

Olena Zymovets,
teacher,
Zhytomyr State University named after Ivan Franko

Producing Electronic Materials for Teaching the Humanities Using Authoring Tools

Each stage in the social development puts forward its requirements to specialists especially to teachers, as they prepare new generations to living and performing various tasks of the modern society. The beginning of the XXI century is identified as the period of transition from the Industrial to the Information Society which requires the acquisition of new skills and abilities on the part of teachers in general and teachers of the Humanities in particular. They include the ability to deal with the huge amount of information, to use Information and Communication Technologies (ICTs) in their professional activity, teachers' readiness to the innovative activity, etc. Hence in the Information Society it is necessary to prepare prospective teachers of the Humanities for the usage of ICTs in their future professional activity. One of the trends of using ICTs in the educational process is producing didactic materials for pupils which can be presented in electronic or printed forms.

In our previous publications we paid our attention mostly to using Office programs (MS Word, MS Excel, MS Publisher and MS Power Point) for creating such materials [1: 90-91]. *The aim of this article* is to describe the possibilities of the so called authoring tools for producing pupils' didactic materials and suggest the plan of the practical class included in the specialized course "Forming professional skills of prospective FL teachers using ICTs" for the students of the Institute of Foreign Philology of the Zhytomyr State University named after Ivan Franko.

In general **authoring tool** also known as *authorware* is "an installable program that allows you to create materials in electronic format which can then be distributed on a CD-ROM, DVD, USB pen drive, floppy disk or via a web page to your learners" [2: 129]. The distinction between authoring tools and programming tools is not clear-cut. Typically, though, authoring tools require less technical knowledge to master and are used exclusively for applications that present a mixture of textual, graphical, and audio data [3]. So, the teacher can create an electronic teaching aid without having special programming skills that is especially important for the teachers of the Humanities who are not as computer-literate as the teachers of Computer Science.

Some authoring tools allow us to make tests or puzzles, the others – to write in a text related to class work. The most popular types of tasks which authoring tools can provide for teaching languages are gap-filling, multiple-choice, true or false, sequencing, total-deletion, matching exercises etc [4]. There are a lot of programs which are available in the Internet and they can help us to make any didactic material in a few minutes, which we can use in a printed variant or in an electronic variant online. Of course, if a teacher has no access to the Internet, it is better to use offline authoring programs for creating electronic didactic materials.

In this article we'll analyze two online authoring programs such as Puzzle Maker (<http://puzzlemaker.discoveryeducation.com>) and Easy Test Maker (<http://www.easytestmaker.com/default.aspx>) and one of the offline authoring tools Hot Potatoes (<http://www.halfbakedsoftware.com>). These three programs, in the author's opinion, are especially useful for teachers of the Humanities as they have the following advantages:

- they are free of charge (for the educational purposes);
- it doesn't take a lot of time to create materials with their help and they are very easy to use, that gives the opportunity to use them both for teachers' and pupils' creative work during the lesson;
- they enable to create exercises of different types;
- the exercises produced with their help can be saved and presented in printed variant;
- some of them (Hot Potatoes) have the possibilities of inserting multimedia (pictures, animation, sound) and hypertext;
- some of them (Hot Potatoes) provide the automatical feedback and different modes: the beginner mode and the advanced mode.

The authoring online program Puzzle Maker creates such types of puzzles for the language teaching as *word search puzzles*, *criss-cross puzzles*, *double puzzles*, *fallen phrases puzzles*, *letter tiles puzzles* and *cryptograms*. For using this program you should have the access to the Internet. In Figures 1 and 2 we present the fragments of the materials produced by the students of the Institute of Foreign Philology of the Zhytomyr State University with the help of this program.


