

Framework of the Language Learning Environment for Assisting Foreigners in Learning Croatian (AFILC)

Kristina Posavec

Faculty of Humanities and Social Sciences
Ivana Lučića 3, Zagreb, Croatia
kristina.posavec@gmail.com

Nives Mikelić Preradović

Faculty of Humanities and Social Sciences
Ivana Lučića 3, Zagreb, Croatia
nmikelic@ffzg.hr

Sanja Kišiček

Faculty of Humanities and Social Sciences
Ivana Lučića 3, Zagreb, Croatia
smatic@ffzg.hr

Summary

The goal of this paper is to present the development framework of the interactive multimedia project AFILC (Assisting Foreigners in Learning Croatian). The purpose of the AFILC is to develop language learning materials that will motivate foreigners to learn the Croatian language and help them cope with its grammatical richness. Interesting graphics, motivating user-friendly interface, educational character and interactivity are the characteristics that will enhance the process of mastering the Croatian language for foreigners. In the AFILC the users will be able to almost completely control and manage the process of learning at their own pace.

Key words: e-learning, computer assisted language learning (CALL), the Croatian language, multimedia, foreigners, education

Introduction

In this paper we will present the concept of the AFILC - the interactive multimedia learning system that will make the process of learning Croatian as a foreign language easier and more appealing to foreigners. The main idea is to make learning more dynamic and appealing to the specific group of people (adult learners between ages 25 and 40) who want to learn the Croatian language. The AFILC system will be available online and free of charge, so that

each user has the opportunity to access and manage all the learning materials. The application interface will be interactive and all the users will be able to follow their own learning path, hopefully improving their language skills. Also, one of the main characteristics of the AFILC system will be its communicative approach, focusing on the language use rather than the language analysis.

However, foreign language learning is not the only aim of this project. Our secondary goal is to link the process of language learning with a wider knowledge of Croatian culture, heritage and history of the Croatian people. All educational materials will consist of carefully selected texts about Croatian history, literature, poetry, art and tradition as well as contemporary issues. Also, we will include facts about some of the most famous Croats that are recognized all over the globe, for example Eduard Slavoljub Penkala, Janica Kostelić, etc.

Description of the AFILC system

The software for learning Croatian as a foreign language will be designed for beginning level of learning. The target group refers to people between ages 25 and 40 who are information technology (IT) literate. The requirement of IT literacy is important because the software will be interactive and it will require the user to manage all the included material. The content will be based on everyday communication in Croatian. Communicative language learning is more appropriate for performing individual beginning level lessons performed by the help of a computer application than analytical learning [13], which is based on studying the morphological structure of the language. The analytical method is appropriate for higher levels of language learning, such as intermediate, advanced and professional. We believe that beginner users should learn basic concepts in a foreign language, and build their own dictionary, which will enable them to communicate in Croatian and cope with everyday situations. The basic language that will guide the user through the content in the software will be English. Application is intended for foreigners who do not belong to Slavic nations, because the Slavs are not absolute beginners in the Croatian language due to similar language structures. Initial version of the AFILC software will offer 20-30 words in a dictionary, and between 10 and 15 most common communication phrases. Based on presented words and phrases, we will provide an explanation on discrepancy between nouns, verbs, adjectives, numbers (1-10) and pronouns (personal and possessive). The last two sections will apply on learning the three most common verb forms (simple present tense, simple past tense and simple future tense), and two cases with their corresponding declensions, i.e. noun inflections (nominative and accusative case). We will put emphasis on practical work and exercises, because we believe this kind of approach is most appropriate for computer assisted language learning (CALL). We also believe that interactivity has a greater impact on users' perception and adoption of language than classical education based on textbooks.

Learning modalities and cognitive styles in the AFILC system

Learning modalities are sensory based and refer to the primary way our bodies take in information through our senses: visual, auditory, kinesthetic and tactile [8].

On the other hand, cognitive styles represent a consistent approach to organizing and processing information, typical modes of problem solving, thinking, perceiving and remembering. Global style learner is one who processes information and sees the perceptual field as a whole, more socially oriented person, while the analytic style learner can easily break the field down into its component parts and is not influenced by the existing structure.

