

Genre Analysis of Daily COVID-19 Infographic Reports in the Arabian Gulf: The Case of the Kingdom of Bahrain

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Abstract

Infographics are visual data that are used in public service announcements to convey particular messages to a particular group of people. During the COVID-19 pandemic, the Ministry of Health (MOH) in the Kingdom of Bahrain relied heavily on the use of infographics to communicate different types of information to all its people. The study at hand aimed to analyze the Medical Announcement Infographics (MAIs) published by the Bahraini MOH during the pandemic. Two research questions were posited. The first one investigated the schematic moves in MAIs, and the second one researched the extent to which the Bahraini Medical Announcement infographics on COVID-19 Pandemic met the contextual variables of register. The study utilized Swales' genre-analysis model and examined the contextual variables of the MIA register and the lexicogrammatical features highlighted in Systemic Functional Linguistics in relation to the Bahraini MOH's MAIs. The study concluded that the register variables showed variation in the lexical, structural, and illocutionary force choice-making. In addition, MAIs included both obligatory and optional moves that impacted the behavioral attitudes of the people either positively or negatively.

Keywords: Covid-19, Genre analysis, infographic reports, the Arabian Gulf, Bahrain

1. INTRODUCTION

In the time of COVID-19 pandemic, infographics for health issues are widely used as an effective tool to provide information about the pandemic and to find ways to prevent the spread of the Corona Virus. Generally speaking, infographics are used in a variety of contexts for different purposes as they play a significant role in persuading viewers/readers of particular messages. One of these contexts is the medical field, where intended and direct messages are communicated to a large segment of society that includes patients and non-

patients. Medical announcements (henceforth MAs) implement infographic designs to effectively deliver a message using a compressed text supported by visual elements, statistics, charts, and sign. These announcements aim to make the general public understand particular medical actions, precautions, and procedures in a straightforward manner by categorizing relationships; for example, cause and effect, classification, and compare and contrast.

The significance of utilizing infographics in MAs is its potentiality in grabbing the public's attention. They are more appealing in terms of mentally grasping the information, in a relaxed-memorable manner, as the "human brain can easily remember things in picture than texts" (Siricharoen, 2015, p. 560). Viewers of infographics attempt to examine the relationships of what is included in an infographic. Therefore, the viewing audience need to mentally process the presented data, that is coding and decoding of such data, and to find links between the written and visual representations.

Understanding the message included in infographics requires infographic creators to consider two factors: creativity and aesthetic (Siricharoen, 2015). This is due to the view that infographics aim to present an overview of intended and packed information, incorporating other multimodality means. Multimodality refers to text interactivity in terms of exploring the semiotic relationships between written/spoken discourse and other meaning-making resources such as images, charts, and gestures (Coffin, Donohue & North, 2013). Those meanings are exchanged in a social context where contextual variables such as field, tenor and mode can be utilized to analyze medical announcements.

2. LITERATURE REVIEW

The term genre has been widely used in examining and analyzing spoken and written discourses in different fields. Gomaa and Abdel-Malek (2010, p. 12) maintain that "The word *genre* comes from the French (and originally Latin) word for 'kind' or 'class'. Conventionally, 'genre' is associated with terms such as short stories, science fiction, novels of the 17th or 18th century, fiction, reports, satire, and many other." In addition, there are many different genres, such as personal recounts, biographies, narratives, descriptions, explanations, discussion, reports, procedures, legal documents, and news broadcasting (Coffin et al., 2013). These genres vary in terms of social purpose, generic/schematic stages and lexicogrammatical features. Some genres can be embedded with others such as descriptions and reports which belong to the same genre in terms of informing about things, yet they are different in terms of the way they present facts (Martin and Rose, 2008). Paltridge (2001) differentiates between genre and text types, and defines text type as patterns of discourse organization in which texts are structured to fulfil communicative purposes. Biber (2012) defines a text type as "a class of texts having similarities in linguistic forms regardless of the genre." (as cited in Paltridge, 2001, p. 237). These text types may include problem-solution, compare-contrast, general-particular and hypothetical-real texts (Hoey, 1991, cited in Paltridge, 2001). It is likely to find a particular text type used in a variety of genres such as a problem-solution text type where can be found in scientific discourse, advertisements, and fiction.

The concept of genre has been defined differently by different linguistic schools and scholars. Swales (1990) defines genre from an English for Specific Purposes (ESP) perspective and considers it as a class of communicative events shared by a particular discourse community that “shapes the schematic structure of the discourse and influences and constrains choice of content and style” (p. 58). Genre in that sense is dependent on the community in which “a group of people who share certain language-using practices is important” (p. 29). It is argued that genres “are best conceptualized as goal-directed or purposive” (Askehave and Swales, 2001, p. 195). They further explain that viewing genre from the perspective of ‘communicative purpose’ is a key factor in genre analysis approaches in understanding a corpus or discourses.

Bhatia (2002) also emphasizes the notion of communicative purpose of a particular text used by a specific group community in a particular context, and he defined genre as “the use of language in conventionalized communicative settings. They serve the goals of specific discourse communities, and tend to establish relatively stable structural forms and constrain the use of lexico-grammatical resources in expressing these forms” (Bhatia, 2002, p. 181). In line with this perspective, Bonini (2010) highlights the concepts of textualization, text production and comprehension as “which performs at least one social practice within various possible relational chains, carrying out then the discourse and the social structure” (p. 489).

New rhetoric scholars and linguists, share similar intuitions with the ESP perspective. Miller (1984), for example, defines genre in terms of social actions that are performed in particular contexts/situations. However, he proposed defining a genre in relation to rhetorical situations rather than structures. Besides, Johns (2009) argues that New Rhetoric linguists prefer to start and end with “a discussion of the rhetorical situation rather than with a more specific analysis of lexicogrammatical elements within the text” (p. 9).

From the Systemic Functional Linguistics (SFL) perspective, genre is defined as a concept that “refers to the overall structural organization and grammatical features shared by texts that have a common social purpose, such as telling a story (narrative genre) or debating an issue (discussion genre)” (Coffin et al., 2013, p. 249). This definition is comprehensive as it takes into account the rhetorical situations, grammatical features, and structural organization. Based on Halliday’s SFL, Martin and Rose (2008) define genre as “a staged, goal-oriented, social process” (p. 6), highlighting three aspects in genre. The first one is that genre is social in terms of involving people and their interaction, while the second one is that it is goal-oriented because genres are used to get things done. The last one is related to the stages as it takes a few steps for people to achieve their goals.