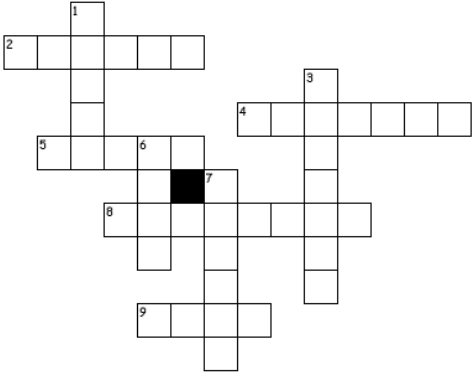
| Transport | |
|---|--|
| <div style="text-align: center; font-weight: bold; margin-bottom: 10px;">Transport</div> <div style="margin-bottom: 10px;"> TARM <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/> BSU <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/> ACR <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/> NAELP <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/> TIRNA <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/> CECLYBI <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/> ONLAOBL <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/> </div> <div style="margin-bottom: 10px;"> <input type="checkbox"/> <input type="checkbox"/>K <input type="checkbox"/> <input type="checkbox"/>V <input type="checkbox"/> <input type="checkbox"/>VE <input type="checkbox"/> <input type="checkbox"/>H . </div> <p style="font-size: small; margin-bottom: 5px;">Unscramble each of the clue words. Take the letters that appear in <input type="checkbox"/> boxes and unscramble them for the final message.</p> <p style="text-align: center; font-size: x-small; margin-bottom: 5px;">Created by Puzzlemaker at DiscoveryEducation.com</p> <div style="text-align: center;">  </div> |  <div style="font-size: x-small; margin-top: 10px;"> <p>Across</p> <p>2. We go there to see films</p> <p>4. Articles of dress</p> <p>5. It grows on the ground in parks and fields</p> <p>8. A high hill</p> <p>9. Not far</p> <p>Down</p> <p>1. The cat is ... the table</p> <p>3. I get up at 7 o'clock in the ...</p> <p>6. It falls in winter</p> <p>7. A dog is an ...</p> </div> |

Fig.1. A Double Puzzle (on the left) and a Criss-Cross Puzzle (on the right).

| | |
|--|---|
| <pre> V E G E T T A P B L M E S A R E G O O D O F O O A R O U R H E A L T H + R + R T C + + + + + + + + + R + + A + + + + + + + + + O + A + B T + + + + + + T + W + + + C B + O + + + + + O + + + + + A + + + + + + + M + + + + + G + + + + + + + A + + + + + E + + + + + + + T + + + + + + + + + + + + + O + T O O R T E E B + N O I N O + + + + + + + </pre> <p>(Over, Down, Direction) BEETROOT (8, 13, W) CABBAGE (11, 3, S) CARROT (10, 6, NW) MALLOW (11, 1, SW) ONION (7, 15, W) POTATO (8, 1, SE) TOMATO (4, 6, S)</p> <p>Vegetables are good for our health.</p> | <p style="text-align: center;">Vegetables</p> <pre> V E G E T T A P B L M E S A R E G O O D O F O O A R O U R H E A L T H I R U R T C O X H P C W Q D D Q B R T S A A B R N H N U E Q T O O A O B T P W I A A F T Q W G B D C B A O Z N A X F O M M V P A B A Y C J T Q U H H H N C O B R G F U B B O P E A D X U R B J E I C O U L Y S T L J M J Z L P I K P F K O H O U W U P Y J V M R M W I L J A Y U W W L E K O S T W T O O R T E E B R W W W V G H C F H Y B N B Z D A S A Q B C Q I N O I N O Q U J D H U U C </pre> <p style="text-align: center;"> BEETROOT CABBAGE CARROT MALLOW ONION POTATO TOMATO </p> <p>----- -----</p> |
|--|---|

Fig.2. A Word Search Puzzle with a Hidden Message (with the Solution).

The authoring program Easy Test Maker creates different types of test (exercises) such as *multiple choice* tests, *true/false* tests, *short answer* tests, *matching* exercises and *fill in the blank* exercises. You can also create a mixed test which includes different types of exercises. One more feature of this program is saving all of the exercises produced in your personal "box" at the web site. So, you can watch your tests in any room which has at least one computer connected to the Internet. In Figures 3 and 4 we present the fragments of the materials produced by the author and the alumna of ELT Summer School "Professional Development of Teachers in the Information Society" (Zhytomyr State University, September 15-19, 2008).

| | | | |
|---|---|--|---|
| <p style="background-color: #0056b3; color: white; padding: 2px;">EasyTestMaker</p> <p style="text-align: center; font-size: small;">www.easytestmaker.com</p> <p>As.....as</p> <p>Match the parts of the phrases</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> 1) _____ as old 2) _____ as snug 3) _____ as cool 4) _____ as melancholy 5) _____ as merry 6) _____ as fit 7) _____ as mad 8) _____ as sure 9) _____ as flat 10) _____ as good </td> <td style="width: 50%; border: none;"> a. as a cat b. as eggs is eggs c. as a pancake d. as a March hare e. as a bug in a rug f. as a cucumber g. as a cricket h. as a fiddle i. as the hills j. as gold </td> </tr> </table> | 1) _____ as old 2) _____ as snug 3) _____ as cool 4) _____ as melancholy 5) _____ as merry 6) _____ as fit 7) _____ as mad 8) _____ as sure 9) _____ as flat 10) _____ as good | a. as a cat b. as eggs is eggs c. as a pancake d. as a March hare e. as a bug in a rug f. as a cucumber g. as a cricket h. as a fiddle i. as the hills j. as gold | <p style="background-color: #0056b3; color: white; padding: 2px;">EasyTestMaker</p> <ol style="list-style-type: none"> 1) Paris est la capitale de la France <ol style="list-style-type: none"> a) True b) False 2) En France on parle <ol style="list-style-type: none"> a) francais b) anglais c) allemand |
| 1) _____ as old 2) _____ as snug 3) _____ as cool 4) _____ as melancholy 5) _____ as merry 6) _____ as fit 7) _____ as mad 8) _____ as sure 9) _____ as flat 10) _____ as good | a. as a cat b. as eggs is eggs c. as a pancake d. as a March hare e. as a bug in a rug f. as a cucumber g. as a cricket h. as a fiddle i. as the hills j. as gold | | |

