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TÍTULO: Aumento de la motivación académica a través del Aprendizaje Integrado de Lenguaje y Contenido (CLIL) y las Tecnologías de la Información y las Comunicaciones mediadas por el enfoque constructivista.

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RESUMEN: El sistema educativo ruso está enfrentando una cierta transición de paradigmas educativos hacia un enfoque constructivista. El artículo presenta los resultados del estudio empírico de la definición y evaluación del grado de motivación académica de los estudiantes de Maestría en términos de CLIL y TIC: educación basada en un enfoque constructivista. Los motivos estudiados son comunicativos, de evitación, de prestigio, profesionales, de autorrealización creativa, educativos y sociales. El estudio mostró una serie de desafíos que los estudiantes de Maestría enfrentaron al desarrollar módulos CLIL en línea y la forma en que los siguientes desafíos influyeron en su motivación académica.

PALABRAS CLAVES: Aprendizaje Integrado de Lenguaje y Contenido (CLIL), enfoque constructivista, Tecnologías de la Información y la Comunicación (TIC), motivación académica.

TITLE: Increasing academic motivation through Integrated Language and Content Learning (CLIL) and Information and Communication Technologies mediated by the constructivist approach.

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ABSTRACT: The Russian educational system is facing a certain transition of educational paradigms towards constructivist approach. The article presents the results of the empirical study of defining and assessing the degree of Master students' academic motivation in terms of CLIL and ICT–education based on constructivist approach. The studied motives are communicative motives, avoidance motives, motives of prestige, professional motives, motives of creative self-realization, educational and social motives. The study displayed a number of challenges that Master students faced when developing on-line-based CLIL modules and the way the following challenges influenced their academic motivation.

KEY WORDS: Content and Language Integrated Learning (CLIL), constructivist approach, Information and Communication Technologies (ICT), academic motivation.

INTRODUCTION.

The core of every educational technology is a theoretical concept that is based on an educational theory or a complex of theories prevailing in the scientific society at a certain point of its development. Nowadays there is a certain transition of educational paradigms from behaviorism to constructivist approach. What is meant by constructivist approach?

The main idea of this educational philosophy suggests that it is impossible to supply a student with ready-to-use knowledge. A teacher can only create favorable educational conditions for a student's successful self-construction and self-development. According to this educational philosophy, a student's point of view is of primary importance. The process of searching the truth is more important than the truth itself. Such famous researches developed constructivist approach in terms of education.

Present day constructivism is a philosophy rather than an educational approach. Its didactic «tool kit» (methods, forms, training resources) has not yet been properly developed. As a result, practical implementation of constructivist approach causes a number of difficulties. Opponents consider constructivism to be a threat to didactics assuming that it causes chaos and spontaneity in the educational process.

We suppose designing and implementation of educational courses basing on constructivist approach are suitable for Master's degree programs. Traditionally bachelor students are taught within the principles of classic didactics based on behavioral approach. Legitimization of the educational process is the core idea of behavioral educational framework. This type of educational process organization has a number of advantages. It is suitable for bachelor students as it develops the skills based on knowledge and provides the process of education with order, manageability and certainty.

There can arise some problems when transferring constructivist theory into sustainable educational strategies and practice. The key element of successful constructivist approach is the ability «to investigate, experiment, construct, discuss and analyze» (Wang, Teo and Woo, 2009). This is the main problem of implementing the following educational approach into traditional educational framework.

In our point of view, Content and Language Integrated Learning (CLIL) is an educational strategy that provides an opportunity for implementing constructivist approach in education. According to D. Marsh, in Content and Language Integrated Learning subjects or some topics within these subjects are taught through a foreign language. It is a dual-focused approach that is aimed at simultaneous learning of content and a foreign language (Marsch, 2000).

