

MODERN TOOLS TO DESIGN MULTIMEDIA REPORTS BY RADIO ENGINEERING STUDENTS

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The paper describes the advantages and disadvantages of using modern multimedia recourses in the foreign language teaching process. It considers whether multimedia report as a collaborative tool is perceived by radio engineering students as a positive way to improve learning outcomes. Special attention is devoted to the web resources used by students. These resources can increase the level of motivation to learn foreign languages. Also we describe several principles of multimedia design based on eleven research study findings in modern scientific literature. In this paper the term «multimedia» refers to an educational presentation made using primarily video, text and images. Unlike hypertext and web-based instruction the reliance on text is minimized in a multimedia product. The results of the paper show that multimedia has for years been considered high in development potential as a tool for English language teachers. However, the author notices two difficulties: there is still relatively little evidence to support the value of multimedia for enhancing learning and the cost of most multimedia production is still relatively high.

Keywords: multimedia production, foreign language teaching process.

СУЧАСНІ ІНСТРУМЕНТИ ПРОЕКТУВАННЯ МУЛЬТИМЕДІЙНИХ ПОВІДОМЛЕНЬ СТУДЕНТАМИ РАДІОТЕХНІЧНИХ СПЕЦІАЛЬНОСТЕЙ

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У статті описуються переваги та недоліки використання сучасних мультимедійних ресурсів у процесі навчання іноземної мови. Розглядається можливість поліпшити результати навчання студентів за допомогою використання мультимедійних доповідей, як інструменту взаємодії на практичному занятті. Особливу увагу приділено веб-ресурсам у реальному часі, які можуть використовуватись студентами радіотехнічних спеціальностей. Ці ресурси можуть підвищити рівень мотивації до вивчення іноземних мов. Також ми описуємо декілька принципів розробки мультимедійних продуктів, які ґрунтуються на результатах одинадцяти дослідницьких робіт у сучасній науковій літературі. В даній статті термін «мультимедіа» належить до освітньої доповіді з використанням в основному відео-, текстового супроводу та зображень. На відміну від гіпертексту і навчання, заснованого на технологіях веб, увага в мультимедійних продуктах на текстову складову зведена до мінімуму. Результати роботи показують, що мультимедіа протягом багатьох років має високий потенціал розвитку в якості інструменту для викладачів англійської мови. Однак автор підкреслює дві супутні проблеми: до цих пір існує порівняно мало результатів, що свідчать про значення мультимедіа в освітньому середовищі при тому, що вартість мультимедійних продуктів залишається досить високою.

Ключові слова: мультимедійні продукти, навчання іноземної мови.

INTRODUCTION

There is no doubt that the main problem of Ukrainian educators nowadays lies in ability to present information in an understandable yet engaging way. While material may have considerable merit

in its own right, if it cannot be properly conveyed, its impact will be lost. Most educators have seen the positive impact a multimedia approach has when presenting information to radio engineering students. Now the products that utilize multimedia to improve the way English teachers present information are expanding at breakneck speed. Authoring systems are designed to help instructors create custom lessons, allowing them to find their own solutions. This software also includes question-and-answer components as well as student tracking and report generation.

THEORETICAL SURVEY

Different areas of our daily life have for many years been utilizing presentation products, for example, software that creates electronic slideshows. More limited in comparison with authoring systems, these products produce a much more attention-grabbing presentation than the bland transparencies many professionals have been using for ages. Class-room lessons and lectures, in a basic sense, are presentations made to a class. For English teachers who do not wish to investigate full-blown web systems but would still like to incorporate interactive elements like animation and still photos in their lessons, multimedia presentation packages may very well fit the bill. Multimedia presentation tools, such as Microsoft Power Point, can also be used for solving this problem. Radio engineering students may be charged with designing a multimedia report on a given subject, complete with text and applicable supporting such materials as: speeches by famous people, photos or diagrams, video etc. Presentation tools are often divided into two categories:

- text-based;
- time-based.

Any student may place multimedia links in certain spots within a document. For instance, when the viewer comes to a certain word that is highlighted, clicking on that word pulls up a definition, illustration or video clip about famous scientist in the field of radio engineering or the device he is studying at specialized lessons. Time-based presentation software often organizes a presentation into a timeline. Multimedia elements are arranged in the order the author decides, following a chronological path. Similar to the slideshow format, time-based presentations must be synchronized.

There are several products on the market that use a textual document as the basis for a multimedia presentation. For example, FunWrite from EdSoft, Inc. is billed as a multimedia word processor that lets students add sound, images and video clips to documents. Links can also be made to other Windows programs; for example, users could launch a calculator after a math word problem.

