

## THE ROLE OF THE WEB 2.0 TOOLS IN FOSTERING DEVELOPMENT OF THE CRITICAL THINKING AND READING SKILLS OF STUDENTS

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**Аннотация.** Данная статья посвящена использованию инструментов web 2.0 для содействия развитию критического мышления и навыков чтения, их роли и особенностям. В статье проведен обзор литературы и описана методологические и теоретические основы образования web 2.0 в системе обучения. В статье также рассматривается важность использования инструментов web 2.0 в качестве дополнения к другим методам обучения, выяснены его мотивационные факторы и преимущества в образовательном процессе.

**Ключевые слова:** Личностно-ориентированное обучение, подход, базирующийся на знаниях, подход, ориентированный на оценку, мотивация, критическое мышление, навыки чтения, и т.д.

**Abstract.** This article focuses on use of the web 2.0 tools in fostering development of the critical thinking and reading skills, its role and its peculiarities. It will review literature, and describes methodological and theoretical part of the web 2.0 education. The article will also highlight importance of using web 2.0 tools as an addition to other teaching methods, find out its motivational factors and benefits.

**Key words:** Web 2.0 tools, web 2.0 education, student-centered learning, knowledge-centered approach, assessment-centered approach, motivation, critical thinking, readings skills, etc.

In modern days, the role of the application of the new information technologies based on web 2.0 tools is especially actual, popular and widespread in educational setting all over the world. It is not only modern means of communication and collaboration but also new forms of education and methods of teaching, a new approach to the learning process. The use of web 2.0 tools helps to implement a personal-oriented approach in teaching and learning process, it provides with individualization and differentiation of the educational process, taking into account the characteristics of subject applied in and age of students, their level of knowledge and skills.

In other words, if web 2.0 tools are integrated properly into language lesson, teacher can create more engaging, interactive, and motivating learning

environment in their classroom, which can foster development of the critical thinking and reading skills. [1]

According to the Pronina Olga Georgievna, Web 2.0 technologies remind now a huge knowledge corporation with the involvement of users from different parts of the world. However, these technologies are not only a way of providing information; they also involve the cooperation of interested users in the formation of information and communication resources. This development is accompanied by the need to form new tools for manipulating digital data and, undoubtedly, tools for managing the knowledge and gained experiences. [2]

As it is stated by Erben, T, the web based 2.0 tool increases motivation, decreases anxiety, foster more student-centered activities, provide student with authentic materials and audiences. Along with other technologies, web 2.0 tools can create interactivity and collaboration, which are at the heart of learning a foreign language effectively. Students can take on active role in learning process with the use of web 2.0 tools, facilitating collaboration and information sharing. [3]

Web 2.0 tools are social networks that represent second-generation Internet technology, Internet services, the main advantage of which is their distinctive factor of human development, his social communications and collaborations. Web 2.0 tools boost students' creativity (e.g. when they prepare presentations or design web sites) and promote communication and collaboration with other students all over the world (thanks to such tools as blogs, wikis as well as thanks to uploading photos, videos or podcasts). Moreover, new technology allows students to get immediate feedback, which boosts their motivation, interest, and encourages them to research the field they are learning about more thoroughly (students find it easy to study a problem as all concepts on the Web are interconnected through hyperlinks). Thus, learning with Web 2.0 technologies promotes multiple skills and literacy such as critical thinking, reasoning, analyzing, and organizing information, selecting valuable information,

communication, creativity, autonomy, and collaboration. Finally, computer and web mediated learning helps to prepare students for lifelong acquisition of knowledge. [4]

Thus, Web 2.0 tool is completely new environment through which joint projects is implemented, scientific and popular information are searched, knowledge is acquired, communication situations are created, critical skills and reading literacy is developed, etc. With this tool, teachers can create a more interactive and motivating environment for learning a foreign language, develop students' critical thinking and reading skills in and out of class assignments, foster more student-centered activities and collaborative learning process. [5]

In fact, many scholars define and describe these tools in a wide variety of ways and since the invention of the web 2.0 tool, the concept of web 2.0 has already gone large transformation and change. Now, web 2.0 *"encompasses a variety of different meaning that include an increased emphasis on user generated content, data and content sharing and collaborative effort, together with the use of various kinds of social software, new ways of interacting with web based applications, and use of the web as a platform for generating, re-purposing and consuming content"* In other words, Web 2.0 refers to a transformation, paving the way for increased collaboration, interactivity, information sharing and content creation through internet based platforms. [6]

According to the Gabriela Grosseck, some of the possible functions of web 2.0 tools and social service networks could include preparing and collecting didactic materials, evaluating and analyzing progress made by students, putting together informative and formative presentations, time management, planning the timetable and the calendar of activities, developing projects in collaboration, digital storytelling, students e-portfolios, etc. [7]