Fig.3. A Matching Exercise (on the left) and a True/False Exercise (on the right).

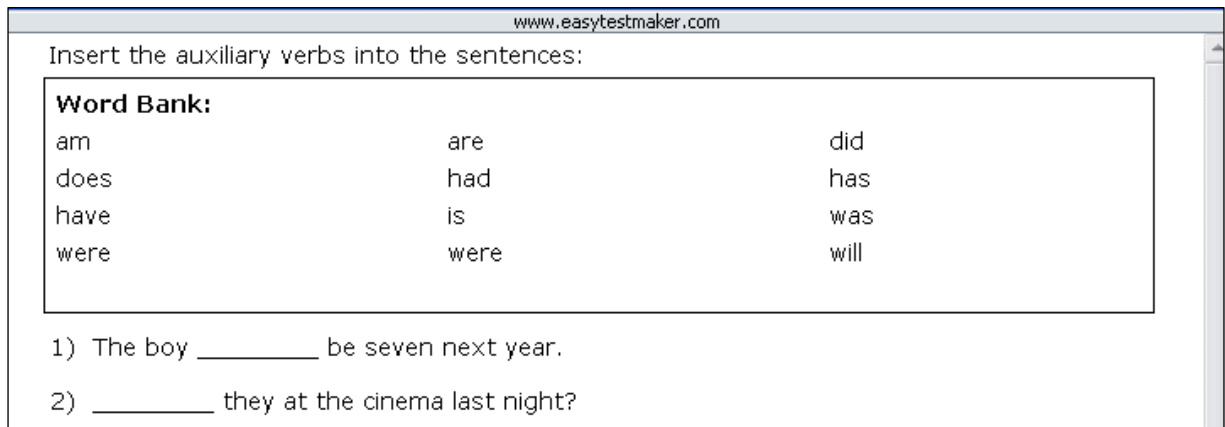


Fig.4. A Fill in the Blank Exercise.

All the exercises made with the help of the tools described above are not completed in the interactive mode online but are used in a printable variant.

One of the most popular offline shareware authoring tools is Hot Potatoes which can be downloaded freely (<http://hotpot.uvic.ca/index.htm#downloads>), installed on any computer and used for educational purposes free of charge. Actually, it includes five subprograms (Fig. 5):

- 1) JQuiz program which creates question-based quizzes including multiple-choice questions, short-answer questions, hybrid questions (short-answer questions that turn into multiple-choice questions after several attempts), and multi-select questions (in which the student has to choose several of a set of options, then check the choices);
- 2) JCloze program which creates gap-fill exercises;
- 3) JCross program which creates crossword puzzles;
- 4) JMix program which creates jumbled-sentence exercises;
- 5) JMatch program which creates matching or ordering exercises.

In addition, there is a program called the Masher which is designed to create complete units of material in one simple operation [5].



Fig.5. Programs of the Hot Potatoes Suite.

In Figures 6-9 we present the fragments of the materials produced by the author and the students of the Institute of Foreign Philology of the Zhytomyr State University with the help of this program.


The image shows two side-by-side screenshots of a web application. The left screenshot displays a matching exercise with five icons and a list of activities. The right screenshot shows a crossword puzzle interface with a grid and a list of clues.

Matching Exercise (Left):

- Icon 1: A woman on a telephone. Dropdown menu: "speaking over the telephone".
- Icon 2: A person thinking. Dropdown menu: "thinking over the problem".
- Icon 3: A winged figure (Cupid). Dropdown menu: "flying in the sky".
- Icon 4: A hand painting. Dropdown menu: "drawing a picture".
- Icon 5: A hand holding a cake. Dropdown menu: "carrying a cake".
- Icon 6: A hand holding an ice cream. Dropdown menu: "eating an ice-cream".
- Icon 7: A hand swimming. Dropdown menu: "swimming in the sea".
- Icon 8: A hand playing a game. Dropdown menu: "playing computer games".
- Icon 9: A person lifting weights. Dropdown menu: "going in for sports".