Based on the aforementioned definitions, genres are usually made up of beginnings, middles, and ends. Eggins (2013) highlights the concept of constituency in defining genres and argued that the different stages should be labeled functionally by determining the “the function of the different constituents” (p. 60). That is, each stage has a particular function that helps language users understand the purpose of any text (Coffin et al., 2013; Eggins, 2013). The work of Swales (1990) in identifying the moves of particular genres are widely recognized. More particularly, his work on identifying three moves in the Research Article Introduction (RAI) as shown in Figure 1.

Another example is the response letters to recommendations, an academic genre that is identified by Swales, Jakobsen, Kejser, Koch, Lynch, and Mølbæk (2000) as cited in

Ashehave and Swales (2001). Swales et al. (2000) identify the moves and the purpose of a response letter to recommendations. The purpose attempts to show politeness among others. They recognize three parts: an opening, a body, and a closing. In addition, Bhatia (2014), for example, identifies the moves of sales letters in a business context. He proposes the schematic moves of sales letters as shown in Figure 2.

Figure 1: The moves in the Research Article Introduction (RAI)

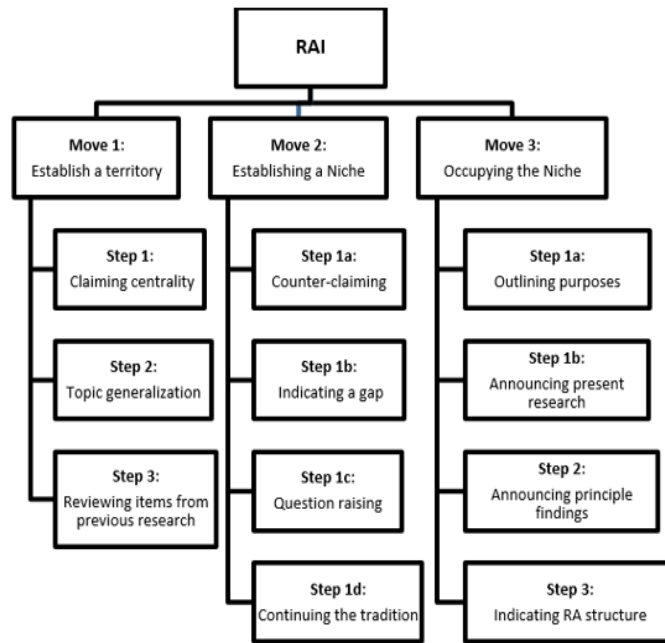
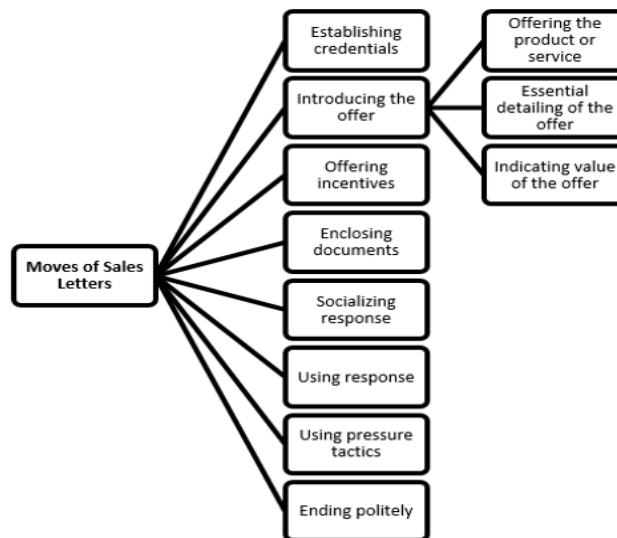


Figure 2: The Moves of Sales Letters



It is worth noting here that these schematic structures/moves should not be seen as rigid or static templates; but, on the contrary, should be considered fluid, that changes and evolves with the rapid changes in technology, resulting in forming genres to “meet the new affordances of the Internet ... opening up new intertextual and interactive possibilities for genre production” (Drew, 2017, p. 204). In the same vein, Coe (2002) argued that thesis statements are not always found in introductions. In addition, Hyland (2007) analyzed the move structure of dissertation acknowledgments and found that they include main and optional moves; a main Thanking move ‘sandwiched’ between two optional Reflecting and Announcing moves, for instance.

A three-level analysis of genre could be used to understand a particular genre. Drew (2017) proposed that the first level is concerned with explaining the genre’s communicative purpose as proposed by Swales (1990) and Swales and Tardy (2014), while the second level deals with the schematic moves that characterize a particular genre. The last level focuses on the analysis of the rhetorical steps for the realisation of the move. This goes in line with Bhatia’s (2014) approach to genre analysis. He proposed a seven-step approach to define and identify unfamiliar genres. The first step is to place the given genre-text in a situational context, where prior experience and knowledge is required to determine the situational context of a genre within a specific discourse in community upon which the communicative conventions are identified. This might correspond to the three contextual variables of register: field, tenor and mode, which are key variables in any context/situation as they influence the way we use language, and each variable includes a number of aspects (Coffin et al., 2013).

Drew’s (2017) second step is surveying the existing literature if prior knowledge is not available. This consists of the literature of other linguistic analyses of the target genre or other similar ones, methodological assumptions, tools, theories of genre-based analysis (Bhatia, 2014). The third step refines the situational/ contextual analysis by defining the speaker/ writer, audience, social roles and relationships and their goals. In addition, the historical, socio-cultural, philosophic, and/ or occupational placement of the community should be considered too. It is also required to identify the network of surrounding texts, the topic, subject matter and extra-textual reality.

In addition, selecting a corpus is the next step that emphasizes the importance of identifying and defining the genre and its characteristics. Stating the criteria of selection is; thus, a must to decide the appropriateness of the corpus selection. The fifth step is to study the institutional context in which the genre is being used by examining the linguistic, social, cultural and academic conventions. Next comes the step of deciding the level of linguistic analysis. Bhatia (2014) identified three levels: lexicogrammatical features, text-patterning or textualization, and structural interpretation of the text-genre. The last step is specialist information in genre analysis where consulting a specialist is pivotal to verify the findings and enhance the validity of the analysis.

