

Summarizing as a Means of Development of a Communicative Competence in Aviation Sphere

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Abstract. The article deals with a problem of such an activity as summary writing of foreign texts in a nonlinguistic university. Under the focus of the author's attention there are key transformation stages of the original text into the newly born one. The author analyses the most essential steps in summary writing based on the original professional text devoted to one of the aviation problems. The practical part is supplied with the system of exercises leading to development of a communicative competence among the cadets at aviation institute. Summary writing is considered as an effective means of working with foreign professional texts cultivating such a competence as a communicative one.

1. Introduction

To become a highly-qualified specialist in any professional sphere one should be able not only to read but to interpret and understand the original literature freely that will allow to discuss special themes in a professional field. A contemporary specialist must not only receive but handle information. So one of the directions of foreign language teaching in nonlinguistic universities is to develop communicative competence by means of perfecting skills in summarizing professional original texts and producing a new compressed one.

While cultivating the skills of summarizing foreign texts, students increase their level of communicative competence so it makes such kind of work highly productive and necessary not only with linguists but with non-linguists as well.

Unfortunately, non-linguists come across with difficulties while translating professional texts. However, summarizing is the way to cope with such kind of problems since it focuses its attention not only on a detailed text analysis but on interpreting the information coming from the text in the right way.

2. Actuality

One of the most important components of language learning is the ability to understand foreign texts from the professionally oriented sources. Thus the main purpose of such educational process is to perfect the skill of professional communication in a foreign language that will prepare students to take part in different kinds of scientific work and discussions. Reading special professional texts facilitates extracting the main information from foreign sources to use it in future occupation. So the role of informative reading during the educational process is growing.

According to the demands of the Department of Education a student should be able not simply to understand the content of a foreign text but to summarize it which shows the necessary level of communicative competence to solve social and communicative tasks in such spheres of his life as cultural, professional and scientific [1]. The author of the article considers summarizing as a means of development of communicative competence of a young specialist.

3. Summarizing

Summarizing or abstract writing refers to the Latin *reffere* which means to report, to inform and is considered to be a short narration of the original [2]. Abstract writing is one of speech activities which is believed to be between productive and reproductive kinds of speech. All the scientific and professionally oriented texts are subdivided into the primary and secondary texts. The primary texts present the source of the original information which is to be delivered in a foreign language. The secondary text presents the text about the text which has been formed as a result of perception, analysis and interpretation of the primary text to solve special corresponding tasks. The secondary texts serve as a means of storing, restructuring and perfecting the original information from the primary text. This is exactly what defines their significant role in teaching. By producing the secondary texts, students develop their individual skills to extract, analyze and code information.

Summary writing is an intellectual and creative process that includes comprehending, analyzing and restructuring of the original text involving such working stages like describing the text, extracting the most important information, compression and producing a brand new text.

The methodology of a foreign language teaching defines a foreign language communicative competence as “an ability and readiness of a person to communicate, a system the main elements of which are language user's skills in using syntax, morphology, phonology and the like, as well as social knowledge about how and when to use utterances appropriately” [3]. In other words, it is not possible to develop a foreign language communicative competence without learning all the elements of the system: social, cultural, linguistic skills, skills to comprehend and produce a foreign speech, ways of compensation the lack of a foreign language usage. All the elements provide readiness to communicate in a foreign language.

The content of social, cultural and background knowledge of a specialist depends on the level of his information culture and professional competence. Information culture can be defined as “a component of a person's general culture, of the society or its particular part that can manifest itself in all the possible ways such as receiving information, storing it, coding and decoding, processing this information and creating brand new one, its transmitting and practical usage” [4].

Rapid growth of technologies and science development nowadays, global extension of international links insist on constant interaction. A successful specialist must possess a high level of professionalism to be able to navigate quickly and properly in the world of technical and technological innovations both at home and abroad. One should be able to find, analyze, synthesize and process information kept in various sources not only in the native language but in the foreign one as well.

Based on the above we can suppose that while working with scientific, technical and other special sources of foreign information and literature, a specialist must understand not only the content of the texts but to be able to summarize them and produce new original ones.

The purpose of informational processing of the text is to extract useful and valuable information on a specific problem, to transfer this information in a shortened or detailed form depending on its practical value and the necessity of its employment. Summarizing is the best way to learn how to achieve this.

The essence of summarizing lies in ultimate compression of the information source size keeping its main details. According to psychology and psycholinguistics comprehension of the text while reading merges with its semantic compression and defining its meaningful key points. Meanwhile forming and recording the main details of the given text are at the heart of summarizing. Consequently, summarizing possesses a great teaching and monitoring potential [5].