The results of a long-term study carried out by Light and Polin in 2010 shows that Web 2.0 tools have the potential to transform many aspects of teaching and language classrooms if used effectively. When teachers know how



to use these tools and blend them with careful instructional design, students benefit and take advantages from the experience. In their study, Light and Polin stated that the Web 2.0 tools chosen by teachers were very easy to use, which was a key factor in their decisions. It was observed by the researchers that these teachers create virtual extensions of their classes and these extensions become a daily part of the teaching and learning process. In this way, the communication between students and teachers increases in and outside the classroom, which strengthens the community sense of learners. [8]

Indeed, in a language classroom, Web 2.0 tools provide instructors with many benefits and advantages such as instructional design, course delivery and student learning outcome for language education [9] One of the main reasons why Web 2.0 technology is preferred by many language instructors is that it creates “a participatory medium and culture for user-contributed learning” [10]

As stated by Richerson (2009) the Web 2.0 has the potential to create more interactive and powerful learning environments in which learners become knowledge creators, producers, editors, and evaluators [11]

According to the Dilfuza Azimova from Uzbek State World Languages University, Web 2.0 tools is useful and advantageous in facilitating interactive learning and innovative responses to assignments and assessments. As she states, Web 2.0 tools also can facilitate authentic interactions with content and with other learners. These tools offer students opportunities to solve real-world problems and to collaborate in meaningful ways with peers face-to-face or online classroom. [12]

Thus, Web 2.0 technologies has the ability to “support active and social learning, provide opportunities and venues for student publication, provide opportunities to provide effective and efficient feedback to learners, and provide opportunities to scaffold learning in the student’s Zone of Proximal Development” [13]

In our point of view, the most important role of Web 2.0 in education are the possibility to distribute relevant content through online communities, involving students in joint activities to create and improve online learning materials, development the skills of future specialists in solving professional problems through online communication, improving the forms of control of independent work of students, involvement of participants in educational activities; stimulating students' interest in cognitive activity, promoting their self-organization. Thus, the advantage of Web 2.0 makes it possible to increase the accessibility, quality and speed of learning by expanding the scope of multi-sided and multidirectional communication, and participants in it, achieves learning goals by improving the skills of managing their presence in the digital environment.

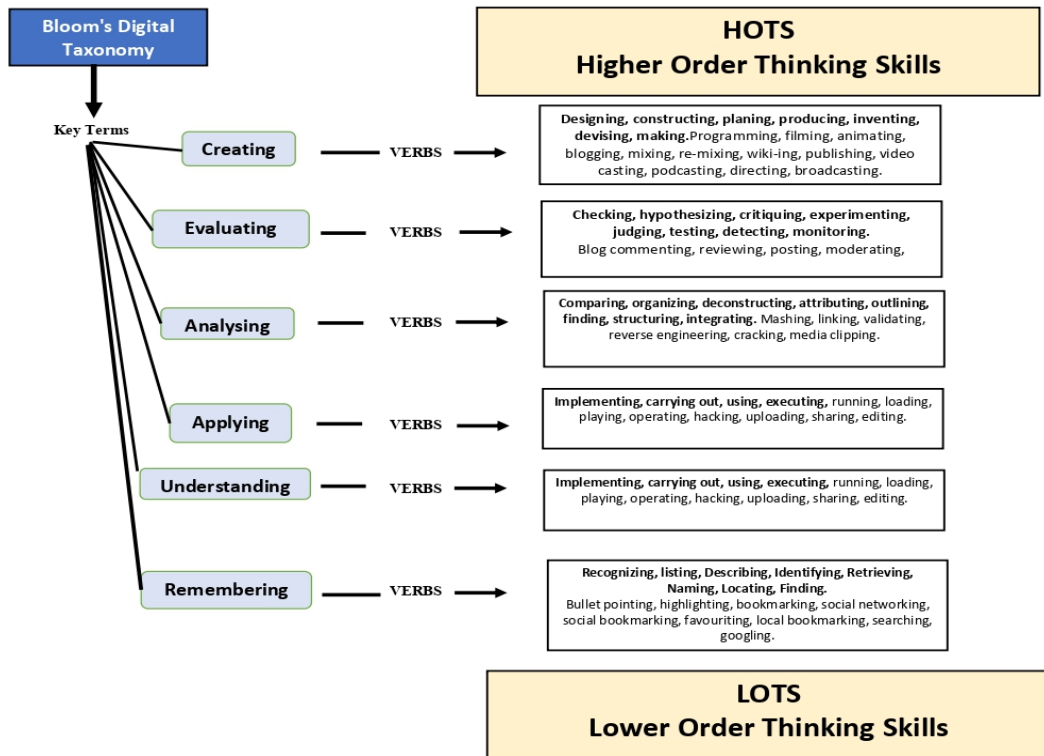
There is many evidence that web 2.0 tool based education has positive impact at fostering of the critical thinking [14] and reading skills of the students when the web 2.0 tools are used effectively in the classroom or outside of the classroom.