FunWrite also includes many features common to mature word processors, such as a 100,000-word dictionary and spell checker, formatting features, cut-and-paste etc. The program also combines tools to facilitate navigation, indexing and automatic annotation, the latter of which simultaneously links every occurrence of a specific word to other text (like a definition), image or sound. To give presentations to others, a separate runtime application is supplied.

The Yang Professor 4.1 from Soft For You Corp. gives English teachers additional bonus - the program will develop questions based on textual information input during the development process rather than requiring the instructor to do so.

In the Curriculum Editor module, the first of two, users develop «learning pages» that contain text, pictures and movies. This module also contains the AutoQuest feature that, when activated, presents guidelines for teachers to follow when inputting text that will be used to generate questions.

The English Tutor module then presents the material, employing a pleasant female voice that acts as the «tutor». The voice also asks questions and provides positive feedback throughout the lesson. Thus, radio engineering students are motivated to use this software mostly because of the presence of technical leverage in the English learning process.

A more mature form of electronic publishing is offered by NEC International, Inc., developers of Guide Reader. This software provides hypermedia authoring tools that create text-based electronic documents. Information can be organized as objects; links between them enable readers to navigate through large volumes of information that is indispensable for future engineer.

Windows-based, the program will place electronic notes to define radio engineering terms or launch other applications. Videodisc support, DVD-ROM, real-time conferencing and animation sequences may also be added. Guide Reader is the runtime application that displays the hypermedia documents so it can be vital in self education process.

Charlston Publishing's Power DVD, a multimedia operating environment that runs on top of either Windows, Android or Macintosh, utilizes text editors for Windows 6.0 (chosen for its compatibility with other word processor documents). Of interest to English teachers who teach radio engineering students creative technical writing, PowerDVD includes a question-and-answer mode that presents an onscreen test, grades the student's responses and prints a report on how he or she performed.

Students and teachers embed commands that link to pictures, sounds or other text within a document. When done, the compiler bundles the elements together. The compiled material may then be sent for further processing via E-mail, Internet relay chat mode or any cloud storage service to Charleston Publishing office. The company will then press the materials directly to a master DVD-ROM, which also houses a run-time player. Instructors can replicate from the master or press their own discs.

The company feels strongly that true multimedia presentations or documents should not reside on one's hard drive. Therefore, when running the disc, none of the multimedia elements are saved to the user's hard disk; they all remain on the CD-ROM.

Time-based presentation packages use either a timeline or slideshow structure. Both present elements in a certain order, embedding buttons or links that branch to other support information (graphics, animation, video or other text). A few also provide limited scoring capabilities.

Now let us focus our attention on one of the examples of multimedia presentation packages based on the timeline metaphor. Symetrix Corp. offers Tower 3.8, which incorporates tools to create onscreen presentations as well as slides and overheads. Linking multimedia effects to words or bullets is as simple as clicking on an object, selecting the media type (digital video, animation, etc.), and choosing the specific media clip. Tower provides over 20 GB of video files. Also videos may be included from YouTube broadcasting web site. Other features include charting tools, a slide sorter with thumbnail views and drawing tools.

PresProducer 3.0 is a real-time multimedia presentation tool from Press Designs, Inc. that combines and synchronizes elements by dropping representative icons onto a «Cue Sheet». Buttons can be used to create interactive links, thus, any object can become a button.

Generating and reading SMPTE time code, the program captures video in MPEG format, plus can save the finished presentation as a PPX file. Over 40 transitions are also included. This approach is important because not all radio engineering students have an experience in computing.

Place up to 120 buttons on each screen using PresShow from AllInOne, Inc. English teachers can designate a video window and use routines to save code space. PresShow imports text files created in a word processor, offers basic drawing tools and animation playback capabilities, and provides 32 wipes. Royalty-free runtime capabilities make sharing presentations easy. Another program, PresShow Media Author, offers multimedia authoring and video editing capabilities.

In addition, Digital Speech, Inc. has a multimedia authoring solution called Show and Tell for children ages 7 to 14. It integrates voice or sound recordings, graphics and text into a synchronized sequence, while also capturing and creating still images. A guided tutorial leads radio engineering students through the program, helping them produce their first presentation within ten minutes. Show and Tell is cross-platform – it is no matter what operating system students use to operate this software – and requires 300 MB of hard disk space. Optional sound devices are also needed. But it is not a problem because all modern desktop and portable computers are equipped with multimedia features.

RESULTS AND FINALIZING

To summarize new approaches of using modern software as a helpful tool in the process of teaching English for radio engineering students we should notice that there are many more multimedia presentation packages to choose from than we have space to talk about them, and more are coming out all the time. English teachers should investigate each package thoroughly; even though most offer the same basic features, others may include additional functions that fit their needs exactly. Traditional authoring systems are likewise improving and evolving. These programs provide the more advanced capabilities that some educators are sure to desire.

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