Communicating recipient’s emotions: Text-triggered interest

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The article aims to expand the scope of interpersonal pragmatics and deals with the issue of ‘recipient’s emotions’ which is the least developed area of communication research into emotions. The authors promote the sociopragmatic conception of emotional processes and highlight the strategic nature of emotional impact in communicative situations. The study focuses on the analysis of emotion-evocative communication in terms of the reader’s emotional interest with reference to expository texts from Russian school textbooks. The main purpose of the study is to identify how the strategic use of language increases text-triggered interest. In order to achieve this purpose, the study applies not only linguistic methods intended to explore the strategic manner of language usage, but also experimental methods intended to verify a possible emotional impact. The linguistic analysis reveals that there are three main ways the strategic use of language increases text-triggered interest: expression of dialogicity, concretisation, and manifestation of emotions. The experimental results prove their provoking functions and demonstrate a leading role of linguistic-based factors in interest-evocative communication. The study suggests that the recipient’s interest is often provoked by text-based factors, and text-triggered interest is dependent on the linguistic structure of the discourse. The linguistic strategies used to increase text-triggered interest might be treated as a foundation for different interest-evoking strategies and as a discursive dimension of the recipient’s interest.

KEYWORDS: emotions in communication, pragmatics, expository text, text comprehension, linguistics of emotions

1. INTRODUCTION

Emotions have a direct link to language and human interaction and permeate every kind of communication (Alba-Juez, 2021; Alba-Juez & Larina, 2018; Bucci, 2021; Langlotz & Locher, 2013; Shakhovsky, 2019; Van Berkum, 2018). The discourse studies document a crucial role of emotions in many facets of language usage, discourse processes, socialisation, and separate social fields, like education, politics, or media (Bohn-Getter & Kaakin, 2021; Burdelski, 2020; Foolen, 2012; Koivunen et al., 2021; Loseke, 2009; Majid, 2012; Moisander et al., 2016; Ozyumenko & Larina, 2021; Wetherell, 2013). They are primarily concerned with the exploration of emotionally laden interaction with regard to emotional processes, encoding through emotive language and expressive linguistic forms. However, one of the research gaps is the issue of recipient’s emotions associated with the actual notion of non-propositional effects to which pragmatists currently refer (De Saussure & Wharton, 2020; Wilson & Carston, 2019).
As yet, unlike other sides of communicating emotions, this issue is mostly beyond the scope of interpersonal pragmatics.

The present article discusses the issue of recipient’s emotions and adopts the sociopragmatic conception of emotional processes. It deals with reader’s emotional interest (text-triggered interest) through the agency of expository texts from Russian school textbooks (see Piotrovskaya & Trushchelev, 2018, 2020a, 2020b). The study is organised as follows. Section 2 positions a theoretical approach to recipient’s emotions as a part of communicative processes. Having identified the pragmalinguistic approach, Section 3 provides linguistic and experimental investigations of text-triggered interest and looks at a strategic use of language in interest-evocative written communication. Section 4 interprets the results obtained. Section 5 concludes the article.

2. THEORETICAL BACKGROUND

There is no unified view of emotions among specialists, physiologists and psychologists. To date, they conceptualise emotional experiences through specific variables, seven of which consistently turn up in most explanations in one form or another: (1) affective valence (positive or negative); (2) provoking stimulus; (3) appraisals; (4) behavioural, physiological, motivational, or cognitive changes; (5) regulation; (6) expectations; (7) activity (Frijda, 2013; Izard, 2007; Lench & Carpenter, 2015). Since Darwin’s The Expression of the Emotions in Man and Animals (1872), scientists also argue that emotions have a discursive nature and serve an interpersonal function in interaction (Bucci, 2021; Oatley & Johnson-Laird, 2014; Shakhovsky, 2019).

Sociopragmatic studies place emphasis on this position and promote ‘the analysis of emotion as embedded in discourse and social context’ (White, 2005, p. 246; see also Alba-Juez, 2021; Koschut et al., 2017; Loseke, 2009; Moisander et al., 2016; Olson et al., 2020; Wetherell, 2013; Wharton & Strey, 2019; Zappettini et al., 2021). In this respect, Abu-Lughod and Lutz (1990) were among the first to examine emotion as discursive practice and to claim, ‘emotions are phenomena that can be seen in social interaction, much of which is verbal’ (Abu-Lughod & Lutz, 1990, p. 10-11). Recently, Alba-Juez and Mackenzie (2019, p. 18) have identified emotion in discourse as ‘a multimodal dynamical discourse process, which permeates all linguistic levels but also manifests itself in non-verbal ways, presenting different stages and forms ... according as the discursive situation and interaction changes and evokes’. In a similar vein, discursive psychology draws attention to how emotions arise in social practices and how they perform different tasks in dynamical discourse structures (Childs & Hepburn, 2015; Edwards, 1999).

Danes (1994) suggested that speech events can be characterised through the exploration of experiencing language and text processes. In his account, the linguistic aspect of emotions is the most obvious form of users’ involvement in discourse (Danes, 1994, p. 256-262). According to this line of thinking, Russian communication research promotes the exploration of communicative emotional situations – to wit: real (as a part of the everyday life) or fictional (as a part of the discourse world) situations of interaction that involve participants’ emotional experiences in terms of discourse processes (Shakhovsky, 2008, p. 129-133; Shakhovsky, 2018). Previously, many studies inspected communicative situations, in which a speaker experiences emotions and expresses them through discursive means. Such studies established the model of the emotive language system that reproduces emotional experiences, attitudes, and interrelations (Alba-Juez & Larina, 2018; Foolen, 2012; Majid, 2012; Shakhovsky, 2019; Volkova, 2015). Some of them, including Danes (1994) and Volkova (2015), noted that expression of emotions could influence recipient’s processing and evoke emotional responses.