In fact Critical thinking is a skill that we can teach to our students. It draws on other skills, such as communication and information literacy, to explore a problem, then analyze, explain, and evaluate it. The skills or action are often forced to be used when the web 2.0 is practiced in educational process. Today's students have more access to information than ever before with the help of Web 2.0 tools. As teachers, we must remember that simply accessing information is not enough. Students need to be able to analyze, synthesis, and evaluate information. [15]

**As show in the picture No 1, Bloom's Digital Taxonomy** explains how using Web 2.0 tools can facilitate fostering the development of critical thinking. Instead of “teaching” Web 2.0 tools; teachers should be developing critical thinking and readings skills in the classroom with the help Web 2.0 tools. Since

systematic use of the web 2.0 tools means that search of information, reading bulk of information and making decision, analyzing, etc.

**Bloom’s taxonomy aligned with web digital skills.**



[16]

The prospects and possibilities of using the Internet as a global interactive e-learning environment are almost limitless and, undoubtedly, their methodological and technological potential is huge and has not been fully explored: they allow us to switch to the use of fundamentally new learning technologies, radically changing its paradigm. These technologies, based entirely or partially on Information Technology, especially accelerated with the advent of broadband Internet and web 2.0 technologies, which radically modified many of the principles underlying classical Soviet and early post-Soviet education.

First of all, web 2.0 technologies have become the main catalyst for changes in the ways a person *interacts with the Network*. Before that, the Internet,



based on the web 1.0 technologies, the content of which was created by the expert community, was the *Internet for readers*. With the advent of the second web technologies (2005-2006), almost every Network user has the opportunity to create their own content, an unlimited number of users have access to content and work with it, create hybrid content combining various data transmission formats – like text format with graphic, color, visual or audio.

In 2006, the concept of a writing-reading Web was arisen, in other words, a web which offers the idea of its creator Tim Berners –Lee about an environment, and a space where it will be possible to communicate, read, write ..... " [17].

Despite of the fact that the meaning of the web 2.0 term is still the subject of discussion and disputes, those researchers who recognize its existence, identify the following peculiar features to it, which can be defined through the notions: *syndication, socialization, collaboration, interactivity, openness and feedback*. [18]

The services of the second web include the following communication platforms:

- Blogs and microblogs (Twitter, Blog.com,);
- Social networks and social presentation systems. (Facebook, MySpace, LinkedIn; Second Life;Odnoklassniki.ru; Profeo; etc);
- Wiki –projects (Wikipedia);
- Social bookmark (Delicious; Bibsonomy, Zeto);
- Multimedia information distribution systems (YouTube, iTunes; Scribd; Flickr; SlideShare);
- Systems of joint editorial offices (Google.docs and Spreadsheets; Gliffy diagrams);
- Technologies of syndication and notification of information (RSS - Really Simple Syndication);
- Podcasting (Podcast people, PodOmatic, PodBean);

Thereby, the web 2.0 technologies created such opportunities for communication and work on the Internet, which then led to the formation of an educational approach based on it, which received the similar name as web 2.0 educations or simply Education 2.0. The term was coined by Canadian educator Stephen Downes

To the peculiarities of web 2.0, which contributed to the emergence of a new educational model, can be attributed such characteristics as the ability to:

- Quick creation of user-generated content;
- Possibility to edit and cooperative work on any text or project;
- Communication;
- storing large amounts of information directly on the network; and not on electronic media
- Storing large amounts of information directly on the network; and not on electronic storage medium;
- Simplicity of working with content;
- distribution of user-friendly interfaces;
- reinforcement of the audiovisual data transmission format; [19]

Moreover, the main requirements put forward to learning models within the framework of Western approaches to education include, in addition to the basic *learner-centered learning approach*, such additional requirements as:

- The knowledge should be focused on knowledge (*knowledge-centered*);
- Focus on the assessment of the acquired knowledge and the effectiveness of the educational process as a whole (*assessment-centered*);
- Focus on creating a professional community (*community-centered*) and contribute to the successful integration of the student into his professional environment.



All the listed requirements for the educational model are one of the key principles of the "work" of the conceptual model of the second web proposed by O'Reilly [20]

Simultaneously with the concept of web 2.0 education, the terms Life-Long Learning and Mobile Learning arise in the pedagogical space, which have some common features with web 2.0 learning. For example, all these three types of educational concepts suggest that, due to the Internet and other mobile means of communication, there should be no binding to a specific time of study or place.

However, Thomas Cochrane, assessing these types of education in the XXI century, emphasizes that "... innovations in teaching and learning are more effectively implemented if they are supported by a certain educational theory"

Thus, the methodological basis for the introduction of the entire social software learning tools, which is an umbrella term for all three previous types of education (web 2.0. learning, Mobile learning and Lifelong learning), consists of the following social theories and models:

- *theory of constructivism;*
- *Theory of social constructivism;*
- *Community of practice theory;*
- *Conversational model of learning;*
- *Social construction of technology theory;*
- *Blended learning theory;*
- *Connectivism;*
- *Social networking theories.* [21]

As it can be seen from the above listed models, web 2.0 learning has quite significant methodological base to be sufficiently effective and successful.

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