Criss-Cross Puzzle (Right):

Complete the crossword, then click on "Check" to check your answer. If you are stuck, you can click the grid to see the clue or clues for that number.

Across 4:  Enter Hint

Grid clues:





- 1:
- 2: h i p p o
- 3:
- 4:
- 5:
- 6:
- 7: m
- 8:
- 9: p a n d a
- 10: g i r a f f e

Buttons: Check, Index =>

Fig.6. A Matching Exercise (on the left) and a Criss-Cross Puzzle (on the right).

The image shows a screenshot of a web application displaying a gap-fill exercise. The background is green. There are five sentences with missing words and corresponding images. A score overlay is present in the center.

Gap-Fill Exercise (Left):

- In early spring all migrating  begin to return from warm
- countries and  their n
- They twitter and  sweetly on the branches of the trees.
- The  trees begin to blossom.
- The  begin to sow fields.

Score Overlay (Center):

Your score is 15%.
Some of your answers are incorrect. Incorrect answers have been left in place for you to change.
OK

Buttons: Check, Hint, Index =>

Fig.7. A Gap-Fill Exercise.

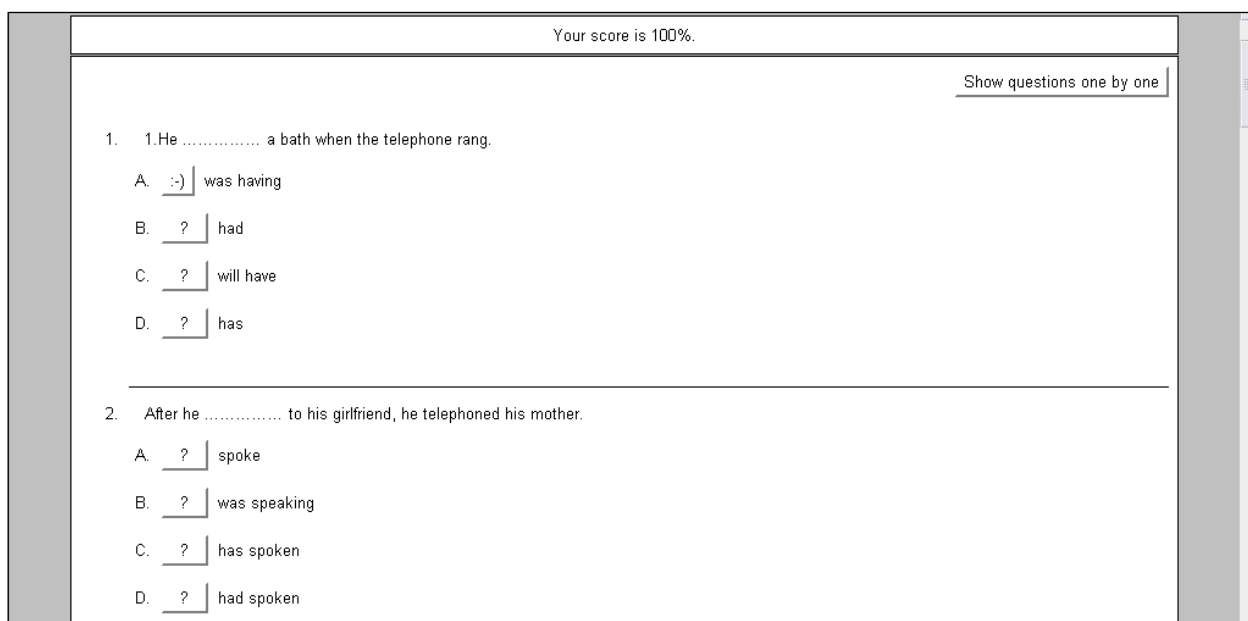


Fig. 8. A Multiple Choice Test.