Regarding this aspect, the emotion-evocative communicative situation can be highlighted as covering every emotional response which arises in the recipient’s processing and ranges from a simple affective reaction to a complex emotional experience (see Burdelski, 2020; Katriel, 2015; Koschut et al., 2017). This kind of situation provides the possible emotional impact due to text characteristics, settings of the context, and the recipient’s personality (experience, expectations, goals, knowledge, interests, preferences, and others) (Bohn-Gettler & Kaakinen, 2021; De Saussure & Wharton, 2020; Shakhovsky, 2018; Van Berkum, 2018; Wharton et al., 2021). Therefore, the emotion-evocative situation can involve any emotional responses elicited by multi-
level discursive patterns. As Shakhovsky (2008, p. 181) precisely pointed out, there will always be a recipient, for whom even a cooking recipe can be quite emotionally affecting. The probable model of emotion-evocative communication thus might be extremely broad. Specifically, Katriel (2015, p. 58) noticed that any discourse ‘calls forth some kind of emotional response – including indifference – on the part of listeners’.

However, back in the ancient literature, scholars discussed the strategic manner of provoking emotional responses in public communicative events, such as speaking in court or political debates (see Aristotle, 2018, p. 55-111; Quintilian, 1920, p. 8-27). Contemporary communication studies develop a similar approach to emotion-evocative communication and propose a strategic view of the recipient’s emotions. According to this view, emotion-evocative situations might be conceptualised, and the author (speaker) can predict the discourse processing and manage the recipient’s emotional processes through relevant discursive strategies (Shakhovsky, 2008, p. 219). For instance, Ozyumenko and Larina (2021) examine emotional impact as an entire manipulative strategy used in media discourse. Such strategies, in turn, are transformed into the outward expression (speech or text) as the discursive form of emotional arousal stimuli. In effect, the strategies merely enhance the potential emotional impact of the discourse but do not yet ensure the prospective emotional effect.

It is not an exaggeration to say that emotional interest, or curiosity, emerges as an essential variable in communicative events. Interest is a basic (innate and universal) emotion, that continually affects and organises cognitive processes (Izard, 2007; Silvia, 2006; Sung et al., 2016; Tikhomirova et al., 2021). Interest arises within ongoing activity and relates to (1) heightened motivation and attention, (2) feeling of enjoyment, (3) active engagement, and (4) usage of effortful cognitive strategies. Surely, interest is a great benefit to discourse processing. It motivates a reader to spend more time on the message and use more effective reader’s strategies, regulates reader’s attention, specifies reader’s appraisals of text content (Hidi, 2001; Schiefele, 2009, p. 209-213; Silvia, 2006, p. 66-73).

Because the text is generated with the discourse processing in mind, the author is always concerned with the recipient’s interest to some degree. In a sense, any communicative situation might be labelled as interest-evocative and examined from this perspective. Having said that, in some social fields, such as education or popularisation, the recipient’s interest is an important contextual condition for communicative practices to take place. It follows that such communicative practices serve as the space in which discourse structures conceptualise the ways of constructing the recipient’s interest.

3. STUDY AND RESULTS

3.1. Problem statement

It is generally accepted that interest is an important motivational variable in a variety of learning contexts, especially in learning from texts (Hidi, 2001; Schiefele, 2009; Silvia, 2006, p. 66-73; Wade, 2001). Therefore, many studies conducted in the framework of educational reading attempted to reveal external sources of interest. Schraw and Lehman (2001, p. 37) reviewed the works published by the beginning of the 21st century and grouped text-based sources into three categories: seductiveness (i.e., the importance and relevance of information), vividness (i.e., imagery, suspense, unexpectedness), and coherence (i.e., ease of comprehension, relevance, poor organisation). In his well-known review, Schiefele (2009) listed sources extensively tested by experts: surprisingness (or novelty), coherence, concreteness, vividness, and ease of comprehension. Silvia (2006, p. 82) suggested that most of the text-based factors can be integrated within his cognitive model, which includes two appraisal components – appraisals of novelty-complexity and appraisals of ability to understand.

Although the existing studies greatly influence the education design, only some of them deal with discursive strategies and textual arousal stimuli provoking the recipient’s interest (see Hidi & Bird, 1988; Shin et al., 2016; Ksenzenko & Mendzeritskaya, 2021). In particular, Lepper et al. (2021) claim that contemporary research into the relationship between text genre (i.e., content features, text structure, language style) and text-triggered interest should be extended. From this point of view, Odintsov (1984) argued that discourse linguistic structures play a pivotal role in popularisation, and the recipient’s interest is usually provoked by linguistic forms of the text.

