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TEXT-TO-SPEECH ANIMATED MOVIE CREATION: POSSIBLE USES IN LANGUAGE EDUCATION

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Abstract

In this era of flourishing technology and the attempt to benefit from technology in education as much as possible, language educators, together with learners, are provided with many tools that enable them to better benefit from the activities they are engaged in. The Internet proves to be the place where quite a number of resources and materials are presented and by which meaningful tasks can be created, making language learning fun and attractive. In addition, most of the resources available are web-based and do not require any technical or programming knowledge. One of these web-based tools is *Xtranormal* (http://www.xtranormal.com/), a text-to-speech animated movie creator. With the help of this tool, a scene is created as a series of movies by choosing backgrounds and characters, writing the script and then dropping on different actions and sound effects. The output will be an animated movie with 3D characters speaking and role-playing. Considering the features it provides, *Xtranormal* can be seen as a great tool for generating listening, writing and pronunciation activities, as well as being a lot of fun. In this respect, the current paper dwells on the possible uses and teaching tips in language learning contexts as regards the use of this text-to-speech movie creation tool.

Keywords: Text-to-speech, animated movie, Xtranormal, comic strips, language education

INTRODUCTION

Nowadays, we are witnessing an interacting twofold movement of computers in education, consisting on the one hand of what the rapid advancements in the field of Information and Communications Technologies (ICT) can offer and on the other hand of how the expansion of computer applications can contribute to language instruction. The combination of multiple media such as text, audio, video and graphics greatly facilitates learning, when especially learning materials are accompanied by illustrations, videos or sounds. Technology is continually breaking new ground, providing new possibilities for language learning and teaching. Consequently, they are becoming more and more widespread at homes, schools and universities with various uses expanding. In the light of the proliferation of educational technology, teachers continue debate on the effectiveness of multimedia language programs and their influence on the activities carried out in the classroom. Undoubtedly, the multimodal presentation of language increases learner's motivation, arouses their interest in the language itself, makes a process of learning more fascinating and matches various learning styles. More importantly, younger generation or digital natives as Prensky (2001) calls them, perceive computers and the Internet as natural and inseparable parts of their lives and use the opportunities provided by technology, though the aim might not be necessarily targeted towards educational knowledge, practice or purposes. Taking the availability of various multimedia materials and Web 2.0 collaboration tools on the Net, especially language teachers appreciate the importance of technology and can now have the opportunity to benefit from these resources in their daily activities or student projects (Son, 2007; Murugesan, 2010). Such opportunity is, moreover, does not require any technical or programming skills or knowledge and most of the resources available are web-based. From this perspective, computers, with unlimited possibilities, can be seen as an inherent part of of language teaching and learning.

One of the web-based tools that do not necessitate specific programming skills is *Xtranormal* (http://www.xtranormal.com/), a text-to-speech animated movie or cartoon animation creator. It can be seen as a tool that combines text-to-speech technology and web-based comic strips, providing scenes with various backgrounds and characters. From the point of view of a foreign language teacher, animated characters and sound production can make *Xtranormal* an entertaining and creative tool that can facilitate language pronunciation, listening and writing skills. Touching upon the issues of text-to-speech technology, creation of web-based comic strips and the use of multimedia will be useful before going to how *Xtranormal* works and can be used in language education.

Text-to-Speech Technology (TTS)

With the introduction of Text-to-speech technology, the conversion of text to speech via special computer application and voices, and the advancements following, it has been possible to make any document such as web pages, PDFs or websites speak and to hear any words or sentences available digitally. The use of this technology as a tool for foreign language education has shown that it can be used to help language-learning process, especially for listening activities (Azuma, 2008). Furthermore, Kataoka (2007) found in his study with high school students in Japan that the participants learned and memorized more English words using TTS. TTS really lends itself to listening and pronunciation activities in language classrooms. According to Kılıçkaya (2006), TTS has this special role with several advantages:

- Listening to any text and any topic, which is not limited to audio cassettes, CDs or DVDs of the course book.)Most EFL listening materials cover a limited range of topics and some of them are rather expensive.)
- Adjusting the speed of reading
- Creating audio materials from any text as wav or mp3
- Creating pronunciation exercises in which a single word or multiple words can be listened
- Creating dialogues using more than one character or speaker with different accents
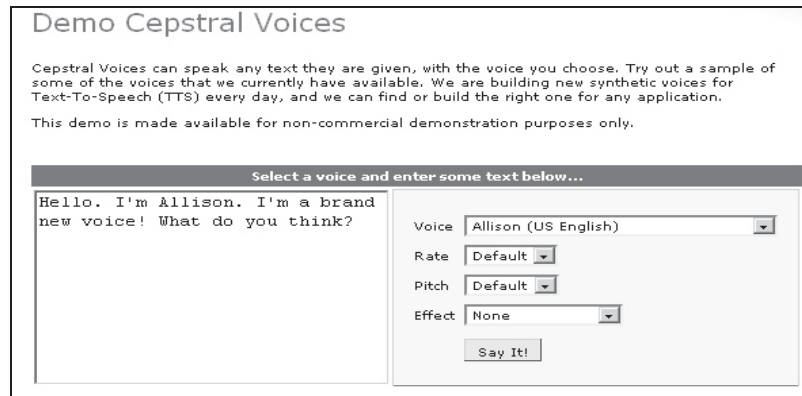
Figure 1. Demo version of Cestral Voices on the web.

Web-based Comic Strips

Regarding the use of comic strips in education, Jacobs (2007, p. 185) emphasized the importance and value of comic strips since they highly support literacy and recommended that educators 'see the potential that exists when we, as teachers and scholar, engage with comics in meaningful way'. In contrast to the discussions especially in the past stating that comic strips did not possess any value or use, most of the learners enjoy reading comic books and it has been realized that comic strips are really appealing to all age groups. Moreover, in relation with comic strips, excellent graphic novels or book-length comics appear to be found for all age groups in different topics. Comic strips and graphic novels are appealing as simply they are engaging and motivating (Gorman, 2002). In addition, the main advantage of comic strips and graphic novels is that they integrate images and text to get the meaning across, which is not possible using only a single medium or tool. On the net, there are some various web-based comic strips creation tools offering teachers, parents or students to express their thoughts and opinions through combining graphics, characters and text. Of these popular tools, *Make Beliefs Comix!* (http://www.makebeliefscomix.com/), online educational comic generator for kinds of all ages, is especially available for children (Figure 2).

Figure 2. A screen shot from the website, *Make Beliefs Comix!*

Multimedia in language education

Multimedia has a very important role considering the opportunities it provides and the resources it presents such as audio and video clips. It brings engaging and motivating activities into a traditional and monotonous classroom, offering impressive learning and teaching tools and contributing to the many aspects of learning such as linguistic, cognitive and social development. With the rapid technological development and the multimedia resources available on the Internet, learners of any foreign language can enjoy learning a foreign language through these resources. In addition to multimedia packages offered to learners such as *Rosetta Stone* and *Tell Me More*, learners now fully benefit from CD/DVD dictionaries that provide fast access to words supported by a considerable amount of knowledge such as cultural information and collocation entries, not to mention spoken examples and pronunciation. Online dictionaries providing definitions and example sentences together with sound files for pronunciation such as Cambridge Dictionaries online (http://dictionary.cambridge.org) and meta-dictionaries giving access to multiple dictionaries and thesauri have paved the way for grasping any opportunity to expand language knowledge.