Constructivism as a cognitive theory and a theory of knowledge development is a core element in CLIL as it explains the mechanisms of human comprehension and cognition that are vital in terms of understanding content and language integration. Constructivists believe human comprehension and cognition to be constructive processes that are organized and developed by an individual. A person can only comprehend and recognize information by connecting it with the available background knowledge available. The process of comprehension depends on personal experience of the world and linguistic knowledge. Clearly, the result of learning will be different in every particular case. Constructivists integrated human emotions into their theory. According to constructivist theory, emotions are constructive units influencing the processes of human comprehension and cognition and, as a result, personal understanding of the environment (Salekhova and Grigorieva, 2016).

Brown (Brown, 2012) assumes that creation of constructivist educational environment can become problematic but due to the integration of IT this process will be more successful. Wen and others (Wen, e al. 2004) underline high level of academic satisfaction and preference to constructivism-based Internet education among students.

Choshanov states that one of the leading principles of constructivism in terms of the process of education is the principle of motivation. According to this principle the students are integrated into the process of research and solving of meaningful problems that deal with real-life situations

(Choshanov, 2005). Curriculum content that students learn during CLIL lessons possesses high motivating potential as CLIL presumes dealing with this kind of real-life situations.

Institute of Philology and Intercultural communication of Kazan Federal University has been implementing a Master's programme for bilingual teacher education for 5 years. The future teachers are supposed to be experts in academic Russian and English.

CLIL is one of the innovative educational technologies that has been implemented during the course. There are such courses as «Content and Language Integrated Learning - CLIL» and «Information technologies in professional activities».

In reference to the above mentioned, the aim of this research is to define and assess the degree of Master students' motives in terms of CLIL and ICT–education based on constructivist approach. The following motives are communicative motives, avoidance motives, motives of prestige, professional motives, motives of creative self-realization, educational and social motives.

DEVELOPMENT.

Methodology.

During the course of «Content and Language Integrated Learning», Master students were supposed to develop an academic online-based resource (Pic.1) consisting of 4 modules.

The structure of every module was to meet a number of dual-focused requirements: *in terms of content and language learning* (content choice, warming-up activity development, vocabulary introduction, task creation aimed at developing all four types of language skills); *in terms of ICT usage* (embed authentic audio and video; develop and embed tests; use Learning Apps to create different tasks).

Every module is based on the following principles of constructivist approach and CLIL:

- 1) The usage of authentic materials (video, flash, web-quests, podcasts, etc.) possessing high motivating potential and matching the requirements of professional development;

- 2) The usage of scaffolding techniques aimed at minimizing cognitive and linguistic load;
- 3) Intensive collaboration between all the participants of the educational process and productive usage of a foreign language;
- 4) Highlighting cultural component in a subject content;
- 5) Development of High Order Thinking skills when learning a foreign language;
- 6) Sustainable and life-long learning that implies activating students' long-term memory (Grigorieva, 2016).

We analyzed 5 web-based platforms for constructing web-sites. They are used for designing a user-friendly and easy to navigate online-resource with the help of templates. Wix.com, Jimdo, Ucoz.ru, Umi.ru, Ukit.com provide free access to their content.

Having studied the potential of the above-mentioned online resources, we came to the following conclusions:

1. The majority of web-based platforms have intuitive interface that helps a user to create his/her web resource. So, there is no need to seek assistance of professional web-designers and IT-specialists as the user can take advantage of free templates.
2. Using templates facilitates the process of web-site creation for language teachers as almost all of them are not qualified enough to work with HTML.
3. Required teaching materials are always available and ready to use. It is possible to enrich and rearrange them by adding new content.
4. Creating a web-site is not time-consuming.
5. A user can adapt a web-site to a smartphone.

Basing on the analyses performed, Wix.com occurred to be the most suitable web platform for designing CLIL-based online resource. According to Wikipedia there were 85 million registered Wix.com users in 2016 (de Velazco, 2018).

