take into account axiological imperatives and introduce the idea of the internal moral attitudes of teachers into the composition of the studied models.

The content of the axiological component of the model is presented in Table 1, which also reflects the result of teacher training in the context of continuing education.

Table 1
The content of the axiological component of the teacher development model

№ п/п	Teacher continuing Education models	Axiological imperatives of continuing education of teachers	The results of teacher training
1	Lifelong education	A person is a subject of continuing education	Additional professional training program
2	Adult education	A person is a subject of the cultural space of continuing education	Vocational education program
3	Continuing professional education	A person is a self-developing personality	The content of the additional professional program
4	Professional standard	Lifelong education – meaning-forming activity	Generalized labor function, labor function, labor action, skills, knowledge
5	National Professional Development System	Own development strategy in a changing world	A system based on a level assessment of professional competencies (subject, methodological, psychological, pedagogical and communicative)

The pedagogical component of the content of the teacher qualification model includes several basic components, which also reflect all the axiological imperatives studied. The post-industrial information society, which dictates the modernization and restructuring of the educational institution as a whole, gives the basic setting, namely the continuous improvement of teachers. A willingness to act under changing conditions and in the presence of high dynamics in solving professional problems in various types of pedagogical activity is a command of the time, which accordingly requires a change in the nature of knowledge itself. Dynamics are possible taking into account the mandatory use of information and

communication technologies in the continuing education system of teachers. These technologies underlying the pedagogical component of the model justify the implementation of lifelong education as a meaning-forming activity in which teachers act as subjects of lifelong education.

Changes in the field of education cannot but affect the social, cultural and historical foundations of education in general. Given the peculiarity of the conditions of the post-industrial information society, the value-semantic content of knowledge acquired by educators throughout life, which contributes to the translation of cultural values, is especially important. The translation of cultural values in this society, which serves as the next component of the pedagogical component of the model, is correlated with an axiological imperative such as 'a person is a subject of the cultural space of continuing education.'

The study of the problems of lifelong education is based on the fact that personal qualities are needed that would allow teachers to change the world for the better, anticipate the challenges and threats not previously established in educational activities, and also consciously and actively confront them. Modern educators should be creative individuals capable of reorienting moral values and redefining the meaning of their life in a professional manner. The personal potential for the implementation of creative activity, which determines the pedagogical component of the content of the model, characterizes the teacher as a self-developing individuality.

A person in the process of continuing education forms a generalized, justified system of ideas that modern society needs fully educated people who are capable of mobility and cooperation and possess such qualities as constructiveness and responsibility. To ensure the sustainable development of society and the individual, basic traits are needed that contribute to self-development and self-realization. Teachers who are constantly experiencing limitations in their existing professional skills are able to realize that the acquired norms and values are also subject to a constant revaluation from the position of acquired pedagogical experience. The next component of the pedagogical component of the teacher development model is the need for regular reflective activity. According to this, such an axiological imperative as 'own development strategy in a changing world' is realized.

The organizational component of the content of the studied model is based on changes in state policy in the field of education, which are enshrined in legislative and regulatory documents. These changes relate to

the wording of the essence of education, which focuses on taking into account the interests of the pedagogical community in the course of modeling advanced training for personal and professional development. These interests relate to the need for continuing education and are reflected in the axiological imperatives 'a person is a subject of continuing education', 'a person is a subject of the cultural space of lifelong education' and 'a person is a self-developing personality.'

Taking the interests of the pedagogical community into account correlates with the concept of qualifications in accordance with a professional standard. The professional standard 'teacher of vocational education, vocational education and continuing education' reveals the content of the teacher. The national system of teacher growth makes it possible to streamline the criteria for assessing professionalism, brings them to a common denominator, and allows a teacher of any level to demonstrate their professional skills and experience and build a career path. These ideas correspond to the axiological imperatives 'lifelong education – meaning-forming activity' and 'own development strategy in a changing world.'

The implementation of the axiological imperatives of continuing education in the design of a model for the advanced training of teachers is presented in Table 2.

The axiological, pedagogical and organizational components of the content of the teacher development model determine the vector and content of the development of relevant advanced training forms. These include scenario development, expert panels and a roadmap.

The development of scenarios involves the creation of scenarios for the development of various technological areas, based on an analysis of future opportunities and alternative development paths. A scenario, built taking into account its inclusion in continuous activities to improve their own potential, allows teachers to meet expectations. Purposeful personal attitudes require the advanced training of teachers and preparation for the implementation of the necessary transformations aimed at improving the quality of education – this is an ongoing process of modernizing the content and technologies of education.

The context of continuing education involves dynamic modeling, a kind of immersion of a person in the subject and social content of their profession, and ensures the effectiveness of cognitive activity. Cognitive activity, indeed, is associated with the constant replenishment of existing knowledge from various sources, thereby expanding their range. The

knowledge gained is used in a teacher's abilities and desire for innovative activity, which means a continuous search for new knowledge. This desire for innovation and attachment to collective creativity and social progress determines satisfaction with personal and professional development.

In a situation of continuity, an important role is played by modern means of communication, such as webinars, coworking, workshops, hackathons, and BarCamp. A webinar involves conducting professional meetings through a downloadable application (or web application) in real time.

Table 2

The content of the teacher training model taking into account the axiological imperatives of continuing education

No.	Axiological imperatives of continuing education of teachers	Components of the content of the teacher development model		
		Axiological	Pedagogical	Organizational
1	A person is a subject of continuing education	Lifelong education	The use of information and communication technologies in the system of continuing education of teachers	Taking into account the interests of the pedagogical community
2	A person is a subject of the cultural space of continuing education	Adult education	Broadcast cultural values in the information society	
3	A person is a self-developing personality	Continuing professional education	Personal potential for creative activity	
4	Lifelong education - meaning-forming activity	Professional standard	The use of information and communication technologies in the system of continuing education of teachers	Qualification in accordance with professional standards
5	Own development strategy in a changing world	National career development system	The need for regular reflective activity	

Coworking (co-working) is combined with the flexible organization of the work of different teachers in a common space with the goal of forming a professional community with an internal culture. A small group of teachers gathers for a workshop to exchange professional experience. Educators can be hired for the hackathon to help software developers work on a professional issue in the forum. BarCamp proposes an international conference network created by educators as participants to discuss their professional interests.

Expert panels imply an interaction between representatives of various scientific disciplines and fields of activity, which is difficult to organize under other conditions. The creation of panels is necessary to interpret the results obtained, determining the source information.

An example of expert panels is the Regional Scientific and Expert Council – a permanent advisory body of the Ministry of Education, Science and Youth Policy of the Trans-Baikal Territory, which reviews scientific, analytical and expert support issues for the development of the regional education system and prepares recommendations and proposals. This body brings together a qualified professional community focused on solving prognostic, analytical, evaluative and expert tasks in the interests of developing a regional education system and stimulating the innovative activity of teachers and pedagogical teams and creating a holistic innovative infrastructure for the region's education system.

The organization of regional innovative scientific and educational sessions also refers to expert panels. Holding such sessions under the general theme of 'Designing innovative activity in education: from concept to implementation' is determined by the general strategies for the innovative development of the socio-economic sphere in Russia in accordance with the law 'On Education in the Russian Federation.'

The roadmap involves the involvement of experts to develop long-term development strategies for the industry and organization; it illustrates the stages of the transition from the current state to the stages of development. The main advantage of this form of advanced training is the definition of a consistent vision for the long-term development goals of the organization.

Employees of the Institute for the Development of Education of the Trans-Baikal Territory participate in the implementation of large-scale federal and regional educational projects and programs. Organizational, scientific and methodological support was provided for the following

areas in the innovative development of the education system of the Trans-Baikal Territory in accordance with the approved action plans (roadmaps):

In the implementation of the project 'Improving the information and communication competence of educators in the Trans-Baikal Territory' (2018–2019);

In the formation and introduction of a national system of teacher growth;

Improving the linguistic and methodological competencies of foreign languages and preparing students for the state final certification in a foreign language;

In the implementation of the concept for the development of school information and library centers of the Trans-Baikal Territory for 2018–2025;

Accompanying the pilot introduction of the federal state educational standard of secondary education in 2017–2020;

In the organizational, scientific and methodological support of the introduction in the Trans-Baikal Territory of the integrated course program 'Trans-Baikal Studies' for 5–9 classes of educational institutions in a pilot mode;

In the formation and maintenance of a regional training network for the most popular, new and promising professions and specialties of secondary vocational education based on the creation of a regional platform for networking;

In the introduction of a professional standard at the Institute for the Development of Education of the Trans-Baikal Territory.

Each of the roadmaps is a visual representation of a step-by-step scenario for the development of a certain direction, which is considered an effective way to solve managerial tasks and processes and as a mechanism for setting and solving certain problems. The implemented roadmaps are defined as actionable, that is, they include a number of activities aimed at ensuring the improvement of education in the Trans-Baikal Territory. The purpose of the activity, the main directions, and the expected results are determined in accordance with the roadmaps, the main regulatory documents upon which the mapping is based are listed, and the various quantitative characteristics are presented. The content of each roadmap is devoted to the description of measures to improve the efficiency and quality of services in the field of education, including a list of events, implementation deadlines and expected indicators.

The roadmap links together the vision, strategy and plan for the innovative development of individual areas in the education system of the Trans-Baikal Territory and builds its perspective. Constructing a roadmap involves group work, which means it forms within the group a common understanding of the problem and the possession of a plan for its solution. Each of the roadmaps has specific features and performs certain functions, taking into account the adjustment of individual events.

DISCUSSION

The content of the teacher training model in the context of continuing education, including the proposed forms of teacher training, is permeated by the implementation of the basic axiological imperatives. These imperatives correspond to the value orientations of the modern education system since values play an important role in the formation of personality. This idea of S.A. Vlasov, which explores the axiological aspect of education, is confirmed by the fact that a qualitative leap in any society becomes possible only when new value orientations mature; each society creates its own specific set of values expressing dominant interests, goals and principles[28].

The processes of globalization that permeate the post-industrial information society affect the everyday lives of ordinary people. A person integrates the ongoing social processes, with a focus on their values, interests, needs and expectations that is largely dependent on their moral attitudes. Being the subject of their own activity, a person attaches great importance to interaction with surrounding objects, through which they assimilate values in the process of continuing education.