COMBINING TEXT-TO-SPEECH TECHNOLOGY AND COMIC STRIPS: XTRANORMAL

Xtranormal was launched in 2006 with a mission of 'brining movie-making to the people' advising that everyone can make short or long movies. Their motto is 'If you can type, you can make movies". *Xtranormal* includes 3D characters, though some are not free, and the system to convert text to speech, offering to make the characters speak what you have written in the script section and behave or show actions with easy drag-and-drop animation system (Figure 3). Although it does not aim to practice language learning or provide educational use, it has the potential to be used in classroom projects especially language-oriented activities. Taking into consideration its features and the promising activities, especially practicing writing and speaking skills, it can be considered as one of the world's most innovative web sites. Moreover, learners will enhance their creativity and explore other possibilities while using the characters with different moods and writing sentences or dialogues during comic strip creation. *Xtranormal* can be seen as a valuable resource from different aspects.

Linguistic aspect

Xtranormal can be used as an effective way of presenting and reviewing language material in an environment of visual elements supported by audio materials. These materials can specifically be used to expand vocabulary knowledge and improve pronunciation, when we especially consider language acquisition takes place in interesting and enjoyable environments (Klassen & Milton, 1999).

Cognitive and psychological aspects

Taking the features of *Xtranormal* into consideration such as 3D characters and the visual elements, it can be claimed that it will further enhance learners' experience and the way how they are exposed to information. With its potential to provide relaxed and stress-free environment, learners can enjoy what they are doing with the target language.
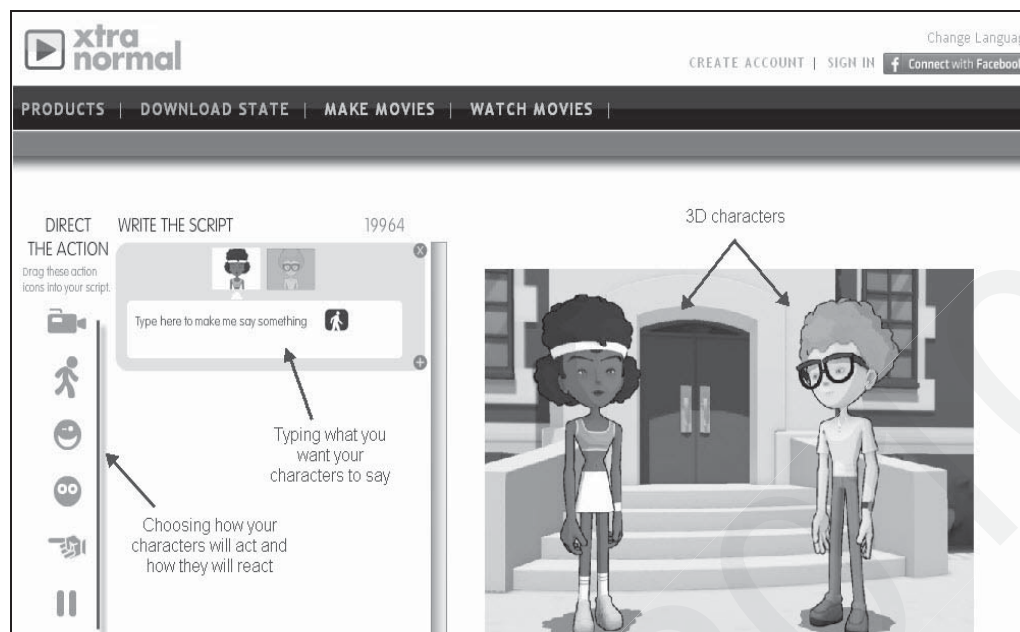

Figure 3. A screen shot from *Xtranormal* movie creation section

Cultural aspect

From cultural perspective, *Xtranormal* can be seen as an opportunity to introduce the target and local cultures, the differences and similarities, making the characters talk about the specific culture elements, which will foster mutual understanding, tolerance and intercultural competence (Aguilar, 2007).

Social aspect

When *Xtranormal* is encouraged to be used in classroom or performance projects with pair or group work, cooperation and interaction skills among learners can be fostered. Pairs and groups can also work together to improve the movies created, taking each other's comments and suggestions.

