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# Developing Soft Skills in Veterinary Students in the ESP Class: Teaching Approaches and Strategies

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***Abstract*— The paper explores the efficiency of visual education approaches (the use of visual communication tools, full-spectrum visual learning, critical thinking approach, active and performance-based learning) infusing into the content instruction in the ESP class at the Omsk State Agrarian University. The five instructional strategies were used to understand the impact of visuals upon visual thinking abilities: 1) "reading circles" strategy; 2) concept mapping; 3) visual thinking activities; 4) storytelling; 5) making presentations. The improvement in the visual thinking abilities in veterinary students doing the ESP course was assessed by the methods of pretesting, end-course students' performance and direct observation in class. The study produced several findings: 1. There was a positive change in visual thinking skills after the treatment; 2. The notable improvement of students' visual learning abilities and communication skills has been achieved due to the "Reading circles" strategy; 3. The growth of visual evaluation abilities is observed in students with high cognitive capacities and rather good communication skills; 4. With concept mapping technology, students are better visual and oral communicators; 5. Though there is an improvement in visual thinking abilities in students, still there is the need for more development in critical engagement with the visual.**

***Keywords—veterinary student, higher education, visual education, visual thinking, critical thinking, communication skills.***

## I. INTRODUCTION

In today's quickly-changing world, professionals are required to possess a range of soft skills which can help them to constantly innovate and adapt to new standards and requirements in the workplace. The universities introduce soft skills components and integrate them into syllabus. In the veterinary carrier, along with specific skills, veterinarians need to have communicative competence, critical thinking, visual thinking, team working, ICT skills, social intelligence, intercultural abilities [1,2]. Stand-alone subjects provide students with opportunities to develop soft skills on a formal base. These courses include English, History, Philosophy and others. Teachers should be creative in designing their teaching modules so as to integrate the relevant skills.

At the Omsk State Agrarian University (OmSAU), much research has been done on the problem of developing soft skills in the EFL class. Different aspects of teaching communicative competence and critical thinking skills in the EFL class have been developed in the context of creative writing [3], extracurricular activities [4]. Research work has also been done on the development of English communication skills in the veterinary teaching staff at OmSAU [5]. However, visual thinking skills have never been in the focus of study of EFL teachers at OmSAU.

The age of Internet technologies, the era of still and moving images highlighted a very important soft skill such as visual thinking. At the present time visual thinking skills are in the focus of educators' attention and have turned into an additional teaching objective in the classroom. It has brought about a new understanding of the role of the visual in language teaching. Images can be used as a meaningful medium of thinking and communication in the teaching-learning process in the English classroom [6]. The visual thinking approach to language teaching may help teachers to instruct the language course more creatively and students become more engaged in oral and visual communication and achieve better English language mastery [7].

Research has been done in relation to EFL programmes supporting improvement of students' visual abilities through language learning, as well as their speaking and writing skills through the use of visual strategies [8,9,10,11,6,7]. However, the research works on the problem of teaching visual thinking in the ESP class are limited. There are some certain aspects that have been investigated by researchers. M. Chalikandy stressed that "ESP materials should be visual-based in order to improve learners visual literacy like increasing the power of observation and reporting what they observe [12]. D. Milosevic explored deeply the impact of video resources on cognitive capacities (grasping and memorizing skills) and development of vocabulary skills in the ESP class [13]. There are still questions about the concept of visual thinking, visual education approaches and instructional strategies to teaching visual thinking in the ESP class.

Our present study aims to develop visual thinking in veterinary students in the ESP class.

## II. METHODOLOGY

The study of the literature on visual thinking reveals the complexity of the concept. The researchers have worked out the definitions of visual thinking as a group of skills or abilities which help in understanding and producing visual messages. These skills and abilities include Visualization, Critical Viewing, Visual Reasoning, Visual Discrimination, Visual Association, Visual Reconstruction, Constructing Meaning, Re-Constructing Meaning, Knowledge of Visual Vocabulary & Definitions, Knowledge of Visual Conventions

[14]. Having summarized the ideas about visual thinking, we come to the conclusion that it is a combination of three main abilities: 1) the ability to read and interpret visual statements; 2) the ability to write and create visual statements; 3) the ability to evaluate visual statements critically.