The axiological imperatives of lifelong education under study correspond to the important processes of the post-industrial information society. The dynamic challenges of the 21st century require the interaction of the individual and society since the intellectual potential should help to overcome the alienation of the technological environment from humans. In the process of this interaction, the newly acquired knowledge should open up additional opportunities for the teacher, increasing their degree of freedom in making professional decisions. Personal accessibility to the use of information is largely determined by the processes of appropriation of the methods of professional activity, existing experience, and the

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[28] Vlasov, S.A., 'Axiology of Modern Russian Education System', *Context and Reflection: Philosophy of the World and Human Being*, vol. 3–4, 52–57, 2013, p. 53.

development of ways to resolve emerging professional problems. Each teacher treats the situation differently and its transformation, in accordance with its inclinations – including in the life situation – establishes a kind of contact with reality, that is, it manifests its subjectivity. Thus, the importance of subjectivity in the post-industrial information society convinces us of the need to implement the axiological imperative 'a person is the subject of lifelong education.'

The world is changing, people and attitudes towards the world are changing, and human intellectual development is carried out in powerful information flows, which have their own development trends as independent systems. The main skill of teachers is understanding and the ability to manage the information space because at present it is recognized as one of the conditions for self-affirmation. In the process of continuing education, teachers project subjective representations of cultural content in a subject activity, which are then transferred to all types of professional activity. Culture is the fundamental connection of educators with the world, reflecting their essential subject-object and subject-subject relations. The cultural component of the management of information space indicates the importance of the axiological imperative 'a person is the subject of the cultural space of lifelong education.'

In the situation of the 21st century, a person must continue to develop their natural abilities. The intellectual abilities of teachers are a powerful psychological resource that must be used for a self-sufficient and productive life and, only for this, teachers need to be assisted in the development of cognitive interests and the desire to constantly improve their existing potential. The development of the intellectual capabilities of the personality is characterized by such an axiological imperative as 'a person is a self-developing individuality.'

In lifelong education, there are not only temporary boundaries but also the boundaries of an activity set for oneself, because a person in the process of cognitive activity comprehends its openness and unpredictability. Unpredictability is seen in the fact that the continuing education model in this context guides educators toward the 'future', towards constantly changing and opening up new spaces for professional activity, which makes it possible to optimally combine its constant and variable components. The unpredictability of a future-oriented model relates to the following axiological imperative: 'lifelong education – meaning-forming activity.'

In providing complete freedom in planning one's own learning process throughout life, you can ensure the activation of cognitive activity of a person. The essence of the goal of continuing education allows us to define this phenomenon as a mechanism for preparing for the future. Determining for themselves the landmarks of the future, teachers make an individual ascent to a given goal, building a trajectory of their own educational needs. The design of one's future as a result of the freedom to plan training is related to the strategy of one's own development in a changing world as an axiological imperative.

The axiological imperatives of continuing education should be taken into account when designing any model for the advanced training of teachers in international practice, which is the significance of the study conducted by the authors. Other researchers need to rely on the highlighted internal moral principles in order for the implementation of the developed model to be successful.

The implementation of the axiological imperatives of the teacher advanced training model is correlated with the formation of the teacher's axiosphere, proposed by the Russian researcher N.A. Astashova in the conceptual model of the dialogue space of education. In her opinion, the formation and development of the teacher's axiosphere 'will allow building the educational process as a world of culture and a system of creative implementation of joint activities'[29], which is the basis of their personal and professional development.

Among modeling technologies for the advanced training of teachers to meet the requirements of the post-industrial information society, digital technology is worth mentioning[30]. The use of web platforms that offer additional professional programs is relevant and should be taken into account when implementing the model studied by the authors.

Among the relevant forms of teacher training, it is advisable to indicate those who are based on the principles of cooperation and interactivity. Collaborative forms include group work, interactive sessions, coaching, and mentoring, as presented by A. McElearney, C. Murphy, and D. Radcliffe. They also focus on interactive forms such as self-esteem, discussion and debate, and situational task analysis[31]. These forms should

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[29] Astashova, Bondyreva, and Smantser, 'Development of the Axiosphere of the Future Teacher in the Dialogue Space of Modern Education', p. 62.

[30] Cendon, 'Lifelong Learning at Universities'.

[31] McElearney, Murphy, and Radcliffe, 'Identifying Teacher Needs and Preferences in Accessing Professional Learning and Support'.

be woven into the teachers' continuing education forms already described by the authors, namely scenario development, expert panels and a roadmap.

Conclusion

At the present stage of the development of society, the implementation of the labor function of teachers in accordance with the types of professional activity is associated with the continuous development of their professional skills. This development is correlated with the self-realization of teachers in the course of professional activity, which is facilitated by additional professional programs for the personal and professional development of teachers. Short-term training in these programs, represented by continuing education courses, should be effective for educators themselves in the context of continuing education. In this regard, it is necessary to take into account the value priorities of continuing education in the model of the advanced training of teachers, and therefore also take into account the internal moral principles, or axiological imperatives of continuing education, which determine the personal and professional development of teachers.

These features are reflected in the study conducted by the authors, namely that the content of a teacher development model is determined by taking into account the axiological imperatives of continuing education ('a person is a subject of continuing education', 'a person is a subject of the cultural space of continuing education', 'a person is a self-developing personality', 'lifelong education – meaning-forming activity', and 'own development strategy in a changing world'). The content of the teacher training model has three components: axiological, pedagogical and organizational.

When describing the axiological component, such models as lifelong education, adult education, continuing professional education, professional standard, and national system of professional growth are used. The following components are taken into account in the pedagogical component of the teacher's qualification model: the mandatory use of information and communication technologies in the continuing education system of teachers, the translation of cultural values in the information society, the personal potential of creative activity, and the need for regular reflective activity. The organizational component of the model takes into account the interests of the pedagogical community during the modeling

of advanced training for personal and professional development as well as qualifications in accordance with the professional standard.

When developing scenarios tailored to be included in a continuous effort to improve one's own potential, an important role is played by modern means of communication, such as webinars, coworking, workshops, hackathons, and BarCamp. Expert panels imply an interaction between representatives of various scientific disciplines and fields of activity, for example, in the Regional Scientific and Expert Council and in the organization of regional innovative scientific and educational sessions. The roadmap includes a number of activities aimed at ensuring the improvement of education.

The distinguished axiological imperatives are consistent with the basic ideas of the post-industrial information society, namely the importance of subjectivity in this society, the cultural component of managing the information space, the development of the intellectual capabilities of a person, the unpredictability of a future-oriented model, and the design of one's future as a result of the freedom of educational planning.

The results should be used in organizing continuing education courses for teachers in international pedagogical practice since in this case the internal moral principles of the continuing education of teachers will be implemented. Also, the disclosure of the axiological imperatives of continuing education and the content of teachers' continuing education models will be appropriate in the course of studying the relevant disciplines in the higher education system, i.e., undergraduate, specialty and magistracy, and graduate school.

In the context of the research undertaken, it is also advisable to investigate and determine design tools, mechanisms and conditions for the implementation of the teachers' continuing education model.

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STRUCTURAL AND WORD-BUILDING ANALYSIS OF ENGLISH "ANIMAL DISEASES" TERMINOLOGICAL FIELD

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ABSTRACT: *Linguistic analysis of the terms of the terminological field "animal diseases" is represented. Formation of terminological units is investigated, word-building patterns are characterized. The most productive methods of term formation and their structural types are determined. The peculiarities of formation and structure of one-component and multi-component terms of the terminological field "animal diseases" are analyzed.*

Thematic groups of abbreviations used for nomination of diseases of animals and their pathogens are considered. The analysis of existing forms of terms has made it possible to establish that the leading place in the studied terminological field belongs to multicomponent terms, as modern science increasingly strives for the specification of existing terms, which allows representing objects in a detailed and refined form.

KEYWORDS: *term, veterinary terminology, animal diseases, terminology field, word-building, structural types.*

Introduction

Veterinary terminology is one of the specific layers of vocabulary, which, due to the peculiarities of structural-semantic, word-building and stylistic nature, differs from common words and, thus, occupies a special place in the lexical system of language.

Veterinary terminology means the set of scientific names of processes and phenomena relating to veterinary disciplines.

The terminology of veterinary medicine consists of 3 basic terminological groups: anatomical, clinical and pharmaceutical. One of the components of clinical veterinary terminology is the terminological field "animal diseases" that has not yet been studied.

The study of the corpus of linguistic material of the terminological field "animal diseases" is due, first of all, to the interest of modern linguistics to the study of certain terminological systems in order to

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identify the general patterns of their development, insufficient elaboration of a number of theoretical and practical questions of general and private terminology, insufficient study of the terminological units that exist in the field of veterinary science.

The analysis of scientific literature

Many scientific papers are devoted to the study of veterinary terminology in the English language. Thus, Yu. Timkina[1] made classification of veterinary terminology in English language, eponyms in veterinary medicine in English and Greek-Latin basis of veterinary terminology was investigated by T. Kudinova[2], linguocognitive approach and derivational processes in the terminology of veterinary medicine were researched by Yu. Rozhkov[3,4,5], terminological abbreviations in the original English language texts on veterinary medicine were the subject of research by S. Yakovleva[6].

Despite the large number of works devoted to the terminology of veterinary medicine in the scientific literature, the linguistic aspect of the study of terminological vocabulary still requires in-depth research. The inexhaustibility of the existing lexical layer continues to draw the attention of linguists to the discovery of its new sides, qualities, characteristics. Investigating the general tendencies of development of the studied terminology in the English language and peculiarities of its formation is interesting, in our opinion, from both theoretical and practical points of view.

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[1] Timkina, Yu., "*Klassifikatsiya veterinarnoy terminologii v angliyskom yazyke*". Filologicheskiye nauki. Voprosy teorii i praktiki, Tambov: Gramota, 2017, 6 (72), vol. 1, pp. 156-158.

[2] Kudinova, T., "*Strukturno-semanticheskie osobennosti kompozitov s poslednim komponentom" prichastie" v angliyskom pod'yazyike biotehnologiy*". Vestnik Vyatskogo gosudarstvennogo universiteta, 2017, pp. 12-17.

[3] Rozhkov, Yu., "*Lingvo-Cognitive Approach to the Studying of Veterinary Terminology*". Cogito-Multidisciplinary Research Journal, 2017, Vol.8, No.3, pp. 72-77.

[4] Rozhkov, Yu., "*Lingvokonitivniy pidhid do vivchennya terminologiyi veterinarnoyi meditsini*". Naukovi zapiski Natsionalnogo universitetu «Ostrozka akademiya». Seriya «Filologichna», 2017, pp. 75-76.

[5] Rozhkov, Yu., "*Derivational processes in the terminology of veterinary medicine*". Euromentor Journal-Studies about education, 2018, vol. 9, No. 4, pp. 129-134.

[6] Yakovleva, S., "*Sokrascheniya kak lingvisticheskaya osobennost veterinarnyih terminov (na materiale angliyskogo yazyika)*". Magister Dixit. MHU, 2011, pp. 36-40.

The scope of the article does not allow analyzing all aspects of the formation of the veterinary term system, so the object of study in this article is the units of terminological field "animal diseases" in the English language.