The present study focuses on this aspect of the interest-evocative communication. It aims to illuminate the strategic use of language for increasing text-triggered interest. It has two parts: the first one conducts a linguistic investigation of textbooks; the second one tests possible emotional effects of text-based factors experimentally.
3.2. A linguistic investigation

3.2.1. Material

Following the sociopragmatic approach to emotions, the linguistic investigation posits an analysis of original textbooks as a space to conceptualise interest-evocative communication. Textbook authors increase text-triggered interest by using a wide range of different strategies (Piotrovskaya & Trushchelev, 2020b). This is especially appropriate to textbooks intended for 11–15-year-olds because it is the age period the need-motivational sphere and personal interests principally develop (Polivanova, 2012, p. 1563; Vygotsky, 1984, p. 6-40). In this respect, the present investigation turns to expository texts from contemporary Russian school textbooks for grades 7–9 on Biology, Physics, History, Geography, and Social Science (more than 2,000,000 tokens).

3.2.2. Methodology

The pragmalinguistic investigation of emotions entails a multidimensional context-oriented analysis to capture a lot of discursive variables (Alba-Juez, 2021; Alba-Juez & Mackenzie, 2019; De Saussure & Wharton, 2020). Turning to the strategic aspects of emotional impact, the linguistic investigation needs data about the functions of text components in the communicative situation, especially in achieving author’s goals, which might include the goal of provoking reader’s interest. In Dridze’s (1984, p. 62) account, the text is an integral communication tool and a functional system in which linguistic units implement the author’s goals. To analyse such a functional system, the usage-based position might be adopted (see Diessel, 2017). This position provides the functional methods of analysis with reference to the emergence of linguistic units in the discourse.

3.2.3. Results

The functional analysis of textbooks reveals that there are three main strategies explaining the use of language in interest-evocative situations: expression of dialogicity, concretisation, and manifestation of emotions.

3.2.3.1. Expression of dialogicity

Expression of dialogicity is related to linguistic resources designed to represent the writer-reader interaction (see Bondi, 2018; Makonen-Craig, 2014). In the written text, these resources display participants’ positions and communicative actions. They cover personal pronouns and personal forms of verbs, progressive tense markers, interrogative and imperative constructions, egocentric units (evaluative adjectives and adverbs, mood and modality units, emphatic and contrastive theme-rheme divisions), cognitive and speech verbs, vocatives, and units of colloquial language – elliptical constructions, emphatic word order, and colloquial words. Together, these items make up a well-studied language system of dialogicity and the discursive space of interaction between an author and prospective readers (see Hyland, 2014; Makonen-Craig, 2014).

Expression of dialogicity often underlies so-called dialogic and/or contextualising strategies, which position readers in the text. These strategies make the text more relevant to readers, activate the reader’s attention and enhance ease of comprehension (see Gelfman & Kholodnaya, 2019, p. 46; Omarova, 2005; Shin et al., 2016, p. 42).

In this sense, interrogative constructions play a leading role because they have a high frequency in textbooks. They often emerge as expository questions (see Sperber & Wilson, 2012, p. 223-226), as the following cases exemplify.

(1) Pochenu zhe na lyzhah muzhno idi po snegu ne provalivajas’? [Why is it possible to ski on the snow without falling through?]

(2) Mogut li sushchestvovat’ pravila na vse sluchai zhizni? [Can there be rules for all occasions?]

Here are questions whose answers authors deem relevant to prospective readers. Sperber and Wilson (2012, p. 222) regard that expository questions are used ‘to arouse the audience’s interest in an answer’. Gelfman and Kholodnaya (2019, p. 46) note a problem function of such questions because they display the need to seek information. Therefore, expository questions can reflect the constituent of reader’s interest – engagement with content. Also, expository questions can organise macrostructure making the text easier to comprehend. For instance, case (1) is located at the beginning of the paragraph about Pressure (Physics) and determines the content of the following passage.
Apart from that, the authors regularly provide the dialogic contextualisation and encode the context of the direct dialogic interaction. The following passages are cases in point.

(3) Mozhno privest'i mnogo podobnykh situatsii. Odnako ty, konechno, ponjal, chto rech' idiot o dolge. Dazhe primerno predstavil sebe, chto jeto takoe. [Many similar situations could be given. However, of course, you understand that we are talking about debt. You have a rough idea of what it is.]


The cases encode the dialogic interaction through personal pronouns ty [you] and my [we], modal and mood markers (konechno [of course], mozhno li [can], k sozhaleniju [unfortunately]), progressive tense markers, cognitive and speech verbs (ponjal [understand], predstavil sebe [have a rough idea], skazat’ [say]), and an interrogative construction. (The Russian cases also contain elliptical constructions in the third sentences with omitted grammatical you-subject.) The first case refers to reader’s processing: it encodes the reader’s cognitive actions and a moment of interaction (a progressive tense marker rech’ idiot [we are talking]). The next case reflects the dialogic interaction by means of a question-answer construction, which presents a typical part of the dialogue and appears as a progressive tense marker.

In other cases, dialogic contextualisation might appear as a ‘joint’ discussion, as in (5) below.

(5) Davaj porassuzhdaem. Janush Korchak, kak ty znaesh’, byl ne tol’ko pedagogom, no i direktorom doma sirot. Svoj obshhestvennyi (pedagogicheskii) dolg on ispolnjal chestno. No vot nastupil osobyj den’: ego ucheniki stali zhertvami nacional’noj nenavisti. Fashisty ne shhadili nikogo, dazhe detej. Kak dolzhn postupil v takoj situacii direktor shkoly, da i prosto normal’nyj, porjadchennyj chelovek? Ty skazhesh’: borot’sja so zlom. Bessporo, jeto edinstvenno priemlemyj dlja porjadchennogo cheloveka sposob dejstvija. No so zlom mozhno borot’sja po-raznomu. [Let’s discuss. Janusz Korczak, as you know, was not only a teacher, but also a principal of the orphanage. He performed his social (pedagogical) duty honestly. But here came a special day: his pupils became victims of ethnic hatred. The Nazis spared no one, not even the children. What should a school principal or just an ordinary decent person do in such a situation? You would say: they should fight evil. Undoubtedly, that is the only acceptable course of action for a decent person. But people can fight against evil in different ways.]