Following Seels's conceptual ideas about three theoretical constructs of visual literacy [15], we propose the model of visual thinking formed by the three components: visual learning, visual communication and visual evaluation. Visual learning is an ability to understand communication of a visual statement, which involves reading, decoding, interpreting the visual statement. Visual communication is an ability to express oneself with the visual. It involves producing, encoding and creating visual statements. Visual evaluation is an ability to think critically about the meaning of a visual statement and to evaluate the effectiveness of a visual as the means of communication.

These abilities need to be taught and assessed as learning outcomes together with communication skills in the language curriculum. Visual thinking abilities were assessed as they were demonstrated by students in a specific learning context in terms of the quality of a student's work or a performance of some kind (e.g., a PowerPoint presentation, a concept map, a visual-based discussion, etc.). The three standard levels have been determined: "unacceptable", "limited", "acceptable". The unacceptable level describes difficulties or lack of visual thinking abilities in students whereas the third level (acceptable) describes the characteristics of a fully competent-in-visual-thinking student.

When we chose the most effective instructional strategies for teaching visual thinking to veterinary students in the ESP class, we based on visual education approaches such as full-spectrum visual learning [16], active and performance-based learning, critical thinking approach [14] and the use of visual communication tools [17].

## III. Research procedure

Our research objectives were as follows:

*1)* To measure visual thinking abilities in the examined groups of students at the start of the ESP course;

*2)* To identify instructional strategies and methods to provide the most effective teaching of the visual thinking abilities in the ESP class;

*3)* To identify the improvement of visual thinking abilities in the examined groups of students at the end of the course.

The following research methods were used to map the students' improvement in the visual thinking abilities: direct observation, pedagogical diagnostics, pretesting and post-course student performance assessment.

The research was conducted during the 2nd semester in the academic year of 2017-2018. Research participants were 85 students majoring Veterinary Medicine at the Omsk State Agrarian University. The EFL teachers instructed a 72-hour theme-based English for Specific Purposes (ESP) course to veterinary students, which suggests teaching English with reference to veterinary industry.

In order to engage students in visual-based language learning and make the process student-centred, we chose 5 instructional strategies: 1) "reading circles" strategy; 2) concept mapping; 3) visual thinking activities; 4) storytelling; 5) making presentations. Now, we describe how we implemented the above instructional strategies to promote visual thinking in the classroom.

With regard to the visual learning ability, we chose a "reading circles" strategy. Since visual learning is addressed to the process of learning from pictures and media, we moved from text-based to image-based "reading". The students were divided into groups of 4 people and assumed designated roles with specified tasks. Successful discussions in groups required teacher's careful consideration to the group formation. It was important to place students with strong and weak language skills in the group and each member was equipped with a role and a task suitable to their language level. After the groups were formed, the teacher distributed a picture and role cards with a detailed explanation of the task among the members of the group. The pictures were chosen from different sources (websites, social networks, journals). The content of the pictures correlated with the topic under study. Performing the roles, students expressed their own ideas about the picture and asked other members of the group about their opinions.

Concept mapping was an effective strategy to help students express their ideas or demonstrate their knowledge of the topic visually, so this strategy focused mostly on students' visual communication abilities. With concept maps, students organized a large amount of information in an easy-to-read visual form. This strategy was very useful in class in many ways: 1) to classify and master topical vocabulary; 2) to organize information on the topic for oral presentation; 3) to summarize the main ideas of the text for further discussion. Using concept maps, students could make short oral summaries on the topic in class. During the course, students created concept maps on each topic, and then they served as a communicative stimulus for a speaking part of the end-term examination. Below you can see 2 examples of concept maps made by students on the topic "Food Preservation" (Fig. 1).