The subject of the research is the structural characteristics and word formation of the studied terminological field.

The material of the study is a corpus of terms totaling 550 units, compiled by a continuous selection of English and bilingual terminological specialized dictionaries.

The purpose of the article is to investigate the structural features and structure of terms in terminological field "animal diseases" in the English language.

Characteristics of the terminological field

An approach to the study of language and speech from the standpoint of terminological field theory helps to identify and emphasize the true position of units in language, as the field reveals and implements the world picture and the hierarchy of values.

The method of terminological fields was claimed by A. Reformatskyi, who believed that the field replaces the context for the term, that "in its terminological field the term-word acquires accuracy and unambiguity"[7].

S. Shelov defines the concept of "terminological field" as a unified, systematically based, multilevel classification structure that integrates the terms of the sphere of homogeneous professional activity[8].

The importance of terminological fields is defined by A. Superanskaya "belonging to a certain field is the most essential feature that distinguishes term-words from ordinary words"[9].

"A field is a collection of linguistic units that are combined with a set of content that reflects the conceptual, substantive similarity of the marked concepts"[10].

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[7] Reformatskyi, A., *Vvedenie v yazyikovedenie.* Aspekt Press, 2010, pp. 99-100.

[8] Shelov, S., *"Terminologicheskiye polya i ponyatiynaya organizatsiya terminologii".* *Strukturnaya i prikladnaya lingvistika*, 2007, 7, pp.211-232.

[9] Superanskaia, A., *"Obschaya terminologiya. Voprosyi teorii".* Obschestvo s ogranichennoy otvetstvennostyu URSS., 2003, pp. 105-107.

[10] Yartseva, V., *Lingvisticheskiy entsiklopedicheskiy slovar.* Sovetskaya entsiklopediya, 1990, p. 355.

The researchers note that the terminological fields in different languages include a number of elements specific to these languages and have a specific configuration. Fields can be used as a basis for identifying the characteristic features of the development of the structure and word formation of the language. The field is characterized by the connection of words and their individual meanings, the systematic nature of these connections, the relative autonomy, the presence of the core and the periphery.

The terminological field "animal diseases" is a system of standardized notations, built on the interconnection of these concepts, which are manifested in the process of communication and cognitive activity. By its genetic makeup, the terminological field "animal diseases" in the English language is represented by: 1) borrowings from classical languages; 3) national terms; 3) terms borrowed from European languages.

Morphological method of term creation in the terminological field "animal diseases"

The study of the structure of any terminology involves establishing different ways of word formation, determining the number of components that make up the terminological unit and the nature of the connection between them. In order to establish the structural features of terminology, it is necessary to solve the following issues: to establish the most frequent word-forming models in one-word and multiword terminology and the components of these models, and to identify the most frequent term elements used in the creation of terms. In the process of solving these problems, an analysis of the structure of terms included in the terminological field of "animal diseases" was performed.

Terminological units of the terminological field "animal diseases" are represented by the following structural types: simple terms, derivative terms, complex terms, terminological conjunctions, abbreviations.

The terminological field "animal diseases" is characterized by the presence of one-component and multi-component terminological units.

One-component terms are terms that include root terms (the base coincides with the root), affixal terms, and term-composites with fused or hyphenated spelling. Such terms are most often formed by morphological and semantic methods[11].

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[11] Kudinova, T., "*Strukturno-semanticheskie osobennosti kompozitov s poslednim komponentom" prichastie" v angliyskom pod'yazyike biotehnologiy*". Vestnik Vyatskogo gosudarstvennogo universiteta, 2017, 12, pp. 12-17.

The sample showed the presence of a large number of one-component terms that indicate different diseases of animals and their pathogens, such as: Akabane; Osteomalacia; Brucellosis; Aflatoxicosis; Anthrax; Cestoda; Coenur; Pathogen; Parrier; Alyariosis; Larva; Mesocercarius.

The composition of one-component (monosyllabic) terms is heterogeneous, however, there are three basic structural types of terms: 1) root terms – monosyllabic terms, the basis of which coincides with the root; 2) affixal terms – one-word terms, the basis of which contains roots and affixes; 3) complex terms – one-word terms, the basis of which contains several root morphemes[12].

As for the terms of the terminological field "animal diseases", the one-word root special lexical units make up 7% of the total sample. Examples of such terms are the following terminological units: pox, akanthor; stagger; dropsy; dourine; itch.

The affixal terms are more widely represented in the investigated terminological field "animal diseases", namely: the total number of affixed terms in the study sample is 44% from the total.

The suffixes and prefixes used in the system of English term building are mainly borrowed from the common word-building tools of the English language. Suffixes have a broader meaning and indicate the category to which the concept belongs. In the terminology under study, lexical units formed by suffixes make up 38% of the total sample.

In the analysis of the terminology studied, it was possible to identify the most productive suffixes involved in the formation of terms. The results of the analysis are presented below in the *table 1*.

Table 1
Productive suffixes in the term building of terminological field "animal diseases"

Suffix	Terminological units amount	Example
-algia/-agia	52 (19%)	Coxalgia, Myalgia, Enteralgia, Gastralgia, Neuralgia, Arthralgia, Dysphagia, Osteragia
-cele	15 (7%)	Diaphragmatocele, Enterocele, Haematocele, Hydrocele, Meningocele, Metrocele

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[12] Grinev-Grinevich, S., *Terminovedenie.* Ucheb.posob. Akademiya, 2006, pp. 125-131.

-emia	25 (11%)	Anaemia, Lipemia,Hypocalcaemia, Hypomagnesaemia, Acetonaemia
-it is	120 (30%)	Gastroenteritis, Dermatitis, Mastitis, Encephalitis, Endarteritis
-oma	39 (18%)	Enchondroma, Granuloma, Carcinoma, Epithelioma, Lymphosarcoma
-osis	50 (15%)	Listeriosis, Brucellosis, Zoonosis, Actynomicosis, Acanthosis

According to the analysis among the terminological units formed by the suffixes, the most productive is the suffix -itis, by which 120 units were formed, which is 30% of the total sample. The suffix -itis means inflammation.

The suffix -algia / agia – pain is the next in terms of quantity in the terminological field "animal diseases" (52 units 19%). Further by the performance follows the suffix -osis – an illness (abnormal condition), by which 50 terminological units are formed, which is 15% of terms. The following suffixes are: -oma – (39 units 18%) (tumor); -emia – blood disease (25 units 11%); -cele – the one denoting swelling (15 units 7%) is less frequent compared to the listed above. From this we can conclude that many terms, formed in the suffixal way, express a certain process or reflect its result. As the table shows, many suffixes are rarely encountered in the process of term formation in the terminological field "animal diseases". These suffixes are more characteristic of the process of word formation of general scientific terms. These suffixes create abstract nouns that express some property, quality, or mechanism that produces a specific action.

Prefixing, in turn, is a less frequent way of term formation than suffixation. 19% of lexical units in the total sample are produced by prefixing. *Table 2* presents the productive prefixes in English terms of the terminological field "animal diseases".

Table 2

Productive prefixes in the English terms of terminological field "animal diseases"

Prefix	Terminological units amount	Example
a-	90 (28%)	Agalactia, Agranulocytosis, Acobalaminosis, Anergia, Aleukia
broncho-	12 (5%))	Bronchopneumonia
endo-	40 (18%))	Endotheliosis, Endocarditis,
fibro-	20 (10%))	Fibrosis, Fibrosarcoma
hemi-	22 (11%))	Hemiplegia, Hemimelia,
hypo-	30 (13%))	Hypomagnezaemia, Hypocalcaeimia, Hypothyroidism, Hypoplasia
pseudo-	29 (12%))	Pseudocowpox, Pseudotuberculosis, Pseudorabies
orchi-	7 (3%))	Orchitis

As the analysis shows, among the terminological units formed by prefixes, the pre-fix a- is the most productive. In the sample under study, the prefix a- means "denial", "no". It produced 90 units, representing 28% of the total sample. Next in performance is the endo- prefix, which means "inside". With this prefix 40 terminology units were formed, representing 18% of the total sample.

The third one in terms of performance is the hypo- prefix, with the help of which 30 terminological units are formed, which is 13% of the studied sample. The hypo- prefix means "below level", "insufficient".

The pseudo-prefix is the next in terms of quantity in the terminological field "animal diseases" (29 units 12%). Further on the performance follows the prefix hemi- (half), with the help of which 22 terminological units are formed, which is 11% of terms. The following prefixes are: fibro- (20 units 10%) (fibrous); broncho-bronchial (12 units 5%); orchi-ovaries (7 units 3%) are less frequent compared to the mentioned above.

Complex one-word terms, the basis of which contains several root morphemes, are also represented in the terminological field "animal diseases", but their number is quite small (14% of the sample). Examples of such complex units are the following terms: osteodystrophia, bottlejaw, bronchopneumonia; bumblefoot; campylobacter, lexicalized syntactic formations such as air-born, food-born, water-born, tick-born, rodent-born.

Multicomponent terms in the terminological field of "animal disease"

In the terminology under consideration, along with complex words, there are terminological conjunctions, by which we mean separately formulated semantically integral combinations formed by the joining of two or more components.

Our research has shown that the most productive way of term formation is making multicomponent phrases with two or three components. The most common structural models of two-component terms are represented in the *table 3*.

Table 3
Productive models of two-component terms formation in terminological field "animal diseases" in the English language

Model	Terminological units amount	Example
A+N	687 (25%)	Atypical pneumonia Blue tongue Avian influenza Japanese encephalitis Lumpy jaw Spotty liver Aleutian disease
N+N	574 (`21%)	Muscle dystrophy Newcastle disease Fowl cholera Amoeba encephalitis Quarter evil Goat plague Calf scour Liver Fluke

Model	Terminological units amount	Example
N+of+N	85 (3%)	Sarcoma of bone Cancer of stomach Cause of disease Cyst of udder Helminthosis of fish History of disease
Ved+N	59 (2,1%)	differentiated cancer Applied epidemiology Propagated outbreak Dropped sole
N's+N	9 (0,3 %)	Hantington's disease Carrion' s disease

Also in the terminological field "animal diseases" there are also three-component terms, among which there are proper words of attributive character, examples of which are listed below in the *table 4.*

Table 4
Productive models of three-component terms formation in terminological field "animal diseases" in the English language

Model	Terminological units amount	Example
A+N+N	240 (10%)	African swine fever Australian bat lyssavirus White nose syndrome White spot disease Mad dog disease Cold cow syndrome New forest eye White muscle disease Crazy chick disease
N+N+N	119 (4%)	Rift valley fever Nairobi sheep disease Egg drop syndrome Red border inflammation Auditory meatus inflammation Mucous gland inflammation
Ved+A+ N	32 (1%)	Inherited hypoplastic anemia Isolated urinary syndrome
A+Ving+N	25 (1%)	Cardiac racing syndrome

N+Ved+N	25 (1%)	Obesity linked inflammation Inflammation related damage

A small number is comprised by multicomponent terms consisting of four words, including phrases and lexical units with transitional status, for example: species specific mortality rate, infectious germ transmission mechanism.

