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Web 3.0 : A Smart Way to Develop Competence

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ABSTRACT*:* In the rapid development of digital era, teachers are obliged to use Information and Communication Technology media in their teaching with the next generation students. English teachers are expected to adapt their teaching methods by adding the use of multimedia and Internet to their class room activities, in order to make classes more attractive, interactive and more innovative. In English teaching process should have fun so digital native students do not feel bored. And it can be done to insert ICT media in teaching learning process, not only to make classes more interesting but also to guide the students to utilize media more wisely. The continuous evolution of the Internet has opened unimaginable opportunities and challenges in web based education and learning. The traditional version of web i.e. Web 1.0 started as a Read only medium; the next version Web 2.0 established itself as Read/Write medium. Now the currently evolving version of web, viz., Web 3.0 is said to be a technologically advanced medium which allows the users to Read/Write/Execute and also allows the machines to carry out some of the thinking so far expected only from the human beings. In a short time, Web 2.0 and now Web 3.0 have created new tools and technologies for facilitating web based education & learning. To begin with, this paper discusses some definitions of the Web 3.0, its evolution and characteristics. Next, we have discussed about the possible future Web 3.0 technologies, trends, tools and services that will assist in the areas of online learning, personalization and knowledge construction powered by the Semantic Web.

Keyword: Web 3.0, Semantic Web, Educational, Technology, Online Learning, 3D learning environments, e-learning, language competence.

I. INTRODUCTION

Language teaching in the twentieth century underwent numerous changes and innovation. In the past ten years the crucial factors have combined to affect current perspectives on the teaching of English. Generally every type of language teaching has its own technologies to maintain it. Language teachers who followed the grammar-translation method (GTM) (in which the teacher explained grammatical rules and students performed translations) relied on one of the most omnipresent technologies in language education, the blackboard a perfect vehicle for the one-way transmission of information that method implied. The blackboard was later supplemented by the overhead projector, another excellent medium for the teacher-dominated classroom, as well as by early computer software programs which provided what were known as "drill-and-practice" (or, more pejoratively, "drill-and-kill") grammatical exercises. On another side, the audio-tape was the perfect medium for the audio-lingual method (in which students were believed to learn best through constant repetition in the target language). University provided the lab facility, where students would perform the repetition drills. Late 1970s, the audio- lingual method fell into disregard, at least in part owing to poor results achieved from expensive language laboratories. Whether in the lab or in the classroom, repetitive drills which focused only on language form and ignored communicative meaning achieved poor results. The 1980s and 1990s have seen a full-scale shift in the direction of communicative language teaching, with an emphasis on student engagement with authentic, meaningful, contextualized discourse. Within this general communicative trend, we can note two distinct perspectives, both of which have their implications in terms of how to integrate technology into the classroom. Modern Trends of Teaching through ELT Computers and language teaching have been walked hand to hand for a long time and contributed as teaching tools in the classroom. Computers and technology are still a source of anxiety for many teachers everywhere in the world despite the latest advances applicable to language teaching such as specialized websites, blogs, wikis, language teaching methodology, journals, and so.

For about last two decades, the World Wide Web (WWW) is being used to improve communication, collaboration, sharing of resources, promoting active learning, and delivering of education in distance learning mode. The WWW helps teachers in planning suitable online delivery structure, sharing goals of learning, and activities for their courses. In recent years, many of the universities and educational institutions worldwide offer online services such as for admissions, virtual (online) learning environments in order to facilitate the lifelong learning and to make this compatible with other educational management activities.

Web 1.0 was the static web where we may read only the content provided by the website. Web 2.0 was dynamic web where along with reading, writing was also possible. Web 3.0 is the semantic web where along with reading, writing editing and sharing is also possible. The term 'Web 3.0' was first coined by John Markoff of the New York Times in 2006, and first appeared significantly in early 2006 in a Blog article "Critical of Web 2.0 and associated technologies such as Ajax" written by Jeffrey Zeldman. Major IT experts and researchers support different approaches to the future Web. There is complete agreement among the experts about how Web 3.0 will evolve.

Characteristics of Web 3.0 : Four characteristics of Web 3.0, as given below, can be summarized from the above definitions and descriptions.

Intelligence: Experts believe that one of the most promising features of Web 3.0 will be Web with intelligence, i.e., an intelligent web. Applications will work intelligently with the use of Human- Computer interaction and intelligence. Different Artificial Intelligence (AI) based tools & techniques (such as, rough sets, fuzzy sets, neural networks, machine learning etc) will be incorporated with the applications to work intelligently. This means, an application based on Web 3.0 can directly do intelligent analysis, and then optimal output would be possible, even without much intervention of the user. Documents in different languages can be intelligently translated into other languages in Web3.0 era. Web 3.0 should enable us to work through natural language. Therefore, users can use their native language for communication with the others around the world.

Personalization: Another characteristic of Web 3.0 era is Personalization. Personal or individual preferences would be considered during different activities such as information processing, search, formation of personalized portal on the web. Semantic Web would be the core technology for Personalization in Web 3.0.