2.1. Context of Register

The Context of situation or register includes three variables: field, tenor and mode. These are key variables in any context/situation as they influence the way we use language, and each variable includes a number of aspects (Coffin et al., 2013). Field covers aspects

such as the social activity, the topic being discussed, the degree of specialization and the angle of representation, while tenor includes the social roles and status in terms of power, expertise and authority, as well as the social distance and the speaker/writer persona. Mode includes aspects such as the degree of interactivity, the degree of spontaneity, the communicative distance in time and space and the role of language and the inclusion of other semiotic resources.

Semiotic resources are used to aid people's understanding of the surroundings and to make meaning in communication with themselves and others (Kress, 2010). From the perspective of Systemic Functional Linguistics, Halliday (1994) argued that meaning is related to the concept of sign and that semiotics has shifted from 'a study of signs' to 'a study of sign systems'. He argued that signs are semiotic resources that include language in its written form through the use of graphology as well as other resources such as images and symbols. These semiotic resources if are used systematically, then they can form modes such as images, colours, gestures, videos, music and other sound effects. These modes can be viewed as multimodal and they can be used as meaning-making resource as a colour, for example, can be seen as a meaning-making resource in texts.

It is argued that the way in which content is presented is of paramount importance especially for the novice as it helps them in the learning process (Danielsson and Selander, 2021). Semiotic resources play a crucial role in communication and that visual images are as important as language in meaning-making (Kress and Leeuwen, 2021). Visual images are similar to language in that both are abstractions that are realized through grammar, where images "are expressed through visual systems of graphics" (Lim, 2004). The notion of semiotic resources can be viewed from a social perspective as Jewitt and Henriksen (2017) explained that Social Semiotics is important to understand the world around us by understanding "how representations are produced by and contribute to cultural settings, that is, to get at their social function and meaning potential in the communicative landscape" (p. 146). They further defined a semiotic resource as "the actions, materials and artifacts we use for communicative purposes" (p. 147).

Based on Halliday's systemic and functional notions of language, SFL starts in social context and looks at how language both acts upon and is constrained by this social context, offering a semiotic system that includes meaning (discourse/ semantics), words and structures (lexico-grammar) and sounds/letter (phonology and graphology). There are three levels of meanings upon which a language is used: ideational, interpersonal and textual (Halliday, 2009). Ideational metafunction is concerned with things existing in the world such as actions, events and processes as well as participants in those processes. Interpersonal metafunction is concerned with the interaction between participants in spoken or written discourses to enact human relationships by investigating speech roles, for instance, to interpret the interaction between speakers and listeners or writers and readers. As for the textual metafunction, it is concerned with how meanings are organized cohesively and coherently in either spoken or written discourses. Halliday's three metafunctions can be associated with the three variables of register as shown in Table 1:

Table 1. Register-metafunction language relationship (Coffin et al. 2009, p. 226)

Register Variable	Metafunction	Language (some examples)
Field	Ideational meaning	Subjects, objects, and adjuncts, specialized lexis
Tenor	Interpersonal meaning	Speech function, modality Clause structure,
Mode	Textual meaning	exophoric/anaphoric reference, lexical density

Examining texts such as medical infographics can be helpful to understand how language is used in such texts to express meanings in certain situations and what forms are used to express those meanings which are influenced by the social and cultural contexts in a particular society. Analyzing the infographics of medical announcements can be viewed as a means of communication between the writer and the reader as Systemic Functional Linguistics (SFL) provides a framework through which language can be interpreted as “a three-level semiotic system, where the discourse-semantic unit, the text, semantically unified through cohesive patterns, is the locus of choices in experiential, textual, and interpersonal meaning” (Eggins, 2013, p. 307), and that language is used to fulfill a particular purpose in a particular context (Coffin et al. 2013; Eggins, 2013).

2.2 Medical Infographic Announcements (MIAs)

2.2.1 Infographics

Siricharoen (2015) define infographics as “data visualizations that present complex information quickly and clearly” (p. 558). These data visualizations can include photos, maps, signs, charts and content. Infographics consist of three main components: visual, content and knowledge (Thacher, 2012). Visual refers to many items such as colours, signs, maps and photos, while content includes other items such as texts, statistics, setting, figures and numbers. Knowledge refers to the conclusion to communicate particular messages. There are many types of infographic designs ranging from 2-D images to animated ones. Ashton (2013) states that there are many types of infographics such as the visual article, the flow chart, the compare and contrast, how-to, useful attraction, number, the timeline, research results, did-you-know?, and the photo. Many studies have been conducted on the benefits of creating infographics in a variety of contexts (Bin Dahmash, Al-Hamid and Alrajhi, 2017; Won, 2018; Hassan, 2016; Otten, Cheng and Drewnowski, 2015; Siricharoen and Siricharoen, 2015; Siricharoen, 2013). These contexts include the education, communication, science, business, economics and health sectors. These studies recommend the creation and use of infographics to enable the audience/public to understand the data in an accessible way as the human brain functions better with visual data. The representation of this visual data can be reliable, entertaining, interactive and informative.

2.2.2 Medical Announcement Infographics

It is of paramount importance to first draw on closely the definition of Public Service Announcements (PSAs) in order to provide a definition of medical announcements as there is almost none or little research on the definition of MAs. PSAs can be defined as non-commercial and non-profit advertisements to inform the general public or to educate them on a particular issue or matter that can be related to social, economic or environmental (Suggett, 2017; Shamsudin, Noh, Nudin, Radzuan, Wan and Ghafar, 2017; Terskikh, 2016; Moriarty, Mitchell, Wood, & Wells, 2019). In addition, Klimes-Dougan and Lee (2010) provide a definition of PSAs in relation to health concerns and issues. Their definition aims to raise the public's awareness and enhance their attitudes and behaviour on health issues such as obesity, suicide, and blood donation.

Accordingly, and based on the aforementioned definitions of PSAs, the study at hand proposes the following definition of Medical Announcements (MAs). MAs can be defined as a type of advertising genre that targets the general public (patients and non-patients) with the aim of informing, educating, guiding, and motivating them in regard to health concerns and issues, which are usually publicized by a governmental body such as the Ministry of Health, which is in turn considered a non-commercial and non-profit organization or agency.