Multiple Intelligences Theory

From Multiple Intelligences Theory perspective, *Xtranormal* can provide an ideal opportunity for developing different types of intelligences especially for verbal-linguistic, visual-spatial and musical-auditory students (Gardner, 2002).

POSSIBLE USES IN LANGUAGE EDUCATION

Xtranormal was one of the topics that were introduced to the course FLE 318 Audio-visual Aids in ELT offered during the academic year 2008-200, aiming to present the technologies ranging from Discussion Boards and Wikis to online teaching tools at the Department of Foreign Language Education, Middle East Technical University. Following the discussions on text-to-speech technology and its features, students were introduced to *Xtranormal*, its basic features together with a demonstration. The following week, the assigned group created movies to show how it could be used in language classrooms, presenting the limitations and problems encountered. Following the presentation, the students and the instructor discussed whether it is a potential resource for language learning and teaching and how it can be applied to language education, taking its limitations into consideration. Most of the students confirmed that Xtranormal can be seen as a valuable resource from different aspects and be applied to foreign language education today. Below is a list of several possible benefits, uses and limitations of using this tool in language learning and teaching.

Possible benefits
- The multimodal environment of visual and auditory input can create entertaining, creative and stress free environment in which learners can enjoy doing language activities.
- In addition to traditional ways of writing and listening activities, learners can practice and improve writing, listening and pronunciation skills.
- When done in pair or group work, it can promote collaboration, cooperation and interaction, which is a very important skill.
- Browser-based access, flash-based design and no requirement of programming skills enable this tool to be instantly used by teachers and students alike.
- Content can be posted immediately and seen by everyone online.

Possible uses

- Learner/teachers can write dialogues for specific topics such as bad habits and advising a friend who asks for help to buy a new computer.
- Learners/teachers can make the characters talk about vocabulary items or grammatical structures.
- Learners/teachers can create monologues in which characters talk about their own cultures or dialogues between two characters on specific cultures, differences and similarities, which will foster tolerance and understanding.
- Learners/teachers can create stories or news on the daily issues.
- Using the 'Remix' feature of *Xtranormal*, learners can create new movies using other movies.
- Learners/teachers can create news bulletin or 'agony' columns in which a character asks for help about their personal problems. Using the 'Remix', another learner can give advice using another character.
- Learners/teachers can create their own soap opera and add different scenes each week by the same learners or different learners.
- Learners/teachers can upload their movies to wiki pages and then learners/teachers can leave comments and suggestions, enabling communication and collaboration.

Limitations and possible problems

- One caveat is that some animations available on the website are simply not for educational purposes and inappropriate for young learners or even offensive to older ones. Therefore, it can deter educators from using it in an educational context.
- Another one is that as it takes a lot of time to plan and create the movie, it is especially useful for classroom projects or performance projects assigned for a semester.
- Free use is limited to certain characters.
- The voices used to create speech especially from longer sentences or dialogues do not sound real.
- Graphic use and animation creation result in pages that load slowly especially when the Internet access is limited or provided through low bandwidth connection.

CONCLUSION

No one can deny the fact that communication in any foreign language is one of the main aims of today's language instruction, meaning learners should not only produce the language, but also actually communicate with others. The growing interest in educational technology and its promising benefits has led to more and more widespread use of applications, helping teachers and students take communication and cooperation go beyond the walls of the classroom and providing an enjoyable atmosphere. Among these applications is *Xtranormal*, which really lends itself to language learning activities dealing with writing, listening or pronunciation. Moreover, it can be also considered as a platform where teachers' and learners' imagination and creativity can be put to good use. Like other tools provided by technology, *Xtranormal* can make language learning and teaching effective and enjoyable provided that it is employed and benefited by teachers and learners taking its benefits and limitations into consideration. Nonetheless, the coalescence of a human teacher, opportunities for human-human interaction in the classroom or outside the classroom via text, face-to-face or online communication supported by the technology constitute the most desirable solution for both educators and students.

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