The passage starts with an imperative construction that is a direct call for a ‘joint’ discussion. Further, dialogicity means (in italic) encode and structure the process of discussion, which includes typical stages: an actualisation of reader’s knowledge (kak ty znaesh’ [as you know]), a problem statement (an expository question), an expression of a reader’s guess (ty skazhesh’ [you would say]), and an elaboration of the guess (Bessporo... No... [Undoubtedly... But...]).

3.2.3.2. Concretisation

Concretisation provides a reference to concrete things or events and encodes fictional situations of visual perception (Odintsov, 1984, p. 25; Piotrovskaya & Trushchelev, 2018). Hence, the linguistic means of concretisation are defined by their referential functions. First of all, they are comprised of so-called concrete language units, or concrete words referring to concrete objects (Sadoski & Paivio, 2013). There are three main groups of concrete words: concrete nouns referring to physical things, concrete adjectives referring to observable qualities, and concrete verbs referring to literal actions. Moreover, linguistic means of concretisation are associated with units that narrow down the referential domain of the discourse and convey the perceptual meaning. These means might involve tense–aspect–mood markers (e.g., perceptual verbs, the perfective focus of action verbs), syntactic modifiers (e.g., relative clauses; participial constructions; modifying nouns, adjectives, and adverbs), markers of actual countability, and locative or temporal deictic markers.

According to psychological studies, concretisation benefits interest-evocative communication by making the text more vivid, dynamic, imaginative, and comprehensible (Hidi & Baird, 1988; Gelfman & Kholodenaya, 2019, p. 47; Sadoski & Paivio, 2013, p. 115-132; Wade, 2001).

In popular science discourse, concretisation completely determines linguistic form and largely affects writing styles (Odintsov, 1984, p. 25-48). In contrast, textbooks incorporate stronger characteristics of the academic style, and concretisation merely provides the discourse elaboration of explanations, scenes, actions and characters.
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Later, we will discuss the concretisation of descriptive texts the experimental investigation involves. But now let us turn to a passage from a historical text.

(6) Półtora mesjaca dilias’ bezuspeshnaja osada. Togda bylo resheno proryt’ podkop pod krepostnye ste- nы. Sdelali dva podzemnyh hoda i vkatili tuda 48 bochek s porohom. Podozhgli fitili, a na bochkah postavili gorjashchie svechi. Odnovremenno takuju zhe svechu zazhgli podle carkogo shtrata. Jeto byl znak — sgorit svecha, i tootchias razdastisja vzryv. Svecha sgorela, no vzryva v podzemel’ne proizoshlo. V jarosti Ivan prikazal rubit’ golovy masteram, delashkim podkop. Vot tut-to i grijanul’ moshhnejshij vzryv. [The unsuccessful siege lasted a month and a half. Then it was decided to dig a tunnel under the fortress walls. Two underground tunnels were made and 48 barrels of gunpowder were rolled in. Wicks were lit and burning candles were set on the barrels. Simultaneously, the same candle was lit near the king’s tent. It was a sign—the candle would burn, and immediately an explosion would occur. The candle burned out, but there was no explosion in the tunnels. In a rage, Ivan ordered the heads of the masters to be cut off. It was then that a powerful explosion burst out.]

There are a lot of concrete words used to present subjects (Ivan [Ivan], svecha [candle], and others), objects (bochek [barrels], hoda [tunnels], and others), predicates (zazhgli [lit], prikazal rubit’ [ordered to cut off], and others), attributes (gorjashchie [burning], moshhnejshij [powerful], and others), and circumstances (na bochkah [on the barrels], podle carkogo shtrata [near the king’s tent], and others). The case also employs a perceptual verb (razdastisja [thunder]), action verbs with perfective focus (in italic), locative and temporal deictic markers (na bochkah [on the barrels], tootchias [immediately], and others), markers of actual countability (numerals and matched plural noun forms).

Together, linguistic means of concretisation allow the author to elaborate on the narrative structure of the discourse and represent in-depth settings of events, a gradual development of the plot and narrative perspectives that capture a point of view of the Ivan character. This, in turn, contributes to the vividness, unexpectedness and dynamism of the historical text.

Regarding non-historical texts, it is important to draw attention to a common manner of concretisation—an exemplary-explanatory strategy. For instance, the following cases are taken from the chapters about Entrepreneurship (Social Sciences) and Motion (Physics).

(7) Predstav’te sebe, chto vy reshili organizovat’ svoe delo. Naprimer, vy uvelekaetes’ rok-muzykjoj, horocho razbiraetes’ v komp’juterah ili uneete shit’ i hotite otkryt’ svoju masterskiju ili atel’e ili sozdat’ muzykal’nuju gruppu. [Imagine that you have decided to start your own business. For example, you are fascinated by rock music, or you are good with computers, or you know how to sew. And you want to open your own workshop, or atelier, or create a music band.]