These MAs may utilize traditional and/or digital media tools to address the public on health concerns or issues. One of these tools is the creation of infographics, which makes use of content, colours, images, graphs, animated pictures, short videos, posters, and brochures to deliver specific messages to a particular group of people. In this sense, it can be argued that both medical announcements and infographics share common purposes and that is informing the public of 'what to do' and 'how to do', e.g. to avoid and prevent the spread of contagious diseases such as COVID-19. Infographics are one of the most important tools that can be employed to perform and/or achieve particular purposes. Based on the definition of infographics, PSAs, and MAs above, the current study also proposes a definition of Medical Announcement Infographics (MAIs) in relation to the context of health. MAIs is defined as the utilization of infographics to communicate a particular message to a particular group of people or community on health concerns and issues. This proposed definition of MAIs highlights various purposes, which is geared towards informing, educating, motivating, and raising awareness.

Accordingly, two factors can be related to MAs: the social behavioural theory and health education. The social behavioural theory can be seen at the heart of medical announcements as it focuses on changing an individual or a community's attitudes, perceptions, and mindset towards the prevention of a disease by enlightening the public of its causes and treatment that are based on scientific facts and statistics. Health communication is also defined as a "kind of study and use of methods to influence and inform individual and also community decisions that improve health" (İnci, Sancar & Bostanci, 2017, p. 150). Health communication entails two components: health education and health promotion. The former focuses on motivating people "to adopt healthy living behaviours" (İnci, Sancar & Bostanci, 2017, p. 152) that are based on health scientific information, while the latter is concerned with how the announcements are effective to evoke a change in people's attitudes (Finlay and Faulkner, 2005 as cited in İnci, Sancar & Bostanci, 2017, p. 152).

Communicating health messages can entail a positive or a negative semantic framing of what is to be communicated. If we consider MAs as a product which aims to achieve a particular behavioural action (Lee, Liu, & Cheng, 2018), then a positive message frame can successfully influence the target audience of following a particular social behaviour, while a negative message frame encourages the audience to avoid unfavorable social behaviours. Both are constituents of goal framing effect which is related to the ‘persuasive impact’ to achieve a particular behaviour (Piñon & Gambará, 2005) and that health messages highlight the goal of “receiving a health benefit by performing a particular behavior or avoiding a negative consequence by performing the same behavior” (Shamaskin, Mikels and Reed, 2010, p. 746).

As with different types of genres, the medical discourse has its distinctive schematic structure, which is first identified by Swales (1990, 2011) using genre-analysis model of research paper. He further identifies the discourse community of genres based on his definition in which he defines genre as “a class of communicative events, the members of which share some set of communicative purposes which are categorized by the expert members of the parent discourse community” (Swales, 1990, p. 58). He identifies six characteristics of what makes a medical discourse community in relation to medical research papers. Based on this, many other researchers examine further the moves of scientific research papers taking into account variables such as the intended audience, obligatory and optional moves, main and sub-moves with detailed descriptions (Davis, 2015; Huang, 2014; Nwogu, 1997; Skeltion, 1994). In addition, the work of Fryer (2012) and Nwogu (1997) as cited in Huang (2014) analyzed the moves in terms of the lexical meaning, propositional meanings and illocutionary forces.

Accordingly, the language of medical discourse is, then, the one used by “medical experts in their professional communication” and it is distinguished for its use of “specialized vocabulary called medical jargon” (Milosavljević & Antić, 2015, p. 78). As with different language genres, the medical language has its specific lexicogrammatical features. These features are summarized by Milosavljević and Antić (2015) as follows: (1) use of normalized forms; (2) passive and impersonal style; (3) false pairs that entail different meanings in different contexts; and (4) compound and complex forms.

The present study aims to analyze the Medical Announcement Infographics (MAIs) on COVID-19 Pandemic published by the Ministry of Health in the Kingdom of Bahrain. This study contributes to the fields of medical announcements, infographics and genre-based analysis as there is no research that has been done on analyzing the schematic moves of MIAs. The study utilizes Swales’ (1991) genre-analysis model. It also aims to give a detailed description of the moves and identify the obligatory and optional, as well as main and sub-moves. It further examines the contextual variables of the MIA register and the lexicogrammatical features highlighted in Systemic Functional Linguistics.

The study posits the following questions:

1. What are the schematic moves in Medical Announcement infographics on COVID-19 Pandemic?
2. To what extent do the Medical Announcement infographics on COVID-19 Pandemic meet the contextual variables of register?

3. RESEARCH METHODS

In order to answer the research questions posited by this study, a qualitative-method approach is utilized. The data is analyzed thematically by examining the schematic moves following Swales' theoretical framework.

The study collected the daily COVID-19 infographic reports published officially on the Ministry of Health's Instagram account at the Kingdom of Bahrain. The corpus included data from the beginning of the pandemic in February, 2020 until August, 2021. The data is collected based on the changes in moves that took place throughout the pandemic period.

4. FINDINGS AND DISCUSSION

This section presents and discusses the findings of the daily COVID-19 infographic reports published by the Ministry of Health during the time span between February, 2020 and July, 2021. The collected data were categorized into three phases to trace down the development of the pandemic throughout the aforementioned specified timeframe. These phases have been identified based on the content and layout of these reports as shown in Table 2:

Table 2. Phases of data

Phase	Timeframe	Content
One	Feb, 2020.	Development of the pandemic locally and globally.
Two	March 3rd – June 20th, 2020.	Tracing cases locally with reference to global situation.
Three	June 21st 2020 – August, 2021.	Cases locally with no reference to the global situation.

4.1 General Features

The general features of all phases include some inconsistencies within the same timeframe and across the three timeframes. These inconsistencies include the content, the layout, the schematic moves, and the colours. The three phases will be described and discussed separately highlighting the similarities and differences among them. They will be first discussed in terms of the three variables of register, and then, in terms of the obligatory and optional schematic moves and other contextual variables such as the layout, and the significance of the colour used in the daily COVID-19 infographic reports.

4.1.1 Contextual Variables of MAIS

Applying the variables of register, Table 3 summarizes the aspects of the COVID-19 situation throughout the three phases.