The advantages of Wix.com are as follows:

- Special emphasis to «Education» category;
- Creation and removal of webpages;
- Creation of new menu items;
- Implementation of feedback forms;
- Implementation of Google Maps;
- Possibilities to use Flash and HTML-format;
- Possibilities of working with images and galleries from Instagram, Flickr and Tumblr;
- Synchronization with social networks (Twitter, Facebook, Google+);
- Embedding video and audio materials, etc.

Master students, majoring in «Education», developed their own CLIL-based online resources using all the opportunities provided by Wix.com. The main page of the web site contains all the modules of the project and provides a user-friendly navigation (Fig. 1). Figures 2 and 3 provide examples of listening and matching activities.

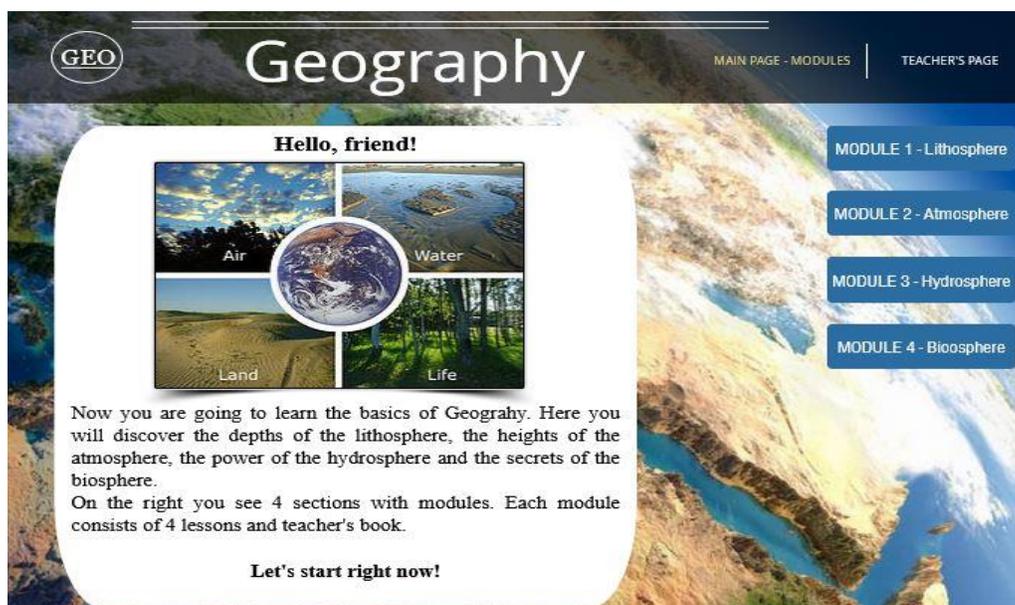


Fig.1 Main page (example).

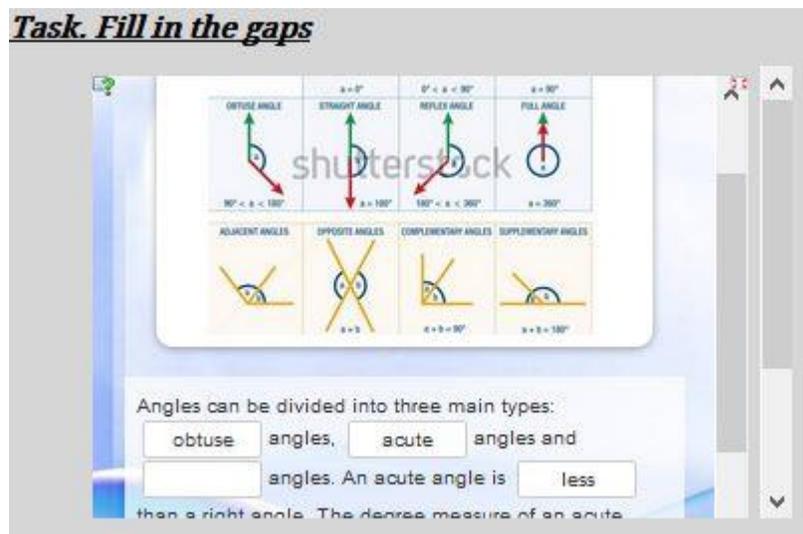


Figure 2. Task example (Learning Geometry in English).