When considering multicomponent terms, it is appropriate to pay attention to the abbreviations in the terminological field "animal diseases".

Before going directly to the analysis of acronyms in the terminology under study, it should be noted that the desire for linguistic economy is one of the main laws of language development, and the language of veterinary medicine is no exception. We emphasize that the system of abbreviations in any language is an integral part of its general lexical-semantic system.

The term "abbreviation is often referred to as "lexical abbreviation" – a noun formed by the abbreviation of a word or a constant phrase that has the features of a separate token as an element of the lexicon[13].

Abbreviation as a way of forming new words has long and firmly entered into the terminological field "animal diseases": AIDS – Acquired immunodeficiency virus; BPH – benign prostatic hypertrophy.

The typological analysis of English abbreviations, prepared using professional literature, made it possible to identify the main thematic categories of abbreviations that are widely used in the modern terminological field "animal diseases":

1. Diseases nomination: ARF – acute renal failure; ATE – aortic thromboembolism; BPH – benign prostatic hypertrophy; COPD – chronic obstructive pulmonary disease; DCM – dilated cardiomyopathy; DDD – degenerative disc disease; DJD – degenerative joint disease; Felv – feline leukemia virus; FIA – feline infectious anemia; FIP – feline infectious peritonitis; FIV – feline immunodeficiency virus; FLUTD – feline lower urinary tract disease; HCM – hypertrophic cardiomyopathy; HGE – hemorrhagic gastroenteritis.

2. Veterinary procedures nomination: HOD – Hypertrophic Osteodystrophy; IVP – Intravenous Pyelogram; MRI – Magnetic

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[13] Rozhkov, Yu., "*Reprezentatsiya veterinarnoyi terminologiyi v angliyskiy movi*". Strategiyi inteorizatsiyi zmistu profesiynoyi pidgotovki maybutnih filologiv. Teoriya i praktika. Monografiya, 2018, pp. 372-379.

Resonance Imaging; R&A – Resection and Anastomosis; CPCR – Cardiopulmonary Cerebral Resuscitation.

3. Nominations of animal parasites: MIHI – Mixed Intestinal Helminth Infestation; HWD – Herring Worm Disease; HPI – Host-Parasite Interplay; CII – Cell Invader Interplay.

Therefore, based on the analysis of the English abbreviations of the terminological field "animal diseases", it was found that the initial abbreviation (shortened form created by the initial letters of the components of the terminological combination) comprises the basic number of abbreviations and is widely represented in the category of animal diseases.

Conclusions

The conducted research allows concluding that the terminological field "animal diseases" in English is a system that has all the necessary word-forming, morphological-syntactic and semantic means for its development and replenishment. According to the results of the analysis, the most productive models of word formation are affixation, word addition and reduction.

The analysis of the formal-structural features of the terminological units of the studied terminological field revealed the presence of simple, complex terms and multicomponent terminological connections. The bulk of the terminology is complex terms, the most common type being multicomponent terms.

Of further interest for the research is the study of the semantic phenomena that characterize the terminological units of the terminological field "animal diseases" in the English language.

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FEMALE ENROLMENT, GENDER LITERACY AND GENDER REPRESENTATION IN NIGERIAN EDUCATIONAL SYSTEM

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ABSTRACT: *The role of education in the development of any society world over cannot be overemphasis. This is because education remains key development of the abilities, attitudes and behaviour of the citizens. Therefore, this study seeks to assess the levels of female enrolment, gender literacy and gender representation in the Nigerian educational system. Data for this study were collected from secondary sources such as reports from the National Bureau of Statistics, textbooks, Journals and other internet sources amongst others. This study revealed that both at the level of students' enrolment and literacy male has the highest figures when compared to the female at all levels of education in Nigeria. This study further argues that until the impediments to female enrolment in Nigeria are addressed in quest for gender equality in education will be a myth and women will continue to be related to the background in every aspect of the Nigerian society. It is suggested in this study among other things that the Federal Ministry of Education subside the tuition fee of the girl child at primary, junior secondary, senior secondary, and colleges of education and universities levels to enable more girl-child to enroll in schools.*

KEYWORDS: *Students Enrolment, Literacy, Gender Representation, Education*

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Introduction

The role of education in the promotion of human development cannot be overemphasized. Over the years, education has been beneficial to human societies all over the world, such that education has helped in the enhancement of the quality of human lives in all endeavour. This explains why the international community has considered education as a critical factor in improving the standard of living all over the world. In a bid to address global gender inequality in education, the United Nations Girls' Education Initiative (UNGEI) was established in 2000 as a multi-stakeholder partnership framework for improving the quality and availability of girls' education all over the world. The UNGEI was as a designated flagship of the Education for All (EFA) initiative. It was in line with the global agenda under the Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs) in achieving gender equality[1].

Similarly, the significance of education as a tool for the advancement of women rights and addressing women marginalization at all levels of human society was also highlighted during the Beijing Conference in 1995 in which education was listed amongst the 12 areas for international attention if the plight of women all over the world will improve. One of the critical issues raised by the Beijing Platform of Action was the need to eliminate all forms of gender-based discrimination at all levels of education and eradicate illiteracy among women by improving women access to vocational training, science and technology education and continuing education for the girl child.

The differences between males and females access to education, political participation and job opportunities have been subject of discussion in several international platforms by policymakers and other stakeholders for some time now. Though, much is to be desired from the condition of females in Africa especially in Nigeria with the highest human population in the continent. Although, World Bank studies have shown that the discrimination along with gender especially concerning the girl-child access to education has become a critical issue for policymakers.

In recent years, development partners such as multilateral development agencies (United Nations, European Union, African Union etc.) and bilateral development agencies (Department for International Development DFID, United States Agency for International Development USAID etc.) and Civil Society Organizations (CSOs) among others have

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[1] www.ungi.org

united under the platform of UNGEI to address the growing gender inequality in the educational system all over the world. This is because it requires collective efforts of the international community to be able to address the growing challenges of gender inequality in the world. Thus, development agencies have been engaging in collective advocacy and coordinated action to improve girl-child access to education[2].

Over the year, concerted efforts by the international community towards achieving free universal primary education have played a significant role in increasing access to education by both male and female in the world. This is evident in the recent increase expansion the educational system in most in African countries which is evident that the concerted efforts of the international community are yielding considerable result[3]. Though, despite this effort, many African countries still require much effort to achieve gender equality in their respective educational system. Today, the gender gap concerning access to education by between both male and female has become a source of concern to the international community as many countries especially in Africa like Nigeria is lagging in making significant progress in this regard. To this end, achieving gender equality has remained a central priority for policymakers at all levels in Nigeria if the condition of the girl child is to be improved.

Today, there is a growing literature on female enrolment, gender literacy and gender representation such as Unterhalter;[4], Lloyd;[5] Onwuameze[6] Murphy-Graham;[7] Momoh, and Umoh[8] Akubo; Momoh[9];

[2] UNESCO, (2018), *Global Education Monitoring Report Gender Review:* Meeting our commitments to gender equality in education Paris: UNESCO.

[3] Onwuameze, N. C., (2013), "Educational opportunity and inequality in Nigeria: assessing social background, gender and regional effects." PhD (Doctor of Philosophy) thesis, University of Iowa,. https://doi.org/10.17077/etd.bs85au87.

[4] Unterhalter E., (2005), Fragmented frameworks: researching women, gender, education and development. In Aikman S, & Unterhalter E (eds) *Beyond access: developing gender equality in education.* Oxford: Oxfam Publishing, pages 15-35.

[5] Lloyd, C.B (ed.), (2005), *Growing Up global; the changing transitions to adulthood in developing countries.* Washington, DC: National Academy Press.

[6] Ibid 6

[7] Murphy-Graham E., (2008), Opening the black box: women's empowerment and innovative secondary education in Honduras. *Gender and Education* 20(1): 31-50.

[8] Momoh, Z. & Umoh, R.N., (2019), Electoral quotas, women representation and lawmaking process in Nigeria (1999-2019) *Cogito Multidisciplinary Research Journal* Dimitre Cantemir Christian University, Bucharest-Romania Volume XI No 4 December, 128-141.

[9] Akubo, A.J. & Momoh, Z., (2019), An assessment of Affirmative Action on women Empowerment as enshrined in the Constitution in Nigeria Federal University Dutse,

Ekine and Abay[10] and Umoh, Momoh, and Rwang[11] just to mention a few. However, there are limited studies that seek to assess the levels of female enrolment, gender literacy and gender representation in the Nigerian educational system. It is against this backdrop, this study seeks to make contributions to this research endeavour.

Conceptual Discourse: Education, Literacy and Gender Equality

The word education is derived from the Latin world "e-ducere" which signifies "to lead out". Education has variously defined by scholars in the literature. In this study, we shall examine some definitions provided by some scholars. For instance, Fafunwa defines education as the aggregate of all processes by which a Child or Young Adult develops the abilities, attitudes, and other forms of behaviour which are of positive value to the society in which he lives[12]. This implies that education remains critical in the development of the child. Literacy, on the other hand, is defined by UNESCO as one who can with understanding both read and write a short, simple statement of his/her everyday life, and an illiterate is one who cannot with understanding both read and write a short simple statement in his/her daily life[13].

Gender is defined as the roles and responsibilities of male and female that are socially created. Gender Equality signifies that men and women have equal access to economic, social, cultural and political rights in a given society. Gender Equity is the state of being fair to women and men or male and female. Literacy Gender Parity Index (GPI) is the ratio used in measuring the level of literacy between male and female adult.

Assessment of female enrolments, gender literacy and gender representation in Nigerian educational System

Several factors have been responsible for the slow pace of female access to education in Nigeria. In Africa, the girl child has been excluded

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Centre for Social and Economic Research (CSER) *Dutse International Journal of Social and Economic Research (JCSER)* Volume 2 No 3 December 2019.

[10] Ekine, A & Abay, A. (n.d). Enhancing Girls' Participation in Science in Nigeria, A Driver for National Development and Social Equality Center for Universal Education

[11] Umoh, N.R., Momoh, Z., & Rwang, .S. P., (2019), Gender (In)equality: Challenges and Implications of Non-State Compliance in Africa *FUDMA Economics and Development Review (FEDER)* Volume 3 No 2 November 2019 95-110.