Fig. 1. Examples of students' concept maps

Storytelling as a strategy was a useful activity for developing visual thinking. We used Rory's Story Cubes (Original) to generate students' ideas. The academic group was divided into small groups of 3-4 people. The students shook dice and threw them. Every side of a cube had a picture so the students in one small group created their own stories using the pictures from 9 dice beginning with "Once upon a time a vet …". The students were offered a genre of their story (e.g. thriller, detective, fairy tale, mystery, etc.) as well. In the final part of the activity the students should present their written story on the list of paper, put it on the board and choose which story was the most interesting or intriguing. Images on the cubes and their combination supposed a strong element of surprise. This activity also helped to foster a spirit of group solidarity: the students worked together and didn't compete with each other.

The application of critical visual thinking activities helped students to interpret different meanings of the visual and evaluate the effectiveness of the visual as the means of communication in the ESP class. The main aim of these activities was to foster visual evaluation abilities in students. The teacher's role was to show a video with the veterinary content to students and organize further an after-watching guided discussion in class. Questions guiding the discussion followed the pattern: description – analysis of elements – creative interpretations – critical thinking. After watching the video, the teacher guided the discussion with encouraging provocative questions to raise various responses from students about the video. Possible questions: "Think about the details you saw in the video. Why are they shown in the video?" "What is the message of the video?" What personal relevance does it have to you, if any?"

By the end of the semester each student made a PowerPoint presentation about a domestic animal covering the main topics of the programme. Creating slides, students were supposed to use different elements, such as pictures, schemes, diagrams, symbols, colors, captions, notes, etc., to express the information visually in the well-organized way. This assignment aimed mostly at assessing students' visual communication and critical visual thinking abilities after the treatment. In the final class, students delivered their presentations to the group with their oral commentaries.

## IV. Results

The first diagnosis was carried out at the start of the ESP course: the students took VL test designed by EFL teachers. The purpose of the test was to check the level of the visual thinking abilities in students without any previous visual thinking training.

The results of the pretest revealed that most of the students naturally developed a limited level of visual learning (52%) and visual evaluation (44%) abilities, though there was a significant number of students (36%) who performed unacceptably in the visual evaluation task in pretesting. Surprisingly, 52% of the students showed poor visual communication ability when they were asked to present the information about a veterinarian profession in the visual form.

After the treatment, visual thinking progression was evaluated through students' performance at the end-term exam and PowerPoint presentations in the final class of Semester II.

The progression of the Visual Learning abilities is presented in Fig.2.

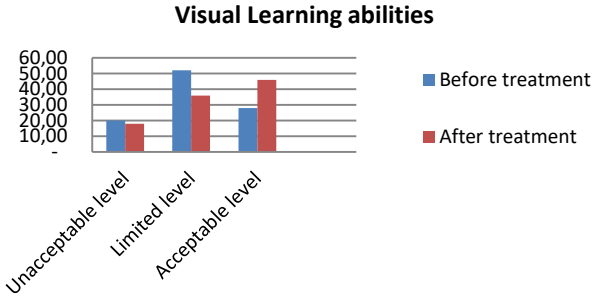


Fig. 2. Progression of the Visual Learning abilities at the end of the ESP course

The results indicate improvement in Visual Learning abilities: the number of students with acceptable level of visual learning skills has doubled by the end of the course. The number of students with unacceptable level remains almost the same. We can see the growth of visual learning abilities in those students who demonstrated a limited level at the start of the ESP course.

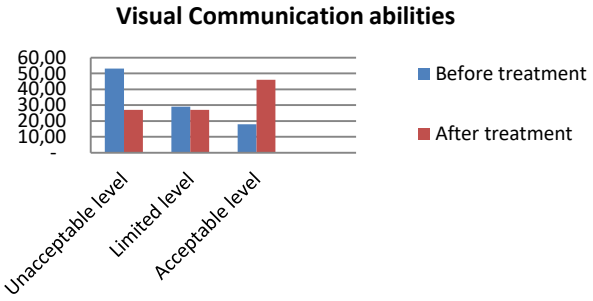


Fig. 3. Progression of the Visual Communication abilities at the end of the ESP course

The improvement of visual communication abilities is more considerable according to the results shown in Fig.3. At the start of the ESP course, we had 52% of students with visual communication abilities of an unacceptable level and the number of those students has halved after the treatment whereas the number of those who demonstrated acceptable level of visual communication abilities at the start has increased dramatically.