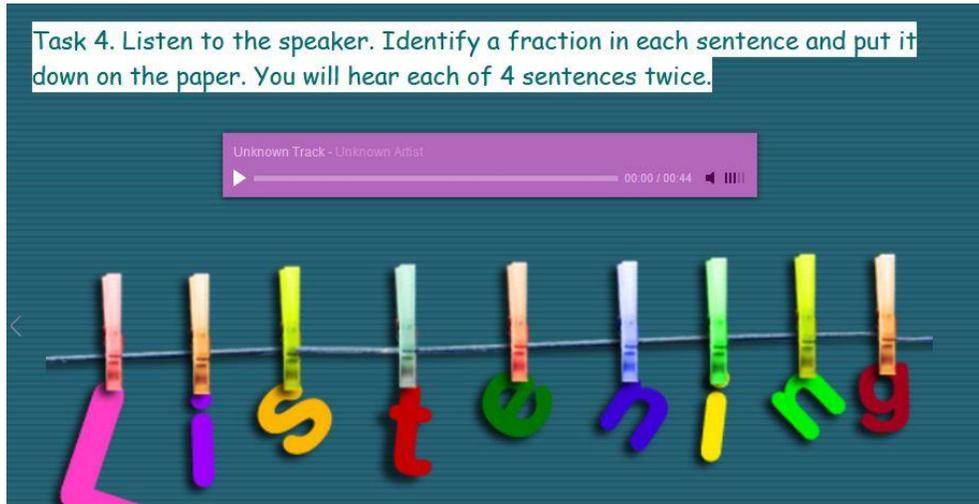


Figure 3. Listening task for «Bilingual English-Russian Learning Studio»

It is vital to point out that master students faced a number of problems when designing websites. Some students considered site design to be rather challenging, others had problems with CLIL lesson planning, especially the language component. For every online module a Teacher's page basing on 4C curriculum (Content, Cognition, Communication, Culture) was developed. It should be mentioned that Teacher's pages contain lesson plans including questions for warming-up activities, possible answers and additional information as well as approximate time required for different tasks (Fig. 4).

GEO **Geography** MAIN PAGE - MODULES | TEACHER'S PAGE

LESSON 1
STRUCTURE OF THE EARTH
CONTINENTS

Give VOCABULARY for each lesson in advance.
Let students look through VOCABULARY. Don't pay too much attention to the words. Students will appeal to them during making up exercises and reading.

1. Warm-up **5 mins**

1. List different objects that are made up of layers. Do most of the objects contain soft or hard centers?
(onion, cake, apple)

Show the class an apple or another round fruit. Tell them to think of it as the Earth. Explain that the outside of the Earth, the skin, is cool. Cut the fruit in half. Explain The Earth we live on has a skin like the apple. Under the skin the Earth is hot. Point to the centre. Explain The centre of the Earth is very, very, hot. This heat keeps the Earth under its skin hot all the time. Tell the class they are going to find out more about the heat inside the Earth.

2. What can you tell me about the internal structure of the Earth? (think about temperature, composition, state of matter)

3. In 1864, Jules Verne wrote "Journey to the center of the Earth". Have you ever read this book? What do you think is between the Earth's surface and its centre?
Journey to the Center of the Earth (Voyage au centre de la Terre) is an 1864 science fiction novel by Jules Verne. The story involves German professor Otto Lidenbrock who believes there are volcanic tubes going toward the centre of the Earth. He, his nephew Axel, and their guide Hans descend into the Icelandic volcano Snæfellsjökull.

Figure 4. Teacher's page.