The people from our target group need a constant link between the learning content and real life situations because it is very important for them to quickly adapt in everyday life. Therefore, they are global style learners [7]. The main feature of the global cognitive style is the establishment of interaction between the user and the language used in everyday communication. Instead of classical learning, where a user gets a textual hint in the parenthesis, we will use graphical material as we can see in example 1. Combining global cognitive style with visual and auditory learning modalities our users will utilize the AFILC as interactive multimedia software for learning. The visual modality is characterized by use of words and phrases that evoke visual images, while the auditory modality pertains to thinking in a linear manner, listening and verbalizing words [7]. While using the AFILC, users will be able to hear the pronunciation of certain words, phrases or even complete sentences in the Croatian language and that will make learning easier. We will give examples of useful phrases for getting around in space and time, for example “Where is the Botanical Garden?”, “How to get to the Museum of Zagreb?” or “Do you know what the time is?” We believe this way the users will master some basics of everyday communication. The application will include a dictionary in which every word will contain a textual explanation both in English and in Croatian. The pronunciation will be only in Croatian. Auditory based exercises will be designed in the form of dictates. User will have to enter the text that is dictated to him into a certain field. At the end, a user will get the correct answer, i.e. properly written text, and an insight into mistakes. The visual modality will be encouraged by a combination of text and pictures, as presented in example 1. Vocabulary exercises will include graphical material where the user will have to recognize what the image shows, for example, exercise of identifying and writing words, as it is shown in example 2. The AFILC will cover orthographic learning, so that users learn how to write words and orthoepic learning in order to hear the correct pronunciation of a given word. Each example will be followed by a pronunciation of the word in the whole sentence. When learning vocabulary, the semantic level is very important, since it explains the word that the user is learning. This explanation will be available in two languages, both English and Croatian. The pragmatic aspect of learning is also important, since the AFILC will allow the user to learn

the basic phrases that are used in everyday communication, which will enable the user to learn about the general culture of Croatia (example 3).

Example 1

Fill in the blanks. The picture might help you.

Koji _____ vozi do Trga bana Josipa Jelačića?



Trenutno je _____ sati.



Example 2

Drag the image of the peach in the circle and then write the correct word in the text field and click on the check-box button to get the correct answer.



Write word here



Multimedia and interactivity in the AFILC project

The AFILC project is based on several multimedia principles that will be explained within this chapter. The learning content will be presented to users in a dynamic way that includes picture, sound, video and animation in order to make the language learning process more efficient and easier than it is in the traditional classroom environment [1, 11].

We will use animation moderately, since the excessive use of animation can be a distraction for users and change their focus [3, 10]. Usage of colors will be balanced and not too intensive. The audio materials will be clear and comprehensible, without any background noise, while the narrator voice will be pleasant and calming with an emphasis on the parts that are important. Finally, our aim is to create a balanced relationship between image, sound and text in the application [5].

The AFILC system will use controlled interactivity that enables user to individually navigate through the content. The navigation bar will allow user to control the displayed content and navigate from one unit to another in a simple and easy way.

The idea of AFILC isn't to replace language teachers; the idea is rather to improve the users' learning skills enabling them to master the basics of the Croatian language quickly and more efficiently using well-designed multimedia activities that want to imply multimedia principles and interactivity in language learning situations.

Quizzing in the AFILC system

As it was stated before, adult foreigners that are beginners in the Croatian language will make the target group of users using the AFILC. Therefore, the test will be created for beginning level of knowledge. The tests will not be time limited and users will be able to work with the exercises at their own pace. There will also be the possibility of self-evaluation after solving the exercises. Upon completing a given task, users will see the correct answers immediately and get an insight into their mistakes. Knowledge testing will be conducted in a form of a quiz. The following question types will be used: choice, matching, filling in the blanks and short answers. Essay questions will not be used since they are "reserved for spoken and written production"[6] and since an individual learning a foreign language for the first time cannot perform self-evaluation on this type of question. The primary purpose of the AFILC software is acquiring basic knowledge of the Croatian language. An example of an educational activity for knowledge assessment that will be used in the software is given below. Explained example can be graphically seen in Example 3:

Description of activities

Unit: general knowledge related to Croatian culture.

Communication themes: vocabulary knowledge check, understanding the questions, mastering general culture.

Learning content: nouns, verbs, pronouns, numbers, colors

Mode: individual

Degree: beginner level

Purpose of the educational activity: acquiring Croatian vocabulary and proper usage of the terms in a given context. The aim is that users master correct writing and adopt general Croatian culture.

Exercise description: the interactive crossword appears on the computer screen with fields that users have to fill in. Below the crossword, there will be questions in English. Questions and fields in the crossword will be matched by the same number. Answers to the questions will correspond to fields in the crossword. At the end of each line in the crossword puzzle there will be an interactive button. After entering a term, users can click on the button to get the feedback on the correctness of their answer. Exercises can be repeated as many times as necessary.