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Table 3. Variables of register

Variable	Field	Tenor	Mode
Aspects of a situation	Social activity	Social roles and status	Degree of interactivity
	Phase 1: <i>Delivery of Coronavirus updates locally and globally</i>		
	Phase 2 <i>Summary of Coronavirus cases locally</i>	<i>Writer to reader; Ministry of Health representative to public</i>	<i>Non-interactive</i>
	Phase 3 <i>Daily COVID-19 Report in the Kingdom of Bahrain</i>		
	Topic	Social distance	Degree of spontaneity
	Phase 1 <i>COVID-19 and Coronavirus updates and numbers</i>		
	Phase 2 <i>COVID-19 and Coronavirus updates and numbers</i>	<i>Professional</i>	<i>Non-spontaneous</i>
	Phase 3 <i>COVID-19 and Coronavirus updates and numbers</i>		
	Degree of specialization	Writer persona	Communicative distance
	Phase 1 <i>Specialized</i>		
	Phase 2 <i>Specialized</i>	<i>Medical expert</i>	<i>Language as reflection (Arabic and English)</i>
	Phase 3 <i>Specialized</i>		
Angle of representation		Role of language	
Phase 1 <i>Medical perspective</i>			
Phase 2 <i>Medical perspective</i>		<i>Visual images/ Choice of colour</i>	
Phase 3 <i>Medical perspective</i>			

In addition, Table 3 shows the different contextual variables of register throughout the identified phases in this study. Each variable consists of a number aspect that help to define and identify the context of situation of MAIs, which are discussed in detail below.

4.1.2 Field

As far as field is concerned, the angle of representation is specialized as the content reflects a medical perspective on the Coronavirus situation across the three phases in the Kingdom of Bahrain. The Ministry of Bahrain is found in the position of agent responsible for delivering information regarding COVID-19. The first public announcement by the Ministry of Health on its official Instagram account included information that discussed the pandemic situation globally and locally focusing on the number of cases identified with the virus. The titles of the MAIs varied across the three phases. In Phase 1, it is called Delivery of Coronavirus updates locally and globally. In Phase 2, it changed to Summary of Coronavirus cases locally, while the third phase’s title was Daily COVID-19 Report in the Kingdom of Bahrain.

The social activity taking place is the delivery Coronavirus updates. The global situation was based on the reports of the World Health Organization (WHO), while the local information was based on the Ministry of Health updates across the kingdom of Bahrain including tests of infected people, tracing cases of people coming from China and other countries with high infections, precautionary measurements taken to screen the main ports, receiving information from official sources, activating hotline number for receiving information, evacuation of health centers to be used for isolation units for infected people and those in contact with them, and basic numbers of cases locally and globally.

The topic being discussed revolves around the COVID-19 situation locally and globally, updates, cases of infection, recoveries, deaths, status of cases, and PCR tests. The choice of vocabulary is specialized in the field of medicine and nominalization is highly used especially in Phases 2 and 3, whereas content of narrative nature was highly used in Phase 1. Declarative statements were used in Phase 1, and these statements focused on informing the public of the WHO's announcement of considering the virus as a pandemic, the number of active cases locally and globally, the number of deaths, the Ministry of Health measurements and warnings. The use of vocabulary is interesting and they are all related to the topic of Coronavirus and its related word range such as isolation, quarantine, contact with infected persons, confirmed cases, negative results, positive results and suspected cases.

4.1.3 Tenor

The social roles that can be identified in MAIs are of unequal interlocutors as it is from writer to reader; in other words, from the Ministry of Health to the public in the Kingdom of Bahrain. That means it is up-down communication; from an expert to a novice, where the former is more specialized in the field, has more expertise and has more authoritative position. The Ministry, in this case, delivers information regarding the pandemic using more formal language as the interlocutors are socially distant. The statements used in Phase 1, for example, are declarative, where no shortened names, contractions, and colloquial lexis were not used. The passive voice was used as well in delivering information about some precautionary measures taken by the government of Bahrain such as in: All indirect flights from Iran have been suspended; Studying in all public and private higher education institutions, schools, and kindergarten has been suspended; Citizens are not allowed to travel to Iran until further notice (25 Feb 2020). In addition, modality is implemented that suggests a high authoritative tone such as in: All citizens and residents returning from Iran during February must immediately call 444 to schedule their medical examination to ensure their safety, and the safety of other citizens and residents (29 Feb 2020). During Phases 2 and 3, no statements were used. Nominalization was used instead in the form of headings/ main subjects to highlight moves that will be discussed shortly such as Today's Number of Tests, New Cases, Status of Cases, Recoveries and Deaths.

4.1.4 Mode

The third register variable, which is mode, is concerned with how the text is produced highlighting its interactivity and spontaneity. The MAIs are written texts that involves zero interactivity and spontaneity as some distance in time and space can be identified. The MAIs are non-interactive as long clauses and coordinating conjunctions were used in the planned written language. No instances of minor clauses were not found. The MAIs are also non-spontaneous as all information that is included was pre-planned, revised and then officially published. The spontaneity of the text can also be correlated with the density of lexis. It is aforementioned, the degree of nominalization is high due to the choice of lexical items. Language here is primarily reflective as the written text is formal. Earlier MAIs were mainly written in Arabic and English was used rarely as evidenced in Phase 1,

while in Phases 2 and 3, both languages were used. In addition to that, some other semiotic modes were used such as visual images, font type and size, and colours which will be discussed in more detail in the following section.

4.2. Generic Moves

This section discusses the generic or schematic moves found in the MAIs of the Kingdom of Bahrain. The data includes the MAIs according to the timeline proposed by this study. It includes three phases as illustrated in Table 3.

4.2.1 Phase One

This phase comprises the daily infographic reports within the month of February 2020. It includes several inconsistent daily reports in terms of the content, layout, and colour. There are 21 moves that can be identified as shown in Table 4:

Table 4. The Moves in Phase One

Moves	Found in all reports	Not found in all reports
Move 1: Ministry of Health's Logo	x	
Move 2: Title <i>COVID-19 updates</i>	x	
Move 3: Date	x	
Move 4: Local situation		x
Move 5: Global situation		x
Move 6: Tests		x
Move 7: Results		x
Move 8: Total of tests		x
Move 9: No. of cases in Bahrain		x
Move 10: No. of cases in China		x
Move 11: No. of cases outside China		x
Move 12: No. of deaths		x
Move 13: WHO's rating of the situation worldwide		x
Move 14: National Team Logo		x
Move 15: No. of negative results		x
Move 16: No. of infected cases		x
Move 17: Measures taken		x
Move 18: Timing of latest updates		x
Move 19: Negative results for arrivals via airport		x
Move 20: #COVID-19; #Ministry_of_Health		x
Move 21: Ministry of Health accounts on Instagram, Facebook, twitter and website.		x

Generally speaking, the purpose of this phase was to give information about the local and global situation, particularly in China. In addition, at a later stage of this phase the communicative purpose was to inform and reassure the public that the Ministry was in control of the situation. Furthermore, the last stage of this phase was to inform and give instructions.