Interoperability: In the context of Web 3.0, the terms Interoperability, collaboration and reusability are basically interrelated. Interoperability implies reuse, which is again a form of collaboration. Web 3.0 will provide a communicative medium for knowledge and information exchange. When a person or a software program produces information on the Web and this information is used by another, then the creation of new form of information or knowledge takes place. Web 3.0 applications would be easy to customize & they can independently work on different kinds of devices. An application based on Web 3.0 would be able to run on many types of Computers, Microwave devices, Hand-held devices, Mobiles, TVs, Automobiles and many others. Pervasive Web is the term used to describe this phenomenon where web is operable to a wide range of electronic devices.

Virtualization: Web 3.0 would be a web with high speed internet bandwidths and High end 3D Graphics, which can better be utilized for virtualization. The trend for future web refers to the creation of virtual 3-Dimensional environments. An example of the most popular 3-D web application of Web 3.0 is Second Life.

Semantic Web: The extension of the World Wide Web that provides an efficient & easier way to share, find and combine data & information from distinct sources is called Semantic Web. In the simplest terms, we can define Semantic Web as a relationship between things, described in a manner which makes people and machines able to understand.

New Age Devices

This year, the Consumer Electronics Show (CES) which was held at Las Vegas, gave a glimpse of ground breaking devices purely meant for students. These showpieces ranged from 3D printers to smart watches. The youth,s requirements are matched by a new age device, be it studies or social media, travel or portability. The media streaming devices like the Google chrome cast and the Rokku make group studies become interactive and presentations surprisingly fulfilled one. One has to stream the media on to a smart TV using s dongle. Another blessing is the e–reader for the on-the-move generation. The all new- kindle paper white is a boon. Students can just tuck in the e- reader for easy reference. The portable document scanner like the Doxie Flip Cordless Flatbet Photo and notebook scanner are used to get the notes sorted. Other devices like copy and Olympus which have come with voice recorders can be utilized to record all the English lectures and be played as and when time permits. The laptop cooler like Thermapak′s Heat shift could be used to cool the laptops after long hours of use.

Web Based Tools used in Developing Competence

Based upon the above definitions, it is likely that the new generation of web applications will have some specific core technologies to support them. In this section, we present some of the major trends in terms of technologies that might become the building blocks of the next generation of the Web.

A web based learning also called technology based learning/distance learning/on line education/e learning is one of the fastest developing areas. It provides opportunities to create well–designed, learner–centered, affordable, interactive, officiate, flexible e-learning environment. There are thousands of English web based classes that offer trainings for a variety of basic language skills such as Learning, Speaking, Reading and Writing and are made interactive in a variety of ways. Some of the common technologies available for promotion of competence are as follows:

E-mail

The students can correspond with native speakers of the target language using e mail by creating a personal email account (g-mail, yahoo, hotmail, etc) which is free. The students can mail their home work to the teachers concerned and get it corrected in turn. The teacher can also provide revisions, feedback, suggestions for the betterment of every work and send them back.

Blogs

A blog is a personal or professional journal frequently updated for public consumption. The blogs enable uploading and linking the files which is very much suited to serve as on line personal journals for students. When participants, assume multiple roles in the writing process, as readers/reviewers who respond to other writer's posts, and as writers-readers who, returning to their own posts, react to criticism of their own posts. The readers in turn can comment on what they read, although blogs can be placed in secured environments as well. Blogs, short for weblogs, have become widely used as an instructional technology, as evidenced by over 400,000 educational blogs hosted by edublogs.org alone. Blogs can foster the development of learning communities, give students a world-wide audience, and provide opportunities for language teachers to engage students in authentic ways. In addition, blogs can increase student motivation to produce quality work, give students' ownership of their learning, increase digital literacy, and encourage the development of skills to critically evaluate online resources. Blogs also provide students with a flexible platform to share thoughts and ideas within the learning environment as they explore new concepts and topics in the classroom and continue discussions outside of class. For language learners, Pinkman (2005), in a study of Japanese students learning English, found that blogs increased learner motivation and interest because of the interaction with and feedback from classmates and teachers created by the blogging environment. There was also some indication in the research that blogging improved reading and writing skills. Collier (2007) states "There is a fallacy that kids aren't reading and writing anymore. They are, but they are just reading and writing differently than what we've traditionally done in schools". The digital natives, the generation that grew up with digital technology (Prensky, 2001a), find their comfort zone in expressing themselves virtually. In addition to being a reading and writing activity, blogs engage students in collaborative learning and communication. Leslie and Murphy's (2008) findings state that blogging ; relates to the social and collaborative construction of knowledge and suggests that an additional purpose for blogging may be to support, contribute to, and provide opportunities or means for collaborative, cooperative and community-centered sharing, building, contributing, outlining and asserting knowledge, ideas, opinions, different viewpoints, interpretations, perspectives and common goals.

Campbell (2003) delineated three specific types of blogs that support learning in an English as a Second Language (ESL) classroom:

1. Tutor blog: run by a tutor or instructor for the learners which provides daily reading practice; online verbal exchange using comments; provides class information and documents such as a syllabus; and a resource of links for self-study.