(8) Dvizhenie tel my nabljudаем povsju: pluyvat’ oblaka, kachajutsja vetki derev’ev, padajut’ snezhinki, leit samoljotj i t. d. Kogda my govorim o dvizhenii tela, to vsegda imeem v vidu, chto ono peremeshshaetsja ot- nositel’no drugih tel. [We see the motion of bodies everywhere: clouds are floating, tree branches are swaying, snowflakes are falling, an airplane is flying, etc. When we talk about the motion of a body, we always mean that it moves relative to other bodies.]
This passage is the beginning of a text about contact electrification (Physics). It gives an explanation from the perspective of people from ancient civilisations, who did not know about electrification (as prospective readers may not know either). The perspectival interpretation is carried out by a reference to perceptual activity. The core of the first clause expresses a subject and process of perception (ljudi zametili [people described]); the second clause details the perspective through a participial construction referring to an observable attribute (potartyj o shrest’ [rubbed on wool]) and concrete words referring to physical things (solominki, pushinki, vorsinki meha [straw, fluff, fleeces of fur]). The new perspective improves the imagery of the text and elaborates discourse in unusual ways.

It is also important to note that concretisation can provide so-called seductive details, interesting but irrelevant information that is not necessary to achieve educational goals (see Mayer, 2018). For example, the following case is taken from a textbook on Biology.

(10) Vazhnjejshimi svojstvami kostej cheloveka javljajutsja: tvjordost’, prochnost’ i jelastichnost’; koto-rye obusloveny osobennostjami ih sostava i stroenija. Tvjordost’ kostej priblizhaetsja k stali! Ne sluchajno nashi predki ispol’zovali kostnyj material, poluchennyj ot zhivotnyh, dlja izgotovlenija prostejshijh orudij truda, nakonechnikov stel i garpunov. [The most important properties of human bones are hardness, strength, and elasticity, which are due to the features of their ingredients and structure. Bones have a similar hardness to steel! It is no coincidence that our ancestors used animals’ bones for manufacturing the simplest labour tools, arrowheads, and harpoons.]

The passage conveys a fascinating fact about bones (in italics). Learners do not need to know this fact in the course on Biology, but the fact makes the text more interesting although it can destroy coherence.

3.2.3.3. Manifestation of emotions

Manifestation of emotions has two sides, emotion talk and emotional talk (Abu-Lughod & Lutz, 1990; Alba-Juez & Larina, 2018; Burdelski, 2020; Katriel, ‘Manifestation of emotions has two sides, emotion talk and emotional talk. Emotion talk transmits information about emotional experiences through descriptive linguistic forms’ 2015; Shakhovsky, 2008, p. 53-126). Emotion talk transmits information about emotional experiences through descriptive linguistic forms. In textbooks, emotion talk is a form of concretisation that encodes emotionally laden events. For instance, case (6) above employs the emotion term v jarosti [in a rage] to encode the emotional state of the Ivan character. In the case below, emotion talk transmits a description of emotional behaviour and involves concrete words (presenting a subject, predicates, and modifiers), locative markers, and emotive direct speech.

(11) Arhimed vyprygnul iz svoej vanny i golym pobezhal po ulitsam goroda s krikom ‘Eureka!’ [Arhimedes leaped out of the bath and ran naked through the city streets shouting ‘Eureka!’]

As is shown in cases (6) and (11), emotion talk provides a reference to the subject of an emotional experience (e.g., the character Ivan or Arhimedes) and loads texts with various emotional perspectives. Hence, like concretisation, it enhances the vividness of the text.

Emotional talk is associated with the interpersonal function of language and implies the first-person usage of emotive units, that communicate the speaker’s emotional attitudes or states. In textbooks, emotional talk relates to the evaluative sides of dialogicity. For instance, case (4) above includes the emotive marker k sozhaleniju [unfortunately], which expresses an author’s emotionally evaluative attitude to the content of the clause. In other cases, emotional talk frequently contains an emotional experience of surprise. In this respect, authors often use exclamatory sentences that underline the emotional impact of the content, such as in case (10) above or case (12) below.

(12) A v 20-m veke vyjasnilos’, chto dazhe ogromnaja Galaktika — jeto eshhjo daleko ne vsja Vseleennaja! [In the 20th century, it turned out that even an enormous Galaxy is not the whole Universe!

In a similar function, authors also use noun phrases, including modifying emotive adjectives (e.g., udvivtel’noe otkrytie [an amazing discovery], ljubopyt- noe javienie [a curious phenomenon]). In addition, the emotive markers might play a part in dialogic contextualisation.
(13) A chto chelovek sotvoril s zhivotnym mirom! Vot, naprimer, videl li ty kogda-nibud’ morskuju korovu? Ne videl. [And what Man has done to the Animal-World! For example, have you ever seen a sea cow? No, you haven’t.]

In this case, for example, the question-answer complex is accompanied by an exclamatory sentence. (The Russian case also contains emphatic words order in the second sentence and an elliptical construction in the third sentence with an omitted grammatical you-subject.)

3.3. An experimental investigation
3.3.1. Material

The experimental investigation has sought to test only the emotional impact of linguistic-based factors and to minimise the impact of content properties. That is why we have selected thematically similar texts. They include four descriptive texts about the natural world from 7th grade Geography textbooks. These texts differed in the degree of potential emotional (interest-provoking) impact. To assess this degree, we considered only the quantitative factor.

The characteristic passages from the texts are presented in Appendix A. The passages are given both in the original and in English, and the linguistic means used to increase text-triggered interest are shown in italics.

Text 1 (218 tokens) describes the natural regions and the organic world of Eurasia and does not include linguistic means for increasing text-triggered interest. We rated Text 1 as a text of the zero potential emotional impact.