During this phase, the daily reports on COVID-19 took different and inconsistent forms and they include different/inconsistent moves. They were all produced in the Arabic language except for a couple of reports that were translated into the English language. According to Table 4, the first three moves were found in all reports during the month of February, 2020 and they were the Ministry of Health's logo, date and title of the report. Moves from 4 to 21 were not consistent in their occurrences in the reports.

It is noticed that all information included in the reports could be trusted as the sources were mentioned: either the Ministry of Health in the Kingdom of Bahrain and/or the

World Health Organization (WHO). Between Feb 5th and 23rd, 2020, the reports included moves 1 to 13. The reports basically provided tabulated information: a) the number of cases in China and worldwide, and b) the evaluation of the World Health Organization (WHO) to the situation. It should be noted here that there is a column about WHO's rating of the situation worldwide. This information is meant to warn the public of the eminent hazard. The source of the information is stated to give credibility and ensure trust. In addition, all these reports include the date of release.

This gives it much credibility to trust the information and the statistics. Dates and in some reports several timings of release were included. The language used is highly formal and objective. This is indicated in the use of the passive voice, third person, and statistics. For example, the passive voice was used as in No Coronavirus-infected case has been registered yet (Feb 5, 2020); Kanoo Health Centre has been designated as quarantine for confirmed cases (Feb 7, 2020). In addition, third person is used to give information as in WHO announced that Coronavirus is a global pandemic and it stated its genetic structure and in Lebanon reports the first Coronavirus case (Feb. 22, 2020).

Starting from Feb 24th, 2020 till the end of the month, the language can be characterized by brevity and the use of nominal phrases in all instances, as in Immediate transfer of the infected cases for treatment (Feb 24, 2020) and Examination of those who were in contact with the infected individual (Feb 24, 2020). This soon changed as the number of positive cases started to increase. The reports included moves 1 to 3 and 14 to 19 as stated in Table 4. Important Moves are 15, 16 and 17 which detailed numerical data on the cases in the Kingdom of Bahrain. In addition, Move 14 can be viewed as significant as it included another logo that carried the title of Public Awareness Campaign to Combat Coronavirus (COVID-19). This logo can be seen as a motivating motto for the inclusion of the people in the Kingdom of Bahrain to act as one team to combat the spread of the pandemic.

The layout, images, and colour were varied and inconsistent. During this phase, it seems that the colour codes might play a significant role in attracting people's attention to the numbers of cases. The green colour was used to highlight the negative cases, while the red colour was used to highlight the positive cases (infected people), measures taken by the government to alert people to act according to them, and the blue colour was used after the 24th Feb as the background colour.

4.2.2 Phase Two

This phase comprises the daily infographic reports between March 3rd and June 20th, 2020. During this phase, the daily report became more stabilized in terms of the moves, content, layout, and colour. The moves are presented in Table 5:

Genre Analysis of Daily COVID-19 Infographic Reports in the Arabian Gulf

Table 5. The Moves in Phase Two

Moves	Found in all reports	Not found in all reports
Move 1: Ministry of Health's Logo	x	
Move 2: Title <i>Summary of Cases</i>	x	
Move 3: Date and timing	x	
Move 4: Total Tested	x	
Move 5: Tested Negative		x
Move 6: Active Cases	x	
Move 7: Active cases not requiring any medication		x
Move 8: Active cases receiving necessary medication		x
Move 9: Tested positive upon arrival, prior to entering Bahrain/ Arrivals from abroad		x
Move 10: Tested as positive in the country/ local cases (community)		x
Move 11: Discharged	x	
Move 12: Active cases receiving Medical Care: Stable-Critical/ Status of cases : Stable-Critical	x	
Move 13: Contacts of arrivals from abroad		x
Move 14: International COVID-19 repatriation programme (ICRP)		x
Move 15: Deaths		x

In general, the daily reports during this phase started to take on a statistical shape as they mainly consist of tables with main headings and statistics. These reports were meant to be concise and answer the questions of the general public with accurate numbers. In addition, they indicate the community spread of the pandemic inside Bahrain to help the public understand the measures taken and make them share the responsibility of combating the pandemic.

More moves were found in all daily reports such as Moves 1 to 4, 6, and 11 to 12, while fewer moves were found in some of them, and they were either not used later or replaced by other moves. One of the moves that was not in use anymore is Move 5 as Move 6 was sufficiently enough to highlight the number of infected people. It seems that Move 5 was redundant. Move 15 (Deaths) was introduced on March 16th, 2020 when the first death was reported due to the Coronavirus, and it continued until the end of this phase. In addition, Move 12 was found in all reports, but with different headings: in the first stage it was called Active cases receiving Medical Care: Stable-Critical, and then it was named Status of cases: Stable-Critical.

Active cases had several divisions. Move 6 was found in all reports, and in some reports at an early stage the statistical number was divided into two more moves (Moves 7 and 8), which at a later stage were omitted. Moves 8 and 12 could be merged together as those receiving medications were then divided into other categories such as stable and critical. Move 12 was reduced to only cases receiving medical care and giving statistics on critical and stable cases. This change reflects the response to the general panic about the number of deaths. The Ministry and the Campaign were clearly following closely not only the facts about the pandemic but also the people's worries and concerns.

In terms of layout and colour, it is found that all reports included statistical tables with five main colours, each signaling different content. The red colour was used to highlight the active cases; green colour to refer to stable cases, tested negative and were discharged.

The orange colour was used to signal critical cases, while the grey one was used to refer to deaths. The last colour, which was blue, was used to refer to the total tested cases.

4.2.3. Phase Three

This phase comprises the daily infographic reports between June 21st 2020 and August, 2021. During this phase, the daily report started to become stable and consistent in terms of the moves, content, layout, colour and the inclusion of visual aids. The moves are presented in Table 6:

Table 6. The Moves in Phase Three

Moves	Found in all reports	Not found in all reports
Move 1: Ministry of Health's Logo	x	
Move 2: National Team Logo	x	
Move 3: Motto/ Message	x	
Move 4: Date	x	
Move 5: Title <i>Daily COVID-19 Reports in the Kingdom of Bahrain</i>	x	
Move 6: Today's Number of Tests	x	
Move 7: New Cases	x	
Move 8: Additional Recoveries	x	
Move 9: today's Deaths	x	
Move 10: Total Tested (PCR tests)	x	
Move 11: Active Cases	x	
Move 12: Recoveries	x	
Move 13: Deaths	x	
Move 14: Status of cases: stable/critical	x	
Move 15: Active cases receiving treatment	x	
Move 16: Individuals vaccinated		x
Move 17: Percentage of positive cases from today's tests		x

In general, Phase Three signals the most important phase among all as it is comprehensive and consistent regarding the moves, layout and content. As indicated in Table 6, Moves 1 to 15 were found in all reports starting from June 21st 2020 until August 2021, with two additional moves that were added starting from January 5th 2021 until August 2021.