2. Learner blog: run by individual students which support writing practice; develop a sense of ownership, encourage further research; promote personal expression; and further the exchange of ideas.

3. Class blog: run collaboratively by the entire class where students can post messages; participate in project-based language learning; access an international classroom language exchange; and develop a publishing group.

Skype

Every internet service has audio functions, and technological instruments like laptops with cameras. The students could communicate with their teachers and friends who are far away. Likewise, they could very well communicate with the speakers of native language and get their pronunciation checked so as to improve their speaking. Skype adds the video and audio components to the communication process, which helps accommodate different learning styles in the classroom, as well as overcome geographic distance for real-time language acquisition activities. The only requirements are a PC with an Internet connection, speakers, and a microphone. What is Skype? Skype is a software-based Internet telephone and video phone service for making computer-to-computer voice calls over the Internet to anyone who is also using Skype, regardless of their location. Once the user accounts are set up, then P2P online texting, voice, and video communication is possible. Skype is Voice over Internet Protocol (VoIP) software that can be downloaded for free.

Mobile Phone

Learners can search for new words using dictionary option in the mobile phones and enrich their vocabulary. They may verify the spelling, pronunciation and usage of the specific word they searched for. Moreover, they can use Short Message Service (SMS) to send queries to their instructors and get their doubts cleared.

Ipods

Ipods, one of the multimedia devices, enhance the users to generate, deliver, exchange texts, image, audio and video scripts as per the requirement. The teachers send text messages and the students can read and answer to them. In addition to this, the students can record and listen to their speeches, poems, news, short stories etc. Thus, ipods give a chance to the learners of English to improve their listening, pronunciation, vocabulary, grammar and also writing.

Language Teaching Design

Geetha Nagaraj says 'A vital development in the area of language teaching design is the Council of Europe′s- A Common Frame Work of Reference for Languages: Learning, Teaching Assessment, now mostly known as CEF/CEFR is a document consisting of nine chapters and four apprentices and is available on the Council of Europe website: www.coe.int. The CEFR aims to provide a common basis for the elaboration of language syllabuses, curriculum… what learners have to learn… skills they have to develop so as to be able to act effectively….′ Morrow (2004) identifies four core areas in the CEF (Council of Europe,s Common Frame Work of Reference for Languages); the learner, the language, the devise, the technique.

Wikis

Wiki is the Hawaiian word meaning "fast" or "quick." One of the primary differences between a wiki and a blog is that while bloggers can contribute to a blog, they cannot edit the author's (the blog owner's) or a contributor's postings. Contributors to a wiki, on the other hand, *can* edit any other contributors' content. Unlike a website, a wiki is not designed for web users who just want to receive information; rather wikis are an effective Web tool for *collaboration*. Peterson (2009), in his study on cooperative learning states "wiki technology made it a natural fit for collaborative student projects. Students writing projects also benefited from being able to see each others' work, and from having an efficient way to bring additional Internet resources into their projects". Wikis have the capacity to allow multiple users to contribute to and edit a file. This tool can be used not only in a writing class but any class that requires students to work together and contribute to a group assignment or project. This is especially useful in a language course. Jee found wikis to be "a very good tool for collaboration or collaborative writing in a foreign language classroom". While research indicates that the time students spend on a collaborative task is equivalent to the time spent on an individual one, the learning outcomes for collaborative projects are superior. Wikis help to shift the responsibility for learning to the students and engage them by providing more interaction among their peers.

Edmodo

Edmodo is an easy to use, communication / educational tool /site to use with classes. It's set up much like Facebook so the format is familiar and appealing to students. Some of the things you can do are: set up class communications, upload assignments, send reminders, collect work online, mark work online, connect with other teachers world wide, (this has lots of potential especially for connecting across schools for moderation requirements).

II. CONCLUSION

We have seen how Web 3.0 has affected communication, information sharing and interoperability for everyone, including those of us in education and, particularly, language education. Currently there are thousands of web services – usually in the form of an Application Programming Interface or API—that already exist. For example, Flickr provides a web service whereby developers can program the interface to search for images, and educators can use it to teach content (Bussert, Brown, & Armstrong, 2008). In the context of *Web 3.0* these web services "…take center stage. By combining a semantic markup and web services, Web 3.0 promises the potential for applications that can speak to each other directly, and for broader searches for information through simpler interfaces".Most everyone has seen and been amazed by Web 3.0 tools such as Google Earth and many educators are now using them in the classroom. Additionally, educators now have access to tablets and smart phones which can receive email, text messages, images, full-motion video, sports and browse the Internet, among other things. One can readily see why most experts make the argument that Web 3.0 has already arrived, evolving standards notwithstanding. For second language acquisition, the use of Web 3.0 tools will be virtually unlimited. Imagine a Spanish class searching for a school building in Mexico City using a picture of the school rather than its text name. Then envision the class using Google Earth to visit the school in 3D and using Skype to see and talk to students in a classroom in that school in real time!

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