Text 2 (210 tokens) describes the Arctic Ocean and includes some dialogic means – emphatic and contrastive theme-rheme divisions and evaluative units. But it does not refer to a reader and reflects neither a dialogic interaction nor a situation of visual perception. Given this fact, we rated Text 2 as a text of low potential emotional impact.

Text 3 (261 tokens) describes the South American internal waters (Amazon River, Iguazu, and others). It includes numerous means to narrow the referential domain and encode a perceptual situation: modifying nouns and adjectives, relative clauses, locative deictic markers, and perceptual verbs. It also contains emotive and evaluative markers to express subjective attitudes. Because of the orientation towards the subjective perspectives, we rated Text 3 as a text of medium potential emotional impact.

Text 4 (310 tokens) describes the oceanic zones and includes the largest amount of linguistic means that increase text-triggered interest. Means of dialogicity and concretisation provide a description of a walk on the bottom of the ocean. The text employs personal pronouns and personal forms of verbs to position the reader as the participant and spectator in the discourse world. For elaboration, it employs concrete words, progressive tense markers, perceptual verbs, and locative deictic markers. Also, it encodes a direct dialogic interaction between the author and prospective readers through a question-answer complex, exclamatory sentences, evaluative markers, and colloquial units. We rated Text 4 as a text of high potential emotional impact.

3.3.2. Procedure, methods, and data analysis

The participants were 40 schoolchildren (in the 7th year of school, with an average age of 13) and 25 university students at the Geography faculty (their average age was 18). Each participant was presented with all four texts. After reading each text, a participant rated its qualities on a 5-point bipolar scales where 3 was designated as ‘neutral’. The schoolchildren rated four qualities: (a) interestingness, 1 (boring) to 5 (interesting); (b) novelty, 1 (familiar) to 5 (novel); (c) complexity, 1 (easy) to 5 (complex); (d) comprehensibility, 1 (incomprehensible) to 5 (comprehensible). The items (b) – (d) represent appraisal components of interest. The university students rated just one quality – interestingness. We assumed that the university students must have good knowledge about the school course of geography and understand texts from textbooks.

To establish the validity of the experimental data, the reliabilities of the ratings were assessed first. Reliability coefficients Cronbach’s alpha for the ratings were as follows: interestingness = .81 and .72, novelty = .79, complexity = .77, and comprehensibility = .77. These values indicate a high degree of the reliability of composite measurements. Next, to select the relevant statistical methods of analysis, the normality of distribution was tested. The distribution of the interestingness ratings failed the Shapiro-Wilk test of normality (.897, .817, .844, and .820; p ≤ 0.01). For this reason, the non-parametric tests of difference were applied for data analysis. They incorporate the chi-square test ($\chi^2$), binomial test ($m$), the Wilcoxon test ($T$), the Friedman test ($F$), and the Spearman’s rank correlation ($r$). The non-parametric descriptive statistics and correlation for text ratings are presented in Table 1.
### Table 1
**Median, quartile deviations, and correlation for text ratings**

<table>
<thead>
<tr>
<th>RATINGS FOR EACH TEXT</th>
<th>MEDIAN</th>
<th>QUARTILE DEVIATIONS</th>
<th>CORRELATION WITH INTERESTINGNESS ($R_s$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Text 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interestingness</td>
<td>3 (3)</td>
<td>0,75 (0,5)</td>
<td></td>
</tr>
<tr>
<td>Complexity</td>
<td>2</td>
<td>1</td>
<td>-0,25</td>
</tr>
<tr>
<td>Comprehensibility</td>
<td>4</td>
<td>1</td>
<td>0,50*</td>
</tr>
<tr>
<td><strong>Text 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interestingness</td>
<td>4 (4)</td>
<td>0,625 (1)</td>
<td></td>
</tr>
<tr>
<td>Complexity</td>
<td>2</td>
<td>1</td>
<td>-0,05</td>
</tr>
<tr>
<td>Comprehensibility</td>
<td>5</td>
<td>0,5</td>
<td>0,15</td>
</tr>
<tr>
<td><strong>Text 3</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interestingness</td>
<td>4 (4)</td>
<td>1 (1)</td>
<td></td>
</tr>
<tr>
<td>Complexity</td>
<td>2</td>
<td>1</td>
<td>-0,20</td>
</tr>
<tr>
<td>Comprehensibility</td>
<td>5</td>
<td>1</td>
<td>0,51*</td>
</tr>
<tr>
<td><strong>Text 4</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interestingness</td>
<td>4 (5)</td>
<td>1 (0,5)</td>
<td></td>
</tr>
<tr>
<td>Complexity</td>
<td>2</td>
<td>0,625</td>
<td>-0,30</td>
</tr>
<tr>
<td>Comprehensibility</td>
<td>4</td>
<td>1</td>
<td>0,39*</td>
</tr>
</tbody>
</table>

* = $p < 0.05$. The adults’ interestingness ratings are presented in parentheses.

### 3.3.3. Results

#### 3.3.3.1. Interestingness

The central tendency of the interestingness ratings appears as a median. The values of the median for the schoolchildren’s ratings are 3 for Text 1 and 4 for Text 2, Text 3, and Text 4. The values of the median for the students’ ratings are 3 for Text 1, 4 for Text 2 and Text 3, and 5 for Text 4.