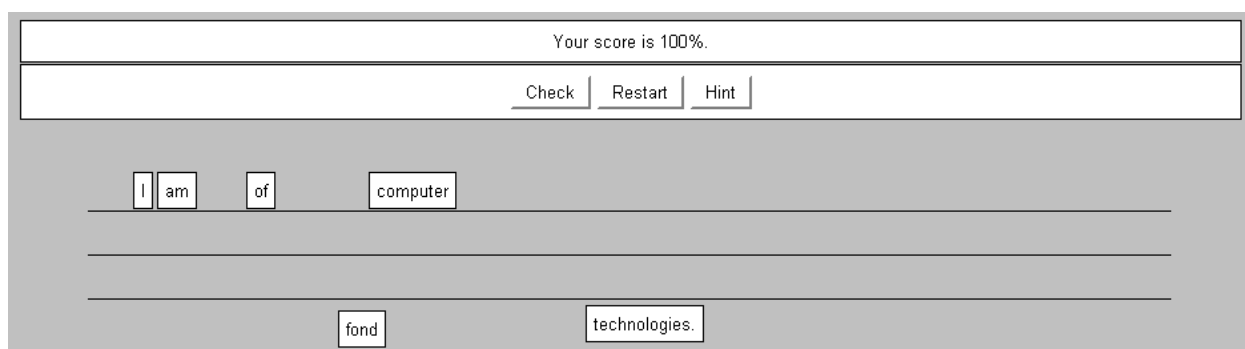


Fig. 9. A Jumbled-Sentence Exercise.

All the exercises made with the help of the programs described above provide automatical feedback (the score is given) and may be completed in the interactive mode both online and offline, using hints and without them. It is possible to use them in a printed variant as well but without the corresponding feedback.

In order to prepare prospective FL teachers for the usage ICTs in their professional activity as well as to form their professional skills we created a specialized course "Forming professional skills of prospective FL teachers using ICTs" for the students of the Institute of Foreign Philology of the Zhytomyr State University named after Ivan Franko. So, we suggest the plan of the practical class devoted to producing electronic materials with the help of authoring tools included to this course.

Theme: Creating Didactic Materials with the Help of Authoring Programs

Aim: to analyze the possibilities of authoring programs for creating didactic materials and create some materials for teaching FL with the help of them.

Dominating skills developed: information-practical, constructive, cognitive.

Adjoining skills developed: organizational, communicative, additional (design skills).

Hardware necessary: one computer per group of 3-4 students connected to the Internet.

Software necessary: offline authoring program Hot Potatoes, online programs Puzzle Maker and Easy Test Maker, a catalogue of didactic materials made with the help of the programs mentioned on a CD-ROM or installed on the computers.

1. Questions to be discussed:

1. Possibilities of the authoring tools for creating didactic materials.
2. Types of tasks which are possible to create with the help of authoring tools.
3. The ways these tasks can motivate the pupils and the skills they can develop.
4. The algorithm of making didactic materials with the help of authoring tools.

2. Practical tasks to do:

I. Pre-computer work

1. Look at the screenshots of electronic didactic materials made with the help of the authoring programs Hot Potatoes, Puzzle Maker and Easy Test Maker and say what types of the exercises they suggest.
2. Try to predict other possibilities which these programs may have.

II. Computer work

1. Look through the computer version of the didactic materials mentioned above in the electronic catalogue and say if you were right in your predictions; define the teaching aims of the exercises, topics and the stages of the lesson, at which they can be used; complete some of the exercises.
2. Visit the websites <http://www.school.discovery.com> and <http://www.easytestmaker.com>. Analyze the possibilities of the program Puzzle Maker for creating different kinds of puzzles and the program Easy Test Maker for creating different kinds of tests online; create one short puzzle and one short test yourself.
3. Watch the tutorial to the program Hot Potatoes from the CD-ROM [2].
4. Load the program Hot Potatoes from your computer, read the additional information about the possibilities of this program in the Help Contents and create one short exercise of any type.

III. Post-computer work

1. Discuss the didactic materials which you've watched at the lesson, comment on the way the teaching aims are achieved, comment on their design, common features and differences, analyze their cons and pros and suggest your ways of their improvement.
2. Explain the technology of making the didactic materials under consideration with the help of the programs which were analyzed at the lesson.

3. Suggest 2-3 exercises of different types and teaching different aspects of the language which can be made with the help of authoring tools.

IV. Tasks for the next laboratory work

1. Make up a catalogue of exercises made with the help of authoring programs for teaching different aspects of the language.
2. Divide them into two groups: exercises which can be introduced in printed variant and exercises which can be introduced only via a computer.
3. Design your own 3-4 didactic materials (on paper), be prepared for creating them in an electronic variant during your laboratory work using online and offline authoring tools for your Portfolio and the further presentation in class.

So, the professional preparation of prospective teachers of the Humanities (and FL teachers in particular) for producing electronic materials with the help of authoring tools is one of the important trends in their general preparation for using ICTs in the future professional activity. In our next publications we'll focus on the other trends of using ICTs such as using Internet resources (websites, chats, blogs, web quests, E-mail etc.), multimedia CALL (computer-assisted language learning) programs and the peculiarities of planning computer-assisted lessons.

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