Summarizing implies two kinds of activity linked with each other directly. They are teaching to read a foreign text with its complete understanding and teaching the main ways to compress the information from the original text. To do this different kinds of reading are used. For example, skim reading, scanning reading, reading for specific information and reading for details.

Analytical work over special texts is closely connected with teaching students to use forms of analytical and synthetic revision of the content of the text and the original language to form a secondary text which is a summary.

A great deal of attention is paid to the summary essence in present Methodology. A lot of researchers look upon a summary as a secondary text made up as a result of restructuring of the original one or as one of the variants of information structuring by means of compression [6]. However, a lot of students come across the problem of substitution a summary for either retelling or word for word translation of the original text during summarizing of foreign texts. So one of the tasks set to the teacher is to differentiate these activities clearly and precisely.

The main criteria of evaluating a summary is the criteria of semantic equivalence of the original and the final text after its notional compression [7]. Summarizing is closely connected with elimination extra information from the original so the informative value of the summarized text is significantly higher than that of the original. This peculiarity is the most important distinguished feature of a summary in comparison with a retelling [8]. It helps a reader or a listener to differentiate between the summary and the retelling.

Abstracting and generalizing are achieved by means of using the so-called key words and key phrases. An integral part of the key words is their nominativity, reproducibility (these words are not the result of a creative act from a referent but used as ready-made components of the text), invariability and impenetrability (new elements are not allowed to penetrate into the key phrases).

4. Material

The main characteristic of teaching to produce compressed texts while reading professionally oriented texts is objectification since the main task is to understand the author's ideas of a primary text exactly and to express them precisely and concisely when writing a secondary text. Any text is composed only to express definite thoughts as information, ideas and knowledge to interact with others during the process of communication in this or that sphere or a field of knowledge. Hence objectification of teaching to summarize foreign professionally oriented texts can be considered as the basic and sense-making component of an educational process [9].

Needless to say that the first problem a teacher comes across during an educational process is the problem which is connected with psychological attitude towards a foreign language (English in our case) among the students. Based on the above we can admit that texts for summarizing are usually chosen from those which are professional and are of great specialty interest for students. The texts are supplied with a group of exercises that are aimed at the development of the necessary skills for this or that professional sphere. Such texts provide deep students' involvement into the professional field and perfect their knowledge of a foreign language leading to increasing their level of motivation to learn the foreign language. The students become interested in receiving actual information from the primary original texts in foreign languages. While reading foreign language texts they also appeal to the professional knowledge from the literature in their native language as well. It means the course of study built on thematic and linguistic material on specialty stimulates a personality, brings positive emotions and activates interdisciplinary capabilities to learn a foreign language in a short period of time.

Proceeding from work experience with the cadets-interpreters, it can be assumed that it is highly productive to use English authentic texts for summarizing and such kinds of reading as scan reading, skim reading and reading for details. All the texts should be supplied with pre-text and post-text exercises. Pre-text exercises as well as grammar and vocabulary ones are aimed at cadet preparation to perceive the text. Post-text exercises develop such skills as perceiving a foreign text as a whole,

extracting the main information from the text and the skill to present it in a concise and precise manner.

Using authentic material facilitates cognitive motivation among the cadets since they learn some unknown facts from the present life of an English-speaking country and it stimulates their interest and cognitive activity. Besides, working over such texts allows to realize that they appeal to the source of information that a native speaker uses. In its turn this raises the practical value of the foreign language. Reading and then summarizing of the authentic and original articles requires not only the knowledge of the background, style of life and culture of an English speaking country but becomes the source of new valuable knowledge. For example, such sources as “The Aeronautical Journal”, “Professional Pilot”, “Air International”, that can be successfully used while teaching English at aviation institute, are an incredible source of modern aviation vocabulary, phrasal verbs, idiomatic expressions and cliché. Thus referring to professionally oriented texts for summarizing from the original sources allows not only to show the processes happening in the English speaking countries, but to broaden the students’ mind and as a result to develop and raise their communicative competence.

Since summarizing requires to understand different descriptions, graphics, charts of the primary texts, there is a necessity to translate texts correctly. So it is highly productive to combine the reading teaching methodology with translation teaching techniques as kinds of speech.