The distribution of the two ratings groups [1 (boring), 2 (rather boring), 3 (neutral)] and [4 (rather interesting), 5 (interesting)] deviate significantly from a uniform distribution in four dimensions: most of the schoolchildren rated Text 2, Text 3, and Text 4 at 4 and 5 points ($x^2 = 9,06; 5,63; 7,26; p < 0,02$), and most of the students rated Text 4 at 4 and 5 points ($m = 20; p < 0,01$). In the other dimensions (schoolchildren’ ratings
‘It seems reasonable to presume that the ways of increasing text-triggered interest – expression of dialogicity, concretisation, and manifestation of emotions – is a foundation for different interest-evoking strategies. Up to now, there are no entire typologies of such strategies, or acknowledged measurements to classify them. In this context, linguistic-based factors stand out for their methodological suitability’

for Text 1, and students’ ratings for Text 1, Text 2, Text 3), the distribution of the ratings groups does not deviate significantly from a uniform distribution \( \chi^2 = 0.63; m = 14; 16; 17 \).

Comparing the related ratings of interestingness shows that ratings of both samples have differences within themselves (for schoolchildren \( F = 11,11; \ p < 0.02 \); for students \( F = 8,18; \ p < 0.04 \)). Comparing the matched pairs of the rankings shows that schoolchildren rated Text 2, Text 3, and Text 4 identically, but ratings for these texts differ significantly from the ratings for Text 1 (\( T = 61.5; 45; 22; \ p < 0.01 \)). The students’ related ratings differ significantly only between Text 1 and Text 4 (\( T = 30; \ p < 0.01 \)).

3.3.3.2. Interestingness and the other ratings

Comparing the related ratings of novelty, complexity, and comprehensibility does not show significant differences within themselves. The schoolchildren rated all the texts for these qualities identically (\( F = 1,15; 4,49; 7,66 \)). Comparing the interestingness and the other ratings shows significant positive correlations between the interestingness and the comprehensibility of Text 1, Text 3, and Text 4 (\( r = .50; .51; .39; \ p < 0.01 \)). However, the values are of a low magnitude, and correlation of the variables is also low.

4. DISCUSSION

The experimental investigation supports the results of the linguistic investigation.

In fact, Text 1 of the zero potential emotional impact was rated significantly lower than the other texts. The schoolchildren evaluated the potential emotional impact of other texts – Text 2, Text 3, and Text 4 – as more interesting. As is shown by the tests of difference, there are no changes in the levels of schoolchildren’s interest in these three texts. The students evaluated only Text 4, with the largest number of linguistic means used to increase text-triggered interest, as interesting. Participants’ interest is not determined by the appraisal components noted above – appraisals of novelty-complexity and appraisals of ability to understand. Moreover, schoolchildren’s ratings of novelty, complexity, and comprehensibility are the same for all the texts. Thus, the ratings of interestingness were determined by linguistic-based factors.

The results allow us to put forward two assumptions. First, the linguistic means, strategically used to provoke reader’s interest, benefit the interest-evocative communication. Sure, such means do not ensure the emotional response, but the entire lack of them significantly reduces the potential emotional impact by degrees. As to the students’ ratings, we may presume that the quantitative characteristics of linguistic means that contribute to text-triggered interest – a number and a variety of them – positively affect, prospective emotional responses.

Second, text-triggered interest can be increased not only by content characteristics, such as novelty, complexity, and comprehensibility. In contrast, it can be increased by the linguistic ways of encoding content in the discourse. For instance, it seems obvious to almost everyone that there is a great difference between an impersonal academic report on the oceanic zones and a vivid description of a walk on the ocean floor from a reader’s perspective. At the very least, this assumption might be relevant to educational communication as a part of the knowledge-building field (see Rose, 2020). In this field, the content of textbooks should be expectedly novel and complex for learners, and, hence, the contribution of these attributes to text-triggered interest is reduced.

It seems reasonable to presume that the ways of increasing text-triggered interest – expression of dialogicity, concretisation, and manifestation of emotions – is a foundation for different interest-evoking strategies. Up to now, there are no entire typologies of such strategies, or acknowledged measurements to classify them. In this context, linguistic-based factors stand out for their methodological suitability. On the one hand, the linguistic means indicated above can be treated as markers of interest-evoking strategies in expository texts. For instance, the units of dialogicity strongly correspond with contextualising strategies outlined by Shin et al. (2016). On the other hand, the linguistic means indicated above can be employed to explore specific
strategies. For instance, such attributes of interesting texts as character identification or activity level (see Hidi & Baird, 1988, p. 470) can be discussed in terms of concrete words and tense–aspect–mood markers. It is exceptionally urgent to conduct research into seductive details, that are identified with reference to their textual and contextual relevance.

The linguistic investigation demonstrates that the strategic ways of increasing text-triggered interest are dependent on the referential domain of the discourse and general text-design strategies (e.g., the exemplary-explanatory strategy). For instance, concretisation provides discourse elaboration, but does not affect the general academic style of the textbook. Also, concretisation can be different for historical and descriptive texts, and the means of dialogicity accompany concretisation merely in non-historical texts. Emotion talk requires the identification of the subject of emotional experiences, and emotional talk requires a reference to the emotional stimulus. It would be important in the follow-up research to take into account the text structure and expand this direction.