[12] Fafunwa, A.B., *History of Education in Nigeria London: George-Allen and Unwin,* 1974.

[13] UN-ECOSOC, United Nations Economic and Social Council Report 2015 Washington D.C: United Nations.

from education due to several factors such as the construction of feminine identities, ideologies of domesticity and gender stereotypes. Besides, other factors like socio-cultural norms and expectations about the role of the girl-child in Nigeria has hindered their access to education at all levels. Besides, the study has shown that the northern part of Nigeria is far behind educational in terms of female enrolments and literacy level[14]. Brock and Cammish[15] identified nine factors responsible for low female enrolments in some developing countries namely Cameroon, India, Bangladesh, Jamaica, Vanuatu and Sierra Leone. The factors include geographical, sociocultural, health, economic, religious, legal, political/administrative, educational and initiatives factors. This study will use this nine factor responsible for low female enrolment as the bases for assessing the factors responsible for low female enrolment in Nigeria as the two countries in Africa studied by Brock and Cammish shares similar challenges of low female enrolments with Nigeria.

One of these factors has to do with geographical factors which relate to the disparity in terms of physical access to education by the girl child. For instance, there is a dichotomy between rural and urban dwellers which in most cases is to the advantage of the urban dwellers at primary and secondary school levels. Other geographical factors that mostly impede the girl child access to education happen during flooding and other natural and man-made disaster.

Besides, the geographical factor, we have the sociocultural factors which have to do with the cultural bias in favour of males as against the female child. This has been sustained in many African societies because of the patriarchal. The implication of this is that it has forced many girl children into early marriage and in turn affect their participation in formal education.

Again, we have the health factors which explain the implications of malnutrition on the health of school-age children. Besides, studies have shown that in most African societies male child stands the chance of been fed than the girl child Who in most cases are over-burden with domestic and the tendencies of the girl child been undernourished is quite high.

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[14] Ekine, A & Abay, A. (n.d)., Enhancing Girls' Participation in Science in Nigeria, A Driver for National Development and Social Equality Center for Universal Education

[15] Brock, C. & Cammish, C., (1997), *Factors affecting female participation in education in seven developing countries* – Education Research Paper No. 09, 1993 (Second Edition) Oxford: Universities of Oxford and Hull.

Also, economic factors have impeded the girl child access to education. This study argues that socio-cultural bias in most African societies especially in Nigeria often favours the boy child as against the child girl. For instance, when many parents in Nigeria are faced with the option of send or choose between sending the boy child or girl child to school, the decision in most cases are always in favour of the girl child. Furthermore, religious factors focus on the perception of various religious on the girl-child. For instance, many parents would prefer to send their girl-child to a well secure boarding with strong religious practice than a school that lack such values. Thus, parents who cannot afford the cost of sending their girl-child to boarding may end up not sending them to school. This is most common in the northern parts of Nigeria. Also, we have the legal factors which have to do with the inability of many governments in Africa especially in Nigeria to design a holistic framework that abolishes many cultural practices that have to impede girl-child access to education.

Political/administrative factors have to do with the political will to carry out all the policies and programmes that are geared towards promoting gender equality such as the policies on universal primary education and eradication of all forms of gender bias. Educational Factors like the challenges of accessibility, inadequate resources and low teacher quality and morale are widespread. While initiatives factors include efforts made by various stakeholders in the educational sector aimed to improve female school enrolment especially at the elementary levels like primary and to some extent secondary schools like the building of more schools in the rural areas like in Bangladesh and passage of laws that will enhance greater female teachers at all levels of education. Besides, countries like India have Operation Blackboard in place, School feeding schemes to alleviate problems of malnutrition in Nigeria. In Jamaica, we have the YWCA technical/vocational institute for girls' technical/vocational institute for girls and Jamaican government efforts at curbing in early pregnancy through the Crisis Centres and the work of Sisteren. Similar efforts include the Vanuatu Council of Women that seeks to promote women political participation[16].

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[16] Brock, C. & Cammish, C., (1997), Factors affecting female participation in education in seven developing countries – Education Research Paper No. 09, 1993 (Second Edition) Oxford: Universities of Oxford and Hull.

Table 1
Percentage distribution of enrolment of school-Age Pupils in Primary Schools in Nigeria by Year

Year	Male	Percentage of Male	Female	Percentage of Female
2014	13,255,789	51.4%	12,545,408	48.6%
2015	13,393,310	52.6%	12,049,225	47.4%
2016	13,435,940	52.5%	12,155,241	47.5%

Source:[17]
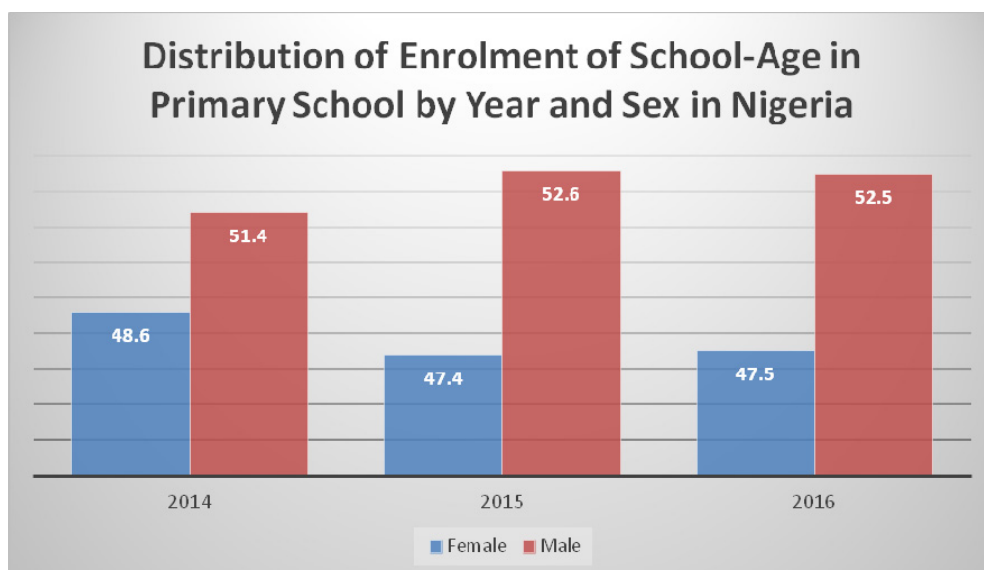
Table 1 and Figure 1 above indicates that a total of 13,255,789 male representing 51.4% and 12,545,408 representing 48.6% enrolled in primary schools in Nigeria in 2014. In 2015, a total of 13,393,310 male representing 52.6% and 12,049,225 representing 47.4% enrolled into primary schools in Nigeria and in 2016 a total of 13,435, 940 male representing 52.5% and 12,155,241 representing 47.5% enrolled into primary schools in Nigeria. Therefore, there was more male enrolment in primary schools in Nigeria than female in the years under review.

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[17] Data for table 1 above were collected from the National Bureau of Statistics Statistical report on Women and Men in Nigeria 2017 published in February 2018, p. 14.

Table 2
Percentage distribution of enrolment of students in junior secondary Schools in Nigeria by Year

Year	Male	Percentage of Male	Female	Percentage of Female
2014	3,311,470	53.4%	2,891,624	46.6%
2015	3,260,109	52.8%	2,920,182	47.2%
2016	3,181,810	53.3%	2,786,332	46.7%

Source:[18]

Distribution of Enrolment in Junior Secondary Schools by Year and Sex in Nigeria
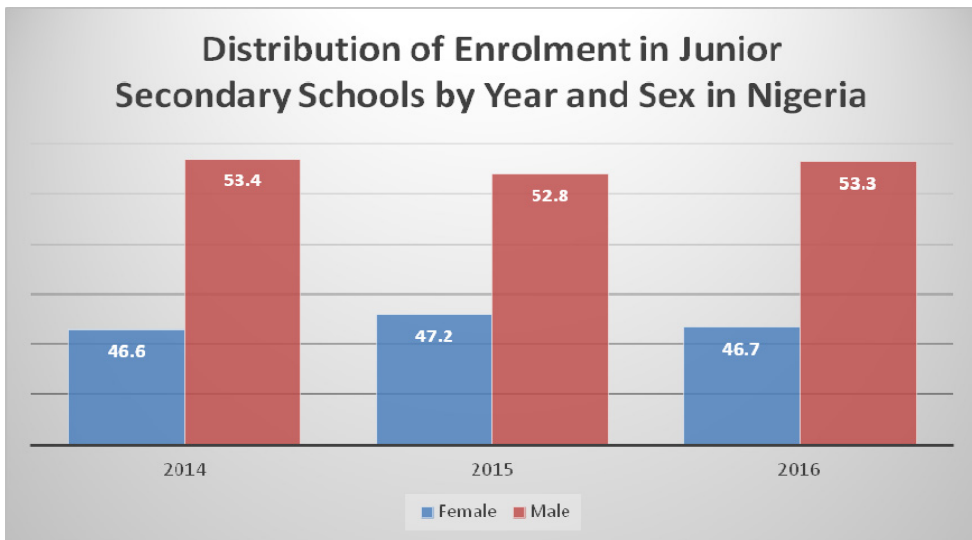
Table 2 and Figure 2 above indicates that a total of 3.311.470 male representing 53.4% and 2,891,624 representing 46.6% enrolled in junior secondary schools in Nigeria in 2014. In 2015, a total of 3,260,109 male representing 52.8% and 2,920,182 representing 47.2% enrolled into junior secondary schools in Nigeria and in 2016 a total of 3,181,810 male representing 53.3% and 2,786,332 representing 46.7% enrolled into junior secondary schools in Nigeria. Therefore, there was more male enrolment in junior secondary schools in Nigeria than female between 2014 and 2016.