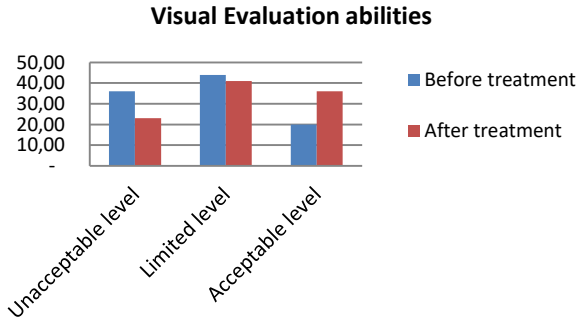


Fig. 4. Progression of the Visual Evaluation abilities at the end of the ESP course

The results shown in Fig.4 indicate the growth of visual evaluation abilities in students. Before the treatment, 36% of students possessed this ability at an unacceptable level. However, after the treatment, the number of these students has reduced significantly. At the same time, we can see a positive change in the number of students with acceptable visual evaluation abilities: from 20% to 36%.

## V. Discussion

The purpose of this study was to develop students' visual thinking skills in the ESP course. Our intention was to move away from "read-and-translate" approach in the direction of meaningful communication on profession-related topics with the use of the visual as a communicative stimulus. We achieved our purpose by infusing visual-based strategies ("reading circles" strategy; concept mapping; visual thinking activities; storytelling, making presentations) into the ESP content instruction.

The study produced several findings. First, at the start of the course, a big number of students revealed weaknesses in producing visual statements. It was really difficult for them to use different visual elements to express and organize ideas in the visual form though they were more successful in recognizing and describing details about the offered visual and understanding the subject matter of it.

Second, the notable improvement of students' visual learning abilities and communication skills has been achieved due to the "Reading circles" strategy. Performing their assigned roles, students learned to look narrowly at the visual, pay attention to different details, see the meaning of every element in the context and connect the meaning of each element with the meaning of the whole image. This strategy was especially effective with students of different levels of language proficiency.

Third, the growth of visual evaluation abilities is observed in students with high cognitive abilities and rather good communication skills. They benefited a lot from visual thinking activities in the form of video-based guided discussions in class. Confident English speakers enjoyed video-based discussions. However, we saw a little different situation with students with weaker language skills who were not active participants in discussions. The teachers had to prepare questions about the video targeting students of all language levels.

Fourth, we considered a storytelling the integration of content, cognition and communication. The use of this strategy allowed students to develop their visual and creative thinking as well as speaking, listening and writing skills. Work in small groups boosted weaker students' confidence as they were involved in collaborative activity and learned from each other. As the students were not limited in grammar and vocabulary, they expressed their ideas freely. Dice images encouraged their creativity. In addition, random image selection through throwing dice implemented an element of a strong surprise both for students and teachers.

Finally, a visual or a video were used to encourage visual learning and visual thinking and promote communication in class. Apart from visual communication abilities, concept-mapping and making presentations promoted creativity, visual thinking and supported oral communication. Concept maps helped students to organize and structure topical content, highlight main ideas, fix topical vocabulary. We noticed that students felt much more confident and performed much better in speaking if they were allowed to use their concept maps as a communicative stimulus.

## VI. Conclusion

The study has discussed concept ideas, approaches and efficient instructional strategies in relation to the development of visual thinking in veterinary students in the ESP classroom.

The findings support the methodology of the study. It is found out that if students are equipped with concept mapping technology, they could be better visual and oral communicators. Also, they are more organized in learning and confident in speaking. Making presentations, students developed their creativity and visual thinking apart from visual communication abilities. The "Reading circles" strategy proved to be the most effective in relation to visual learning and visual evaluation. Moreover, it was the most popular with the students. Although there was a positive change in visual thinking abilities in students, still there is the need for more development in critical engagement with the visual.

All in all, adopting 'reading circles' strategy, concept mapping, visual thinking activities, storytelling and making presentations to support visual thinking and communication in the ESP class also helped veterinary students to be more creative, organized, open-minded and sociable in the classroom settings.

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