As summarizing is considered to be a rational means of decoding of the content of the text, the following exercises can be recommended while teaching to summarize. They are defining the key words and key sentences, defining the main idea of the text, producing the headings of the paragraphs, answering the questions that lead to generalize and summarize the text, simplifying the structure of complex and compound sentences, emphasizing the main idea of each paragraph, making up a logical plan of the text, dividing the text into logical parts such as introduction, the main body and conclusion. Such exercises as dividing the text into logical parts, their heading and making a plan, compressing the text by semantic, grammar and notional paraphrasing are recommended to be used as pre-text tasks.

5. Practical exercises

Let us now describe the algorithm of working with the summary. While teaching summarizing a teacher should rely on a “simple-to-complex” basis. Thus, to define the main idea of the text during the first working stage over the text scan and skim reading can be recommended. This idea is frequently put in the title of the text itself, though there are some exceptions so the readers have to find it themselves.

The following texts can be recommended to use for completing such a task. The texts given to cadets do not represent great difficulties for understanding so they can fulfill the task quite quickly.

1. The growing drone marketplace shows significant potential, with European demand suggestive of evaluation in excess of EUR 10 billion annually, in nominal terms, by 2035 and over EUR 15 billion annually by 2050. The impact of civil missions by (either for governments or for commercial businesses) is expected to generate the majority of this value. The other main sectors, defence and leisure, will continue contributing to this market place and remain the largest sources of value in the near-term.
2. The world’s first commercial cargo ship partially powered by a giant kite is setting sail from Germany to Venezuela. The designers of the MS Beluga Skysails say the computer-controlled kite, measuring 160 sq m (1,722 sq ft), could cut fuel consumption by as much as 20%. They also hope the state-of-the-art kite will help reduce carbon dioxide emissions, as tugs the ship.

In case the text is not titled, the cadets are offered to read the text twice to either give a heading themselves or to choose the best headline from the choices that reflects the main idea of the text. For example, the following text can be suggested to do this.

In the future pilots might wear their avionics rather than stare at the instrument panel. Google Glass holds early promise for such a transition.

From Google Glass to Garmin's new D2 pilot watch, we're beginning to get a preview of the trend toward wearable electronics that very well could transform the whole experience of how we fly in the future.

Some pilots have already started using Google Glass — a miniaturized computer that the wearer dons like a pair of eyeglasses — for a number of flight-related functions, including completing electronic checklists, viewing charts and maps, and calling up weather information.

The next step would be to employ technology that can sense the position of the wearer's head. This would allow a wearable head-mounted display to become an indispensable cockpit resource, permitting, for example, the traffic collision avoidance system to call out a target at 9 o'clock that the pilot could electronically highlight on the display by turning his head left. Linked with a full database of Jeppesen nav data or a ForeFlight subscription integrated into the flight management system, a head-mounted display could potentially take over where the iPad or Android tablet leaves off.

Choices:

- a) A tiny computer for pilots
- b) Wearable Avionics
- c) A cockpit of the future
- d) Nanotechnology materials for flying

Another type of exercises offers cadets to read the text which is not put into paragraphs. They are to divide it into paragraphs according to a logical structure and then to find the main idea either of the whole text or of every paragraph as a variant.

Afterwards comes reading for details during which a given text should be read once more to find its key words and sentences. The cadets are to tick the paragraphs which contain the main information that reveals the title of the text and its main idea. By defining the main idea in this paragraphs the cadets make up a logical plan of the text. Moreover, it is recommended to analyze new vocabulary and grammar that present some linguistic difficulties and to translate them to cope with comprehension challenge.

As an example let us analyze the following text.

The development of the civil drone industry is dependent on the ability of drones to operate in various areas of the airspace, especially at very low levels as below 150 metres. In aggregate, some 7 million consumer leisure drones are expected to be operating across Europe and a fleet of 400 000 is expected to be used for commercial and government missions in 2050. Commercial and professional users are expected to demand drones in both rural and urban settings. – The key words here are *drone* and *missions* since they are a topic of the discussion in the whole text. The key sentence is the first one.

Analyzing new vocabulary and grammar demands to compress minor and trivial information. This helps to learn the ways to compress the primary text which in its turn leads to forming and perfecting skills for summary writing. The following skills are nurtured:

- a skill to substitute subordinate clauses in complex sentences with the infinitive and participle clause or with the noun phrases;
- a skill to reveal all the complex verb forms, modal verbs and their equivalents;
- a skill to substitute complicated and compound adjectives with simple ones;
- a skill to use such kind of speech transformation like paraphrasing;
- a skill to build up sentences with homogeneous elements.