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[18] Ibid 2: 15

Table 3
Percentage distribution of enrolment of students in senior secondary Schools in Nigeria by Year

Year	Male	Percentage of Male	Female	Percentage of Female
2014	2,321,183	54.1%	1,971,306	45.9%
2015	2,629,526	53.5%	2,629,526	46.5%
2016	2,417,192	54.0%	2,058,117	46.0%

Source:[1]
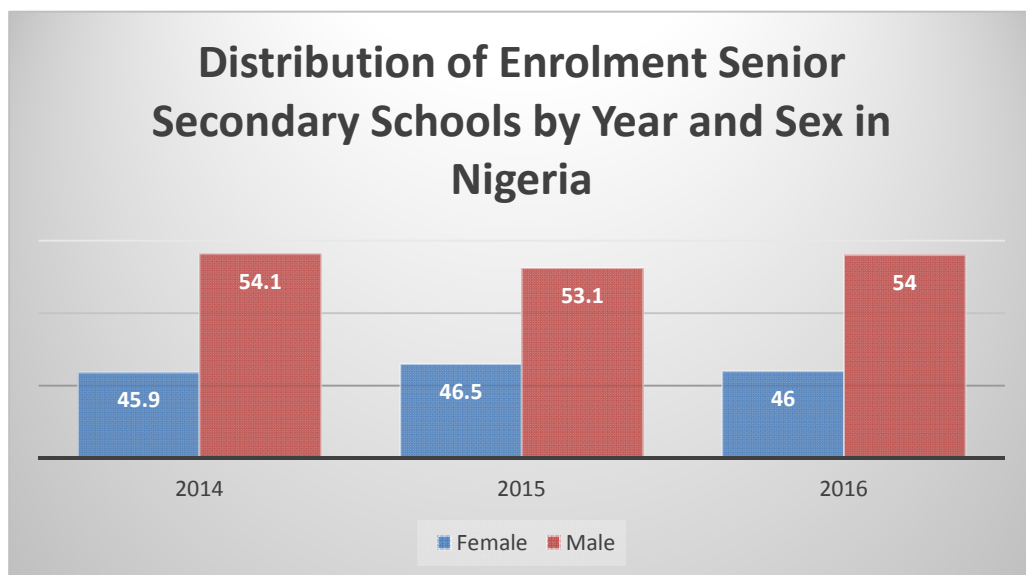
Table 3 and Figure 3 shows that a total of 2,321,183 male representing 54.1% and 1,971,306 representing 45.9% enrolled in senior secondary schools in Nigeria in 2014. In 2015, a total of 2,629,526 male representing 53.5% and 2,629,526 representing 46.5% enrolled into senior secondary schools in Nigeria and in 2016 a total of 2,417,192, male representing 54% and 2,058,117 representing 46% enrolled into senior secondary schools in Nigeria. Therefore, there was more male enrolment in senior secondary schools in Nigeria than female between 2014 and 2016.

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[1] Ibid 2: 16.

Table 4
Percentage distribution of enrolment of students in Colleges of Education in Nigeria by Year

Year	Male	Percentage of Male	Female	Percentage of Female
2013/2014	195,019	52.63%	175,507	47.37%
2014/2015	199,811	53.25%	175,438	46.75%

Source:[2]

Figure 4: Distribution of Enrolment in Colleges of Education by Year and Sex in Nigeria
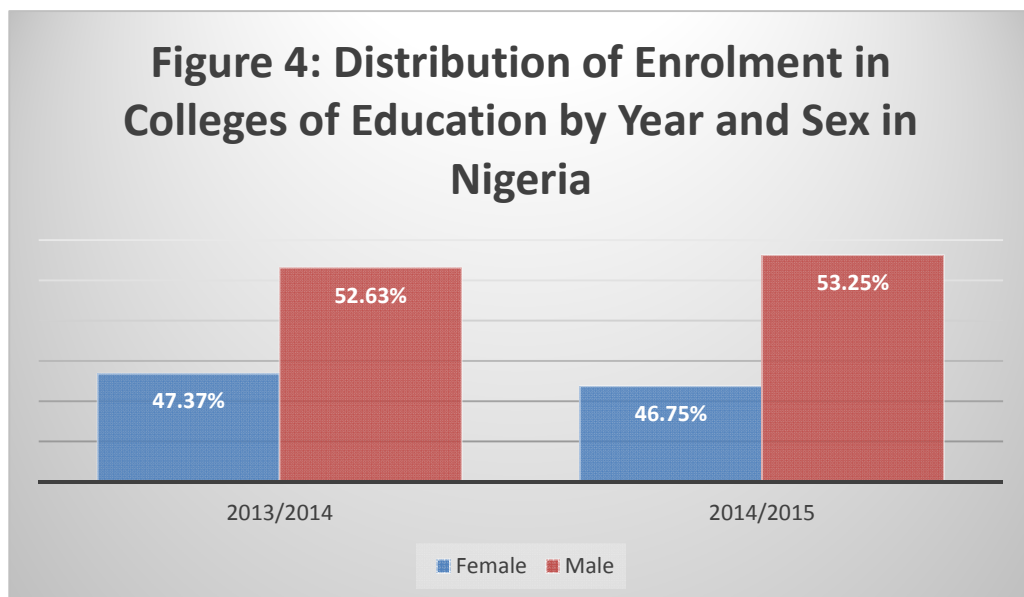
Table 4 and Figure 4 shows that a total of 195,019 male representing 52.63% and 175,507 representing 47.37% enrolled into Colleges of Education in Nigeria in the 2013/2014 academic session. In the 2014/2015 academic session, a total of 199,811 male representing 53.25% and 2175,438 representing 46.75% enrolled into Colleges of Education in Nigeria.

[2] Ibid 2: 20.

Table 5
Percentage distribution of enrolment in Nigerian University by Sex (2012/2013)

University	Male	Percentage of Male	Female	Percentage of Female
Federal	487,706	64.06%	273,657	35.94%
State	243,384	58.60%	171,942	41.40%
Private	39,203	61.64%	39,203	38.36%
Total	770,293	61.64	479,349	38.36%

Source:[1]
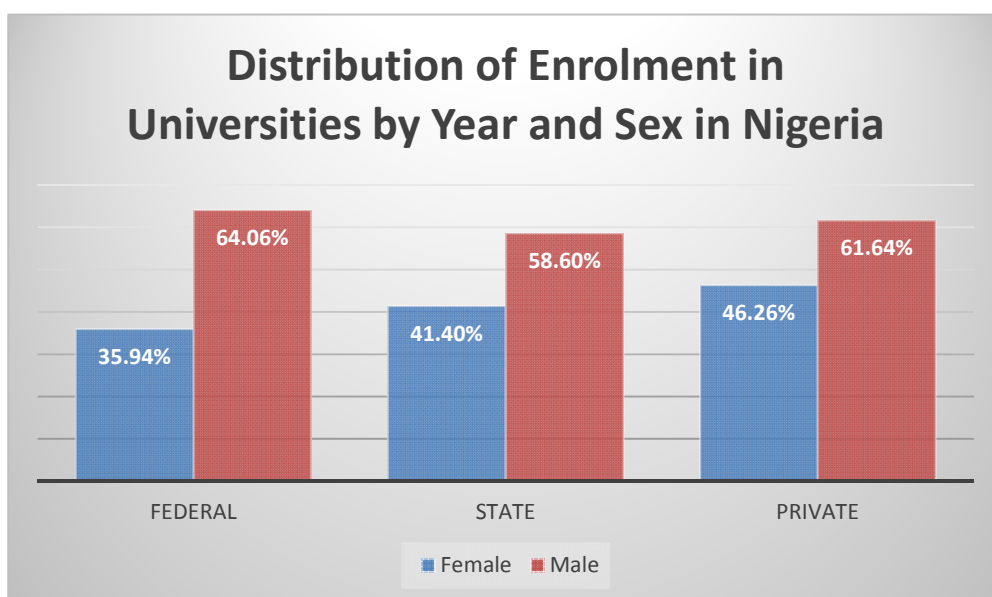
Table 5 and Figure 5 revealed that 487,706 students enrolled in federal universities in Nigeria in which male represent 64.06% and female represent 35.94%. State universities had a total of 243,384 students who enrolled in various academic programmes in which male represent 58.60% and female representing 41.40%. Private universities in Nigeria had a total of 770,293 students' enrolment in 2012/2013 academic session in which 61.64% are male while 38.36% are female. Therefore, there is more male enrolment into Nigerian universities in the 2012/2013 academic session than female.

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[1] Ibid 2: 21

Table 6
Percentage of Male and Female age 15-24 years who are literate (2016-2017)

Zone	Male	Female
North West	57.5%	38.0%
North East	53.1%	41.9%
North Central	76.4%	62.0%
South East	93.7%	92.6%
South-South	95.0%	94.8%
South East	94.3%	95.4%

Source:[2]

Percentage of Male and Female age 15-24 years who are literate (2016-2017)
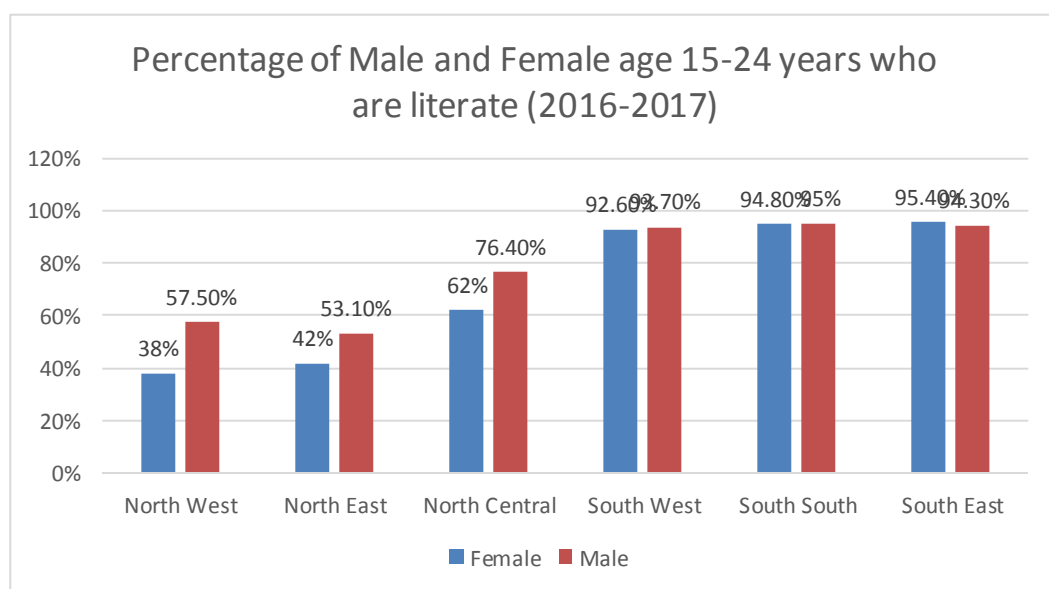
Table 6 and Figure 6 shows that the North-West geo-political zone in Nigeria has a total of 57.5 per cent male and 38 per cent of the female who is the age between 15 and 24 years who are literate. The north-east geo-political zone has a total of 53.1 per cent male and 41.9 per cent of the female who is the age between 15 and 24 years who are literate. Also, North Central geo-political zone has a total of 76.4 per cent male and 62 per cent of the female who is the age between 15 and 24 years who are literate. Besides, the South-East geopolitical zone has a total of 93.7 per cent male and 92.6

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per cent of the female who is the age between 15 and 24 years who are literate between 2016 and 2017. The south-south geo-political zone has a total of 95 per cent male and 94.8 per cent of female who is age between 15 and 24 years who are literate and South-East geo-political zone has a total of 94.3 per cent male and 95.4 per cent of female who is age between 15 and 24 years who are literate between 2016 and 2017. Therefore, South-South geo-political zone has the highest percentage of the male who is the age between 15 and 24 years who are literate while the North-West geo-political zone has the lowest percentage of the female who is the age between 15 and 24 years who are literate between 2016 and 2017.