This phase gives a complete statistical overview of the pandemic situation in the Kingdom of Bahrain with no reference to any external data outside the kingdom. The use of tables and figures makes it easy for people to follow the status of the pandemic in the country. Move 17 was added starting from Feb 9th, 2021 to give more statistical data in percentages so that the general public can make use of it to understand the situation and how to act accordingly. Move 16, which started from Jan 5th, 2021, is about the number of vaccinated people, and it includes those who got first, second and booster doses.

Move 3 is interesting as it is about the motto or message that the Ministry of Health adopts overtime to encourage people to act according to the precautionary measures set by the Ministry. The mottos/messages target the general public's awareness of the situation by activating the inner psychological alarm that might help them regulate their attitudes to combat the virus. Some of these mottos are BE Responsible; BE Determined; Commit4Bahrain; UnitedAgainstCOVID19 and VACCINATE AND STAY SAFE. Other

examples encourage them to adhere to all precautionary measures such as A strong and united commitment to precautionary measures helps stop the spread of COVID-19; Adhering to all precautionary measures is a national responsibility to protect the health of all in the community; and Adhere to precautionary measures and preserve the health and safety of our community.

It is also interesting to highlight the use of imperative clauses to say that it is time to take the situation seriously. Some examples are Stay committed, be responsible; Get vaccinated and protect all; and Commit to precautionary measures and protect others. In some other examples, the use of personal pronouns such as your, our and we suggest the inclusion of all to increase their awareness such as Your commitment reduces the spread of the virus; Your commitment reflects your awareness; Protecting our elderly and vulnerable people is our duty; and Together we can stop the spread of COVID-19.

A final remark that is of great interest in this phase is the use of colour codes and symbols, which are added in this phase, to signal different situations. The main colours are blue to signal vaccinated individuals, total number of tests and total tested; red to signal new and active cases; green to signal stable cases, recoveries and additional recoveries; orange to signal critical cases; and grey to signal deaths. In addition to the colour codes, symbols have been added to the different colours aforementioned.

Another interesting point here is the background colour that the Ministry of Health has adopted in their Traffic Light System. On a continuum, it ranges between high altered phase (red), moving gradually to low altered phases (orange, yellow and green). This system has been used as an innovative approach to combat COVID-19 as it envisages a self-regulated framework that builds a shared understanding of how individuals in the Kingdom of Bahrain should act to support the efforts of the government to maintain the safety and wellbeing of its people.

5. CONCLUSION

Halliday's (2014) functional approach focuses on the communicative functions to understand language in context deeply. In this study, this linguistic dimension helps not only in explaining the producer's intended meaning to achieve the communicative goals successfully, but also in identifying the variety of messages of the selected daily infographic reports. The detailed analysis of the three variables or register (field, tenor and mode) within the three phases of timeframe shows variation at the level of the lexical, structural and illocutionary force choice-making. At all these levels, producer or the Ministry of Health in the Kingdom of Bahrain employs different locutionary acts for instance depending on the phase of timeframe such as representatives at the first phase to give information about the pandemic locally and globally. Whereas at the second and third phase, the choice of commissives is more frequent to give direct instructions related to seriousness of the case. Infographic reports are designed for Bahraini health programme to serve specific receivers, hence the message is designed within this social context. The production of each report represents information, statistics and even colors which are investigated in terms of moves, whether positively to be followed or negatively to be avoided by receivers to keep safe. In fact, the whole cognitive image cannot be completed without investigated ideational, interpersonal and textual meaning to show the relation between message, participants and the

whole structural of the discourse. This type of study with combined approaches and innovations brings new insights and inspirations to the modes and conventions of visual messages.

REFERENCES

- Ashton, D. (2013). *The 9 types of infographics that get shared the most online*. NeoMam Studios. <https://neomam.com/infographics/the-8-types-of-infographic>.
- Askehave, I. & Swales, J. (2001). Genre identification and communicative purpose: A problem and a possible solution. *Applied Linguistics*, 22(2), 195–212. <https://doi.org/10.1093/applin/22.2.195>.
- Bhatia, V. (2002). Applied genre analysis: Analytical advances and pedagogical procedures. In A. M. Johns (Ed.), *Genre in the classroom: Multiple perspectives*, Lawrence Erlbaum Associates, 279-283.
- Bhatia, V. (2014). *Analysing genre: Language use in professional settings*. Hoboken: Taylor and Francis.
- Biber, D. (2012). *Variation across speech and writing*. Cambridge: Cambridge University Press.
- Bin Dahmash, A., Al-Hamid, A., & Alrajhi, M. (2017). Using infographics in the teaching of linguistics. *Arab World English Journal*, 8(4), 430-443. <https://doi.org/10.24093/awej/vol8no4.29>.
- Bonini, A. (2010). Critical genre analysis and professional practice: The case of public contests to select professors for Brazilian public universities. *Linguagem em (Dis) curso*, 10(3), 485-510.
- Coe, R. (2002). The new rhetoric of genre: Writing political briefs. In A. M. Johns (Ed.) *Genre in the classroom: Multiple perspectives*, Lawrence Erlbaum Associates, 197-207.
- Coffin, C., Donohue, J., & North, S. (2013). *Exploring English grammar: From formal to functional*. Routledge.
- Danielsson, K., & Selander, S. (2021). *Multimodal texts in disciplinary education*. Springer.
- Davis, R. H. (2015). *A genre analysis of medical research articles*. PhD thesis, University of Glasgow.
- Drew, C. (2017). Educational podcasts: A genre analysis. *E-Learning and Digital Media*, 14(4), 201-211. <https://doi.org/10.1177/2042753017736177>.
- Eggs, S. (2013). *An introduction to systemic functional linguistics*. Continuum.
- Finlay, S., & Faulkner, G. (2005). Physical activity promotion through the mass media: Inception, production, transmission and consumption. *Preventive Medicine*, 40(2), 121-130. <https://doi.org/10.1016/j.ypmed.2004.04.018>.
- Fryer, D. (2012). Analysis of the generic discourse features of the English-language medical research article: : A systemic-functional approach. *Functions of Language*, 19(1), 5-37. <https://doi.org/10.1075/fol.19.1.01fry>.
- Gomaa, Y., & Abdel-Malak, A. (2010). Genre Analysis of Egyptian Arabic Written Wedding Invitation. *Journal of the Faculty of Arts*, 26, 75-101.