It is likely, the linguistic ways of increasing text-triggered interest might display a cognitive ‘picture’ of the recipient’s interest (see the discussion of emotional scenarios in Edwards, 1999 and affective practices in Wetherell, 2013). As Lepper et al. (2021) explain, text characteristics can serve as keys to interest. As an illustration, expository questions reflect a reader’s desire to receive more information about the content, and such desire is the most obvious facet of interest. The linguistic units of dialogicity and units with perceptual meaning locate readers in the text and display the other facet of interest – the active engagement in the learning process. Also, as shown above, many linguistic means used to achieve an emotional impact generally encode concrete and context-dependent information and, thereby, provoke a specific processing mode that actualises mental imagery (see Sadoski & Paivio, 2013, p. 42-66). This observation supports the study by Bornstein et al. (2020) that highlights the differential effects of concrete and abstract processing on emotional responses. In their account, concrete processing enhances the intensity of basic emotions (which, as stated above, includes interest). Further research may inspect and discuss this aspect.

Finally, it is impossible not to pay attention to how the linguistic ways of increasing interest affect the reader’s processing and comprehension. A recent experimental study by Piotrovskaya and Trushchelev (2019) dealt with the same materials (Text 1 – Text 4) and applied the keywords methods (participants wrote out keywords from the texts) to identify the features of the reader’s comprehension. The results demonstrate that Text 4 provokes a high degree of variability in reading comprehension. Therefore, we may assume that the accumulation of diverse interest-evoking strategies within the discourse can make the text less effective for learning. Follow-up research should clarify this assumption.

5. CONCLUSION
We have presented the sociopragmatic interpretation of recipient’s emotions as communicative variables. We have focused on interest-evocative situations of written communication in the context of learning from texts. After analysing expository texts from school textbooks, we have identified ways that the strategic use of language can increase text-triggered interest and verified them experimentally. The results suggest that linguistic means allow authors to present content in a variety of linguistic forms and, thereby, provoke the recipient’s interest. Furthermore, these linguistic-based factors can be applied by experts to detect and explore particular interest-evoking strategies. Also the linguistic-based factors could give more detailed guidance for educational practitioners.

ACKNOWLEDGEMENTS
We would like to sincerely thank the reviewers for their useful suggestions and recommendations.

Appendix A
A passage from Text 1 (the zero potential emotional impact)

Naibol’nee raznoobrazen organicheskij mir juzhnoj chastii Evrazii, gde v techenie desyatkov millionov let sohranilsja teplyj klimat. V centre i na severe materika rastitel’nyj i zhivotnyj mir bolee skudnyj i odnobraznyj. Prichina jetogo — ne tol’ko sovremennye usloviya. Ego obedinenie proishodilo v periody neodnokratnyh poholodanij i oledenennij, goroobrazovaniya i issushhenija klimata. [The organic world of the southern part of Eurasia where a warm climate has been preserved for tens of millions of years is the most diverse. In the centre and north of the continent, plant and animal life is poorer and more uniform. The reason for this is not only contemporary conditions. It was depleted during the repeated periods of cold and glaciation, mountain-building, and climate desiccation.]
A passage from Text 2 (the low potential emotional impact)

Jetot okean samyj malen’kij, samyj melkij i samyj holodnyj iz vseh okeanov. No zato imenny ego issledovaniya, imenny ego osvoenie potrebovali ot cheloveka naibol’shih usilii. Vody jetogo techenija tetrymi nazvat’ trudno, vedi’ ih temperatura ne podnimaetsja vyshhe +7°C.

[This ocean is the smallest, shallowest, and coldest of all the oceans. However, it was an exploration of and familiarisation with this ocean that took the greatest human effort. The waters of this stream can hardly be called warm because their temperature does not rise above +7°C.]

A passage from Text 3 (the medium potential emotional impact)

Vody Amazonki bogaty zhizn’ju. V tihy zavodjah i pritokah rastet kuivshinka viktoria-regija s plavajushhimi list’yami diametrom do 2 m. Sredi ryb naibolee izvestnye hishhnye piran’i, jelektricheskie ugr, akuly, promyslova-yja ryba piraruka dlinoj 4 m. V reke zhivut kajmany (vid krokodilov), a takzhe mlekopitajushhie — presnovod-nye del’tiny. Stoit li udivljat’sja, chto stol’ moguchaja i neobjatnaja reka porodila mnozhestvo legend i mifov, o kotoryh napisano mnogo interesnyh knig.

[The Amazon River is rich in life. In the silent backwaters and tributaries, water lily Victoria Regia with floating leaves up to 2 metres in diameter grows. Among the fish, the most well-known are predatory piraranhas, electric eels, sharks, and 4 metres long pirarucu trade fish. The river is inhabited by caimans (a species of crocodiles), and mammals, such as freshwater dolphins. Is it any wonder that such a mighty and immense river gave rise to many legends and myths, about which many interesting books have been written.]

A passage from Text 4 (the high potential emotional impact)


[Sunbeams cannot penetrate the water deeply. The deeper we dive, the darker it gets around us. Sunbeams pierce the first 20–30 metres of the water surface, but at greater depths we are enveloped in a bluish twilight, thickening as we descend. No wonder that the ocean is called the blue abyss. Almost full darkness sets in at a depth of about 200 metres. Here we have to turn on the flashlight, and what do we see? A stunning sight!]


Piotrovskaya, L. A., & Trushchelev, P. N. (2018). The training text concretisation as a way to evoke reader’s interest (nature description for examples). In N. B. Lezunova (Ed.), *Pechati i slovo Sankt-Peterburga* (Peterburgskie chteniya — 2018) (pp. 305-311). SPbGUPTD. (In Russian)


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