Similarly, Ekine and Abay their study shows that Nigeria has over 20.5 million children enrolled in primary school and over 9 million enrolled in secondary school. However, Nigeria has one of the highest numbers of out-of-school children in the world, with an estimated 10.5 million children not enrolled in school. Though, the girl child enrolment in primary school represents 47 per cent are girls. However, this figure later decreased to 44 per cent at the junior secondary school level, thereby making Nigeria one of the worst country with the highest out-of-school school children in the world, with 10.5 million children out of school.

Ekine and Abay further assert that the survival rate to the last grade of primary school was estimated at 69.8 per cent for girls. They further state that only 53 per cent of all students throughout Nigeria has the possibility of furthering their education to secondary school.

Ekine and Abay have equally asserted that in the northern part of Nigeria, gender disparities concerning school enrolment has remained very high when compared to the southern part of the country. Though, significant progress has been made toward achieving gender parity in access to education in the southern part of Nigeria.

Percentage of Male and Female age 15-24 years who are literate (2016-2017)
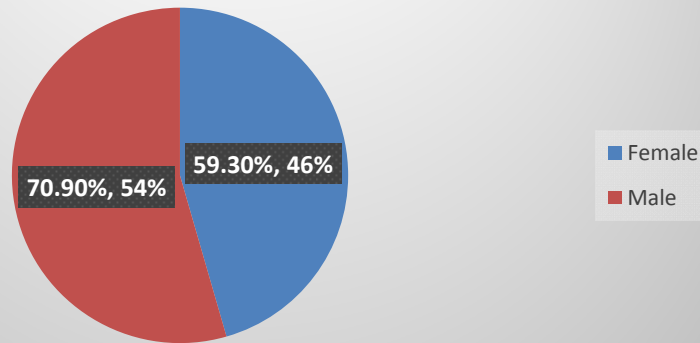
59.30%, 46%

70.90%, 54%

Female
Male

Figure 7 shows that male represents a total of 70.9% of Nigerians age between 15 and 24 years who are literate and female represent 59.3% who are literate between 15 and 24 years in Nigeria between 2016 and 2017. Thus, there is a more literate male in Nigeria than female.

Conclusion

From the above analysis, we discovered that female enrolment in primary, junior secondary, senior secondary, and colleges of education and universities levels have been low when compared to the male counterpart between 2014 and 2016. This study further revealed that the percentage of numbers of a male between the ages of 15 and 24 years across the six geo-political zones who are literate is higher when compared to the female. Therefore, it can be said that there more male enrolment in primary, junior secondary, senior secondary, and colleges of education and universities levels of education in Nigeria than the female. Also, there are more male between the age of 15 and 24 who are literate in Nigeria than female.

Recommendations

The Federal Ministry of Education should subside the tuition fee of the girl child at primary, junior secondary, senior secondary, and colleges of education and universities levels to enable more girl-child to enroll in schools.

The National Assembly should enact a law that will make it punishable by law for any parent who deprive their girl-child the right to education especially in the northern part of the country especially North-West geo-political zone where the numbers of female between the age 15 and 24 years are low when compared to other geo-political zones of the country.

The Federal Ministry of Information and Communication and other stakeholders such as National Orientation Agency and Media should embark on a rigorous campaign on educating Nigerians on the need to allow their girl-child access to education.

The Ministries of Education at the State and Local Government levels in Nigeria should engage in grass root sensitization of Nigerians especially in the rural areas on the need to educate their girl-child because of the view of many who hitherto hold tenaciously on the belief that the girl-child does not require former education. All these will go a long way, in improving girl-child enrolment and literacy level of the girl-child in Nigeria.

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THE EVOLUTION OF THE TERM "BIOTECHNOLOGY" DEFINITION

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ABSTRACT: *In the field of innovative technologies, such as "biotechnology" the identification of basic terms and the study of their definitions are important, since this is a relatively new field of knowledge, the terminology of which is at the stage of formation.*

The article is devoted to the evolution of the definition of the term "biotechnology".

The importance of the study of this term definition is caused by the urgent need for analysis, review and systematization of amount of new definitions that has appeared over the past forty-fifty years in the field of biotechnology. Recently there has been growing concern about the misuse of the word "biotechnology" as a general term covering several different categories.

The author shows the history of the term origin, reveals the main stages of development of its definition. Analyzing the definition of the term "biotechnology" in the English language, the author points to the lack of a well-defined definition of this term, which confirms the temporal definition of concepts in any science that can be transformed depending on the development of the latter.

KEYWORDS: *definition, biotechnology, term, terminology, innovative technical discourse.*

Introduction

At present, one of the most intensively developing interdisciplinary fields of scientific and technological progress is biotechnology, which integrates a number of traditional disciplines of biology and chemistry, as well as emerging fields of applied character. It affects almost every area of human activity: industry, medicine, agriculture, pharmacology, ecology.

Despite the fact that biotechnological processes are one of the oldest and have been used by humans since the birth of the first civilization, as science biotechnology was distinguished only in the 20th century.

To date, the term expressed by the word "biotechnology" is at the heart of a large part of innovative research and is present in the

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overwhelming number of scientific works of the specified disciplinary segment.

However, despite the fact that it belongs to the basic terms of innovation and technical discourse, the term "biotechnology" does not have a well-defined definition, as well as most terms of the field of innovative technologies. Although one of the basic requirements for the term is its uniqueness, examples of definitions of biotechnology terms derived from dictionaries and glossaries may call into question the existence of special lexical units.

From a rational point of view, the word "biotechnology" comes from two simple terms of science, namely: "biology" and "technology", originating from the Greek words *bios* – life, *techne* – art, *logos* – word, teaching, science.

If we try to decipher these two words, then simply speaking in the language of amateur, this is a technology that makes our life convenient and comfortable using biological resources.

As Antoine Lavoisier said, "scientists must be accurate in their speeches and letters, in terms of their scientific definitions and dimensions".

It should be noted that recently there has been growing concern about the misuse of the word "biotechnology" as a general term encompassing several different categories. In various scientific publications of the innovative and technical discourse in the field of biotechnology, the content of the term "biotechnology" varies greatly depending on the main areas of scientific activity of the author (chemistry, biology, biochemistry, molecular biology, genetics, immunology, microbiology, etc.), since each specialist understands this term in different ways.

In this regard, the study of the definition of terms in the framework of scientific and professional discourse is one of the most important and actively developed areas in terminology and cognitive linguistics.

In our opinion, all the necessary prerequisites for studying the specifics and evolution of the definition of the term "biotechnology" have already been formed, since the rapid pace of development of the biotechnological sphere, the discovery of new objects and phenomena of reality require terminological correction.

The analysis of the scientific literature

Science can exist only in the presence of language. A concept does not become the property of scientific thought until it is verbally expressed using the term and its definition.

Despite the enormous amount of research devoted to the terms (works by G.O. Vinokur, A. A. Reformatsky, D.S. Lotte, B.N. Golovin, V.M. Leichik, A.A. Superanskaya, S.V. Grinev, L.A. Kapanadze, V.P. Danilenko, O.V. Zagorovskaya, T.L. Kandelaki), the definition of the term "term" remains one of the main problems in modern linguistics. According to A.V. Superanskaya, the absence of a single, universally accepted concept of "term" is due to the fact that "... among representatives of different disciplines it is associated with its own specific concepts and ideas, has an unequal amount of content and is determined in its own way"[1].

After analyzing a significant number of linguistic works in the framework of our study, we came to the following definition of the term: a term is a verbal designation of a concept that is included in the system of concepts of a certain area of professional knowledge and requires the creation of a definition to establish its meaning. The terminological units are connected as follows: as members of a system of concepts — the definition of a scientific concept (concept), and as members of a specific language system (word) — the name, concept name, its verbal designation[2].

Definition is the second form of expression of a verbal concept, the study of which may be useful for scientific fields of knowledge[3].

The foundations of the scientific analysis of definitions were laid the works of logicians, as well as linguists such as A.M. Akhmetbekov[4], S.V. Vorobyov[5], G. Yu. Grishechkina[6], A.M. Zarva[7], M.N. Latu, A.V. Razduev[8], O.A. Makarikhina[9], A. G. Sokolova[10], E.V. Shilova[11], T.V. Yashina[12], etc.

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[1] Superanskaya, A.V., Podol'skaya N.V., & Vasil'eva, N.V., *Obshchaya terminologiya. Voprosy teorii*. M.: Nauka, 2003, p. 11.

[2] Myshak, H., "*Definition of the Term Biotechnology*". *Cogito*: Multidisciplinary Res. J., 2018, vol. X, No.4, p. 140.

[3] Ibid p. 141.

[4] Akhmetbekova, A.M., "*Definitsiya kak osnovnoye sredstvo raskrytiya znacheniya termina*". Vestnik KazNU. Seriya filologicheskaya, 2012, No. 2(136), p. 177-182.

[5] Vorob'yova, S. V., Bocharov, V.A., & Markin, V.I., *Definitsiya*. Gumanitarnaya entsiklopediya: Kontsepty [Electronic resource]. Tsentr gumanitarnykh tekhnologiy, 2002–2019 (poslednyaya redaktsiya: 17.12.2019). https://gtmarket.ru/concepts/7315.

[6] Grishechkina, G. YU., *Vidy definitsiy terminov v nauchno-populyarnom tekste*". Uchenyye zapiski Orlovskogo gosudarstvennogo universiteta. Seriya: Gumanitarnyye i sotsial'nyye nauki, 2010, No.1, p. 120-127.

[7] Zarva, A.M., *Definitsiya kak tipologicheskaya raznovidnost' nauchnogo teksta: dis. … kand. filol. nauk: 10.02.19*, Nal'chik, 2003, p. 156.

It should be noted that today the study of term definition in the framework of scientific and professional discourse is one of the most important and actively developed areas in terminology and cognitive linguistics[13].

Studying the evolution of term definition, in our opinion, is most relevant to conduct on the material of innovative technical discourse, which is a relatively new field of knowledge, for example, biotechnology, the terminology of which is at the formation stage.

The time has come to look at biotechnological terminology from a scientific point of view, and for this, first of all, it is necessary to rethink the general theory of the term and penetrate deeper into the essence of the dynamic processes of its definition.

The purpose of the article

The purpose of the article is to consider the specifics of the definition of the term in scientific and professional discourse and present, using concrete examples, the evolution of the definition of the innovative technical term "biotechnology" in the English language.