After the analysis of the primary text is done, the cadets can build up a logical plan of the original. Building up a logical plan facilitates nurturing of the skill to abstract and generalize separate facts into a logical statement. It is highly productive to offer the cadets the following types of exercises

- make up a question to every paragraph of the text;
- express the content of every paragraph in one sentence;
- unite several sentences in every paragraph in one;
- make up a question the answer to which is the primary text.

Judging by specific character of teaching compression of a foreign text at a non-linguistic university, it is practicable to recommend the following algorithm of making up a summary. The process of producing the summary can be divided into the following steps:

1. quick scanning of the text to learn the main idea of the text;
2. reading for details to look up unknown words through the dictionary and according to the context;
3. singling out the text key fragments that allows to follow the evolution of the main idea of the text either in the paragraph or in the group of paragraphs;
4. contextual analysis and grouping all the material into three groups according to its importance and significance. The first group includes the most valuable information, the second one comprises the information which is peripheral and the third group has the material which can be easily extracted from the text without a great loss for comprehension respectively;
5. grouping the material and writing the summary;
6. making up a short conclusion.

6. Summary algorithm

The following text sets an example of teaching summary writing to cadets-interpreters of aviation institute.

Read the text. Find its main idea, key words and key phrases. Make up a logical plan in the form of the questions. Present a summary of the text in English and in Russian.

Modern technologies in aviation

Today one can't overestimate the role of aviation in the whole world. The volume of the world's aircraft construction market accounts for 155 billion dollars. According to Oxford Economics, approximately 50 million jobs and 3.6 trillion dollars of the world's GDP will depend on general aviation by 2026. In this case technological advancements are going to be very important in the future. Here are the top three trends that we think have a profound impact on the modern aviation industry.

As aviation is the fastest growing cause of emissions (flying causes 3.5% of global CO₂ emissions will jump to more than 15% by 2050) engineers are thinking about the idea of green flight. In this case we should consider solar planes which are very promising, though they will need to be greatly improved before commercial flight becomes an option. Another advancement in green aviation is electric crafts. For example, Sikorsky Aircraft has recently revealed its Firefly helicopter, an all-electric aircraft. Like solar planes, the Firefly features a high-capacity battery to store energy in-flight. Electric crafts inherently require less energy, since they lack the many extra moving parts required to use fuel. The second trend is drone flight. Today, unmanned aircraft are commonly used for war operations in many countries. But as drone planes grow more capable of performing complex tasks and carrying passengers, unmanned commercial flight seems to be on the horizon. One particularly promising non-combat application of unmanned aircraft is search and rescue. A team of researchers at Brigham Young University has recently revamped a cheap propeller-driven plane with computerized maps and cameras that determine the locations of lost hikers. The third trendiest topic in aviation is futuristic design and innovation. A prime example is Airbus' 2030 Concept Plane. Conceptual components include self-cleaning cabins, smart seats that form to passengers' bodies, and see-through walls, floors and ceilings. Engineers even imagine holographic projections that could turn the cabin into a home office or Zen garden.

All of these technologies might provide the keys to safer, greener and more comfortable air travel [10].

1. While scanning and skim reading the main idea is found – *Green flight is the future of aviation.*
2. Reading for details allowed to work out the following key words and phrases: modern aviation, top trends, green flight, solar planes, electric crafts, drone, perform tasks, search and rescue, futuristic design, technologies, comfortable travel.
3. To make up a logical plan of the primary text the following questions might be offered:

- What are the modern trends in aviation industry today?
 - What is the concept of the green flight?
 - What do electric crafts bring to aviation?
 - What is the most promising non-combat application of unmanned aircraft?
 - What does futuristic design provide?
4. Having finished working over the content and linguistic structures of the primary text, the cadets are tasked with making up an individual variant of the summary, which is presented at the lesson and marked by the teacher.

Consequently, working over the content, compression of the primary vocabulary and grammar structures and the text, simplification of the original foreign texts with the help of introduction and usage of the frequently used vocabulary, excluding the most complicated grammar structures provide employing a “simple-to-complex” basis, which leads to a gradual growth of linguistic difficulties with the cadets. In its case it facilitates development of such a skill as reading the text in the original and forms positive motivation for future mastering of a foreign language.

7. Conclusion

In conclusion it should be mentioned that such activity as summary writing teaches the cadets to think over the content of the texts logically and in a creative way. It teaches them to evaluate the content of the text, to define its main idea shortly, to express their own attitude to the information given in the text. All in all, it develops and perfects foreign language communicative competence of a cadet-interpreter.

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