- Halliday, M. (1994). *Language as social semiotic: The social interpretation of language and meaning*. Edward Arnold.
- Halliday, M. (2009). Methods–techniques–problems. In Halliday and Webster (Eds.) *Continuum Companion to Systemic Functional Linguistics*, London: Continuum International Publishing Group, 59-86.
- Halliday, M. (2014). *Introduction to Functional Grammar*. Routledge.
- Hassan, H. (2016). *Designing Infographics to support teaching complex science subject: A comparison between static and animated Infographics* (Doctoral dissertation, Iowa State University). ProQuest Dissertations and Theses database. (UMI No. 10167764).
- Hoey, M. (1991). *On the surface of discourse*. Nottingham: Department of English Studies.
- Huang, D. (2014). Genre analysis of moves in medical research articles. *Stylus*, 5(1), 7-17.
- Hyland, K. (2007). *Genre and second language writing*. Ann Arbor: University of Michigan Press.
- İnci, B., Sancar, O., & Bostancı, S. (2017). Usage of health-themed public service announcements as a social marketing communication tool: A content analysis related to public service announcements in the Republic of Turkey, Ministry of Health's web site. *Marketing and Branding Research*, 4, 148-168.
- Jewitt, C., & Henriksen, B. (2017). Social semiotic multimodality. In: Klug, N-M and Stöckl, H. (eds) *Handbuch Sprache im multimodalen Kontext* (Handbook of Language in Multimodal Contexts). Berlin: Mouton De Gruyter, 145-164.
- Johns, A. (2009). *Genre in the classroom: Multiple perspectives*. Routledge.
- Klimes-Dougan, B., & Lee, C. (2010). Suicide prevention public service announcements: Perceptions of young adults. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, 31(5), 247-254. <https://doi.org/10.1027/0227-5910/a000032>.
- Kress, G. (2010). *Multimodality: A social semiotic approach to contemporary communication*. London: Routledge.
- Kress, G., & Leeuwen, T. (2021). *Reading images: The grammar of visual design*. London: Routledge.
- Lee, H., Liu, S. & Cheng, Y. (2018). Positive or negative? The influence of message framing, regulatory focus, and product type. *International Journal of Communication*, 12, 788-805.
- Martin, J., & Rose, D. (2008) *Genre Relations: Mapping Culture*. Equinox.
- Miller, C. (1984). Genre as social action. *Quarterly journal of speech*, 70(2), 151-167.
- Milosavljević, N., & Antić, Z. (2015). Medical English genres: Indispensable tool for effective academic and professional communication. *Scientific Journal of the Faculty of Medicine in Nis*, 32(1), 77-81. <https://doi.org/10.1515/afmnai-2015-0008>.
- Moriarty, S. E., Mitchell, N., Wood, C., & Wells, W. (2019). *Advertising & IMC: Principles & practice*. New York: Pearson.
- Nwogu, K. (1997). The medical research paper: Structure and functions. *English for Specific Purposes*, 16(2), 119-138. [https://doi.org/10.1016/s0889-4906\(97\)85388-4](https://doi.org/10.1016/s0889-4906(97)85388-4).
- Otten, J., Cheng, K., & Drewnowski, A. (2015). Infographics and public policy: using data visualization to convey complex information. *Health Affairs*, 34(11), 1901-1907.
- Paltridge, B. (2001). Genre and the language learning classroom. *ELT Journal*, 50, 3, 237-244. <https://doi.org/10.3998/mpub.23749>.

- Piñon, A., & Gambará, H. (2005). A meta-analytic review of framing effect: Risky, attribute and goal framing. *Psicothema*, 17(2), 325–331.
- Shamaskin, A., Mikels, J., & Reed, A. (2010). Getting the message across: Age differences in the positive and negative framing of health care messages. *Psychology and Aging*, 25(3), 746–751. <https://doi.org/10.1037/a0018431>.
- Shamsudin, W., Noh, M., Nudin, A., Radzuan, L., Ghafar, I. & Wan, S. (2017). Public Service announcement media platform for child safety. *1st Asia International Conference Art and Design*. Bandung: Institut Seni Budaya Indonesia, 1-7.
- Siricharoen, W. (2013). Infographics: the new communication tools in digital age. In *The international conference on e-technologies and business on the web (ebw2013)* (Vol. 169174).
- Siricharoen, W. (2015). Infographic role in helping communication for promoting health and well-being. In *Conference: proceedings of the second international conference on computer science, computer engineering, and education technologies (CSCEET 2015)*. Kuala Lumpur, Malaysia.
- Siricharoen, W., & Siricharoen, N. (2015). How infographic should be evaluated. In *Proceedings of the 7th International Conference on Information Technology (ICIT 2015)* (pp. 558-564).
- Skelton, J. (1994). Analysis of the structure of original research papers: An aid to writing original papers for publication. *British Journal of General Practice*, 44, 455-59.
- Suggett, E. (2017). *Risk assessment of patients as a means of directing a clinical pharmacy service* (Doctoral dissertation, University of Birmingham).
- Swales, J. (1990). *Genre analysis: English in academic and research settings*. Cambridge University Press.
- Swales, J. (2011). *Aspects of article introductions*. University of Michigan Press.
- Swales, J., Jakobsen, H., Kejser, C., Koch, L., Lynch, J., & Mølbæk, L. (2000). A new link in a chain of genres? *HERMES-Journal of Language and Communication in Business*, (25), 133-141.
- Swales, J., & Tardy, C. (2014). Genre analysis. *Pragmatics of Discourse*. <https://doi.org/10.1515/9783110214406.165>.
- Terskikh, M. (2016). Public service announcements and their influence upon system of values of children (Research of Concept of “Family” Formation). *Procedia - Social and Behavioral Sciences*, 233, 133-138. 10.1016/j.sbspro.2016.10.168.
- Thatcher, B. (2012). *An overview of infographics*. Webinar. Illinois Central College Teaching & Learning Center. Retrieved from www.slideshare.net/icctic2.
- Won, J. (2018). Interactive infographics and delivery of information: The value assessment of infographics and their relation to user response. *Archives of Design Research*, 31(1), 57-69.