The concept of definition

Definition is a unique logical and linguistic phenomenon in which language and thinking interact to perfect each other. The definition can be called a kind of "bridge of understanding", because it connects old knowledge with new, participates in the transfer of experience from generation to generation, helps communication of specialists of all areas of

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[8] Latu, M.N, & Razduyev, A.V., "*Diskursivnaya spetsifika definitsii termina (na primere russkoyazychnykh politicheskikh terminov)*". Politicheskaya lingvistika, 2016, No.5 (59), pp. 136-144.

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[10] Sokolova, A.G., *Leksikograficheskaya definitsiya kak predmet lingvisticheskogo opisaniya: dis. … kand. filol. nauk: 10.02.01*. Arkhangel'sk, 2011, p. 296.

[11] Shilova, Ye.V., *Terminologicheskaya definitsiya kak metatekst v russkoyazychnoy i angloyazychnoy nauchno-tekhnicheskoy literature: dis. … kand. filol. nauk: 10.02.20*. Yekaterinburg, 2005, p. 226.

[12] Yashina, T.V., "*Evolyutsiya terminologicheskogo apparata v distsiplinarnom kontekste innovatsionno-tekhnicheskogo diskursa*". Filologicheskiye nauki. Voprosy teorii i praktiki, 7 (25), vol. 1, 2013, p. 217-221.

[13] Myshak, H., "*Definition of the Term Biotechnology*". Cogito: Multidisciplinary Res. J., 2018, vol. X, No.4, p. 143.

knowledge and contributes to the efficiency and success of cognitive activity of a person[14].

Like any linguistic phenomenon, the definition has a certain form and content. Both the form and the content of the definition are determined by the laws of thinking and the language in which the thought process takes place[15].

Since the text of the definition is a pragmatic speech-communicative act, the degree of informativeness of such a text should be very high, and the syntactic structure should be strictly logical, since the term is fixed in the text of the definition. Thus, the definition is a short term-fixing text (the term of V.M Leichik)[16].

From a logical point of view, the definition is two-part. It consists of a definable concept (definition), represented by the term, and a defining concept (definition). This is the horizontal structure of the definition text, its linear expansion. In terms of content, the definition is not equal to the scientific concept that it defines, but only approaches it. The semantic structure of the definition is constructed from classification semantic features that are universal for terms of different subject areas and are determined for the most part by the type of conceptual category; therefore, such structure is characterized by such characteristics as great uniformity and standardization. The metalanguage of definition is characterized by more or less termination depending on the type and category of a concept, and in its grammatical composition, the use of all the main significant and auxiliary parts of speech is traced[17].

The history of the definition of "biotechnology"

The concept of "biotechnology" appeared in the language relatively recently. Karl Ereki, a Hungarian agricultural economist, published the article in 1917 entitled "Biotechnology for the production of meat, fat and milk in large agricultural enterprises". The term "biotechnology"

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[14] Grishechkina, G.YU, "*Sposoby raskrytiya termina v nauchno-populyarnom tekste*". Voprosy kognitivnoy lingvistiki, 2, 2011, pp. 92-93.

[15] Myshak, H., "Definition of the Term Biotechnology". Cogito: Multidisciplinary Res. J., 2018, Vol.X, No.4, pp. 142-149.

[16] Leychik, V. M., *Terminovedeniye: predmet, metody, struktura. 3 izd*. M.: Izd-vo LKI, 2007, p. 256.

[17] Kravtsov, R.V., & Karavayeva, Ye. I., "*Biomeditsinskiye tekhnologii: voprosy pravovogo regulirovaniya i otvetstvennosti*". Sibirskiy yuridicheskiy vestnik, 2005, No.3, pp. 7-10.

proposed in this article, as understood by K. Ereki, meant "types of work in which certain products are produced from raw materials with the help of living organisms"[18].

Despite the capacious reflection of the essence of technology, this understanding did not take root, and therefore the term was used for two times in two ways: some used it in connection with the fermentation process, others implied a person and his practical activity in order to optimize tools, conditions and labor process.

In 1947 under the heading "Biotechnology: a new fundamental in the training of engineers" biotechnology was considered as a branch of technology concerned with the development and exploitation of machines in relation to various needs of human.

In 1962 the Journal of Microbiological Technology and Engineering edited by Elmer L. Gaden changed to Biotechnology and Bioengineering and undoubtedly was a major factor "involved in disseminating the word biotechnology to a wider readership, especially in engineering". Biotechnology was viewed as all aspects of the exploitation and control of biological systems.

The word biotechnology has evolved through different forms of usage. What may be called 'traditional' or 'old' biotechnology refers to conventional techniques that have been applied for centuries to produce beers, wines, cheeses and associated other foods using microorganisms and in recent times with the production of antibiotics and solvents of many types. 'New' biotechnology involves all methods of genetic modification by recombinant DNA and cell fusion techniques, together with the further developments of 'old' biotechnology processes[19].

Unfortunately, in many parts of modern science the term biotechnology is now being used as a substitute for genetic modification and genetic engineering. In the United States in the late 1970-80s, new aspects of genetic engineering were being demonized by activists and the NHI began using the term 'biotechnology' when describing transspecies genetic modifications. The term was then picked up by the media and by politicians and, eventually, found its way into governmental documents and legislation.

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[18] Robbins, P. (Ed.), *Encyclopedia of Environment and Society: Five-Volume Set*. Sage Publications, 2007.

[19] Smith, J.E., "*A concise history of biotechnology – Some key determinants*". Biotechnology, 2009, vol. 1, pp. 321-326.

In the broadest sense biotechnology applies the principles of technology to the biological sciences and applies the principles of living biological materials to technology. However, from a public aspect the term biotechnology is now more widely recognized from its genetic engineering association and as an icon of high technology.

While engineers were using the term biotechnology by the late 1960s most biologists waited on the arrival of genetic engineering before it was more widely accepted. The term biotechnology held great fascination within business programs and in press coverage in the 1980-1990s, but undoubtedly the word biotechnology has, to some extent, become an overused buzzword, often with incorrect usage together with a plethora of definitions.

Biotechnology should not be viewed as a single scientific discipline but rather drawing upon a wide range of relevant subjects including microbiology, biochemistry, molecular biology, cell biology, plant biology, immunology, protein engineering, enzymology, mammalian cell culture and a wide range of process technologies. More relevantly, biotechnology can be viewed as a range of enabling technologies that will be applied in many industrial, environmental, Biotechnology should not be viewed as a single scientific discipline but rather drawing upon a wide range of relevant subjects including microbiology, biochemistry, molecular biology, cell biology, plant biology, immunology, protein engineering, enzymology, mammalian cell culture and a wide range of process technologies. More relevantly, biotechnology can be viewed as a range of enabling technologies that will be applied in many industrial, environmental, agricultural, medical and veterinary sectors[20].

Thus, during the 20th century, the concept of biotechnology underwent many conceptual changes. The term "biotechnology" has been defined in various ways, presented in *table 1.*

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[20] Ibid pp.328-331.

A collective noun for the application of biological organisms, systems or processes to manufacturing and service industries.

The integrated use of biochemistry, microbiology and engineering sciences in order to achieve technological (industrial) application capabilities of microorganisms, cultured tissue cells and parts thereof.

A technology using biological phenomena for copying and manufacturing various kinds of useful substances.

The application of scientific and engineering principles to the processing of materials by biological agents to provide goods and services.

The science of the production processes based on the action of microorganisms and their active components and of production processes involving the use of cells and tissues from higher organisms. Medical technology, agriculture and traditional crop breeding are not generally regarded as biotechnology.

Really no more than a name given to a set of techniques and processes.
The use of living organisms and their components in agriculture, food and other industrial processes.
The deciphering and use of biological knowledge.
The application of our knowledge and understanding of biology to meet practical needs.

Table 1. Some Selected Definitions of Biotechnology Source: Smith (2009) Biotechnology. 5th Edition. Cambridge University Press

As we can see from the presented definitions, the term "biotechnology" has two meanings: on the one hand, it is the science of applying biotechnological processes in production, and on the other, it is a complex scientific and technical field that studies these processes.

Currently, there are many interpretations of the concept, but in general they all come down to one thing: in the traditional understanding of biotechnology, this is an interdisciplinary field that arose at the junction of biological, chemical and technical sciences; this is the use of living organisms and biological processes in industrial production.

It is now becoming increasingly accepted that there should be a descriptive foreword when defining biotechnology, e.g. animal cell biotechnology, stem cell biotechnology, plant biotechnology, enzyme

biotechnology etc. Clearly, the term biotechnology will never remain static and its usage and how it is defined will continue to evolve[21].

It should be noted that recently, English-speaking researchers have been paying attention to the appropriateness of the use of the term biotechnologies in the plural, since the disciplinary context of this scientific field is not limited to one technology that operates at a bi-level. As stated by McCormick, a former editor of Nature Biotechnology "there is no such thing as biotechnology, there are biotechnologies. There is no biotechnology industry; there are industries that depend on biotechnologies for new products and competitive advantage"[22].

In reality, biotechnologies cover a set of disciplines (biology, chemistry, physics, molecular genetics, molecular biochemistry, bioinformatics), the achievements of which contribute not only to the development of biotechnology and bioproduction, but also to many traditional types of industry.

Conclusions

Having examined the evolution of the definition of biotechnology, we can conclude that the term biotechnology will never remain static, and its use and methods for its determination will continue to evolve.

Biotechnology acquired its current significance (in connection with molecular biology and genetics) only after the 70s. Prior to this, the term biotechnology was used in such diverse fields as agriculture, microbiology, and enzyme-based fermentation. Although the term "biotechnology" was coined in 1917 by a Hungarian engineer Karl Ereki, the earliest references to biotechnology in the news and specialized media belong to a number of ancient methods, such as selection, fermentation and hybridization.

At present, there is no consensus in understanding biotechnology. It is interpreted as a set of methods and techniques for obtaining useful products and phenomena for humans using biological agents; special social activities aimed at the practical transformation by a person of the world around him and himself through the use of biological processes and agents; the science of how to obtain target products using biosynthesis,

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[21] Smith, J.E., "*A concise history of biotechnology – Some key determinants*". Biotechnology, 2009, vol. 1, pp. 332-334.

[22] Ibid p. 335.

controlled by environmental parameters or genetic engineering manipulations, or a combination of these effects.

Each science or discipline has its own terminology, which requires careful linguistic study. The terminology of biotechnology in connection with its obvious youth and novelty is no exception. The importance of studying this terminological system is emphasized by the urgent need for historical analysis, review and systematization of the significant amount of new vocabulary that has emerged over the past decades in the field of biotechnology, as well as the need to streamline spontaneous term formation processes in the future.

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