The usage of web-based platform as a means of education enhances the efficiency of the educational process making it student-oriented. There is no doubt that the following types of work result in new forms of teacher-student interaction promoting cognitive skills and critical thinking of learners.

The survey conducted in the end of the academic year among master students was based on the questionnaire. It was aimed at defining and assessing the change in the degree of academic motivation of master students after their experience of developing online-based CLIL modules. Special attention was paid to assessing communicative motives, avoidance motives, motives of prestige, professional motives, motives of creative self-realization, educational and social motives (Badmaeva, 2004).

Discussion and results.

During the research we analyzed to what extent different components of academic motivation were highlighted among master students. The maximum number of scores for each component of academic motivation is five. Figure 5 illustrates the distribution of arithmetic average of academic motivation components after the final survey. The survey was conducted among 34 master students, majoring in «Education», after they took courses in «Information technologies in professional development» and «Content and Language Integrated Learning - CLIL».

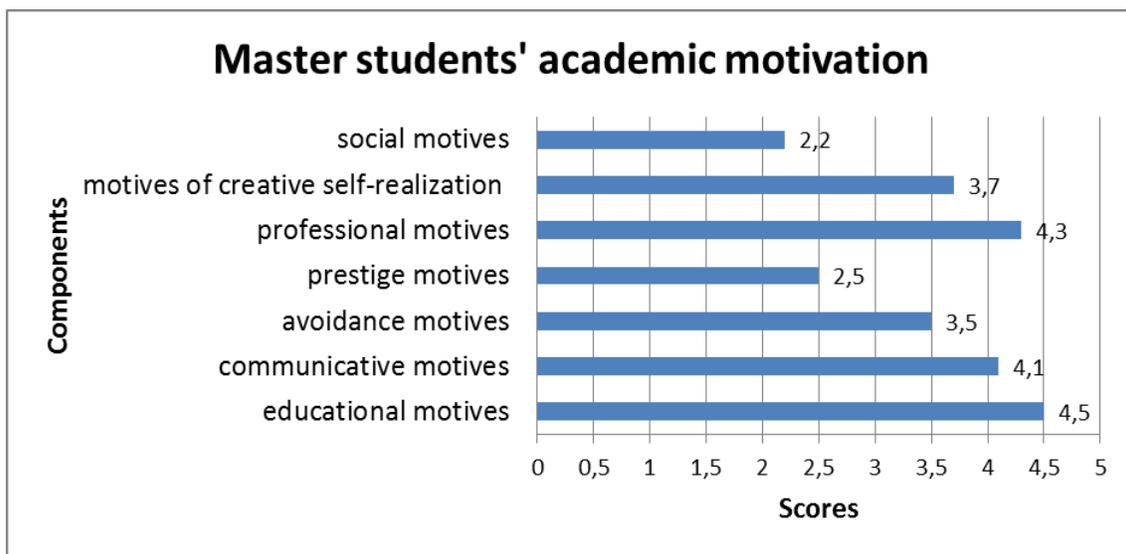


Figure 5. Results of students' motivation analyses.

The leading place in the motives' structure is occupied by educational, professional and communicative ones. This fact illustrates students' desire to acquire knowledge and skills necessary for successful professional development.

Approximately equal position is shared by the motives of creative self-realization and avoidance. That proves the fact that self-identification and personal fulfillment are meaningful to students in terms of academic professional development.

The least expressed are social motives and motives of prestige. The following illustrates that social sphere requires special attention from the teacher. At the same time the following level of prestige motives guarantees that students realize the necessity and importance of getting knowledge and consider this process to be a necessary part of a high-quality specialist development.

CONCLUSIONS.

Application of ICT-mediated constructivist approach in terms of Content and Language Integrated Learning displays positive results in promoting students' academic motivation. The analyzed results prove that in terms of academic motivation the incentives for students are professional, educational and communicative motives. Social motives and motives of prestige are less meaningful and important.

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