important issue is the motivation of users, which we tend to increase and sustain by the inclusion of dynamic games and exercises (examples given). In developing the AFILC, we will use Adobe Flash CS5, a comprehensive tool which enables designing software with a considerable amount of interactivity for dynamic learning. We will not use the software that does not support the diacritical characters, which are an integral part of the Croatian language. We will not use software such as Easy generator, Dreamweaver or Microsoft Office PowerPoint, which is commonly used in drill and practice exercises. The reason for not using PowerPoint is that its' primary purpose is presentation, rather than interactivity. We also have to consider the size of the application for two reasons: firstly, for storing the application on a portable media, such as a DVD or a CD ROM, and secondly, so it can be run on older and/or slower computers. Therefore, the graphics in the software should not be too demanding. We wish to create the AFILC software that will be available online so that users can access it from all over the world. Since there are plenty of computer training programs for preschool and school age (e.g. *Zekina košarica*, *Sunčica među slovima*, *među brojka*, *u prirodi i u prometu*), we plan for the AFILC to be a computer education program for users between ages 25 and 40 that have basic ICT literacy. Therefore, the design and usage has to be adapted to those structures. We will avoid too colorful content, as well as too cheerful music, interface congestion with unnecessary animations and graphics that distract from the main purpose, i.e. learning. Instead, we will use video clips, photographs, illustrations, moderate animations and pronunciation. The content will include articles intended for the target group (music genre, trends, fashion, etc.), phrases for getting around in the city and concepts from general Croatian culture (sports, film, art, nature and cultural heritage). We want to follow a constructivist approach of learning with a learner at the centre of the educational process [2]. The AFILC software will be useful, cheaper and more attractive compared to learning from textbooks. Although the main goal of this project is learning a foreign language, we must not neglect the second most important goal, which is the integration of learners in the Croatian society through communication and contemporary themes.

Lexical issues of cases and verb forms

The most common problem in mastering the Croatian language is production of meaningful sentences using appropriate verb forms and cases. Since this project is for beginning level of learning, our wish is to create a good foundation for later learning process so that the user could better master the higher levels of the Croatian language. We will concentrate on mastering the basic verb forms only; simple present, simple past and simple future tense because we believe those are necessary for basic communication. We will present only two cases, nominative and accusative, out of seven altogether. We will give examples of noun inflection for the two cases so the users gain basic knowledge for further understand-

ing of the rest of the cases and corresponding inflections. The reason why we chose the nominative is because it is a "neutral case, used for the nomination and accusative is taught second since it is the most common case after the nominative case and has a simple meaning that can be a good learning material in beginner level communication" [12]. We will try to resolve the problem of acquiring different verb forms and cases by forming thematic units that will be used for basic communication phrases for getting around in space and time. In the unit with verb forms, we will initially include adverbs of time at the beginning of sentences in order to help users to master simple present, simple past and simple future. Afterwards we will form sentences without adverbs of time. Together with verb forms we will introduce accusative case. For beginning level, it is important that users know to which questions the cases respond to. This would ease the proper use of cases. Nominative case will be demonstrated on the example of people introducing each other (examples 1, 2) or on explanation of words and concepts (3, 4). Learning the accusative case by the help of a verb that can be followed by a direct object, such as eat, drink or look will clarify the difference between nominative and accusative case (5, 6, 7). In addition to the textual content, pronunciation of words or whole sentences is essential in order for the user to hear the difference between the nominative and accusative case, which will be emphasized all the time.

Example 4:

- (1) Moje ime je Marko. → tko? Marko
- (2) Ja sam Marko. → tko? Marko

- (3) Ovo je restoran. → što? restoran
- (4) Ovo je ptica. → što? ptica

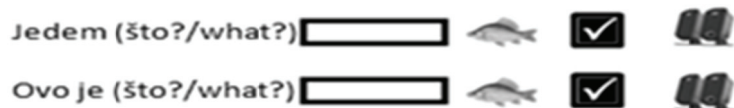
- (5) Jedem ribu.
- (6) Jest ću ribu.
- (7) Jeo sam ribu.

The software will support pronunciation of both incorrect and correct answers. This option will enable the user to hear the difference between correct and incorrect answers. Verb pronunciation will be accompanied by a video clip presenting the action of the verb. A user will have to recognize what action is presented after which he will have to provide the correct verb form in simple present, simple past and simple future tense.

In example 4 there are exercises for noun inflections in the nominative and accusative case. By the help of photos, a user will have to fill in the blanks in the sentences. After filling in the blank, a user clicks the check-box button on the right side and the software provides feedback on the correctness of the answer. In either case, a user will get an explanation why the answer is correct or why it

is incorrect. After that the user will be able to click on the button for pronunciation of the sentence, which will enable hearing the difference between the nominative and accusative case. The goal of this type of exercise is that the user understands the differences between the nominative and accusative case both in terms of grammar and pronunciation. Grammar definitions and inflection rules are not sufficient for successful language learning. Through interactive exercises, video clips, animation, and pronunciation, users will master Croatian grammar and spelling much quicker and easier than by using textbooks. The AFILC software will provide exercises and explanations, and users will be provided by feedback so they learn on their mistakes. The educational content will not be comprehensive, since the program is designed for beginning level of language learning.

Example 5



Evaluation and conclusion

The evaluation of the AFILC system will involve the testing of the effectiveness and usability. In order to measure the effectiveness of the software, we will conduct a research involving two groups of learners, the control group and the experimental group of learners. Users in the experimental group will use the AFILC as a learning instrument, while the users in the control group will use the conventional learning method. A pre-test and a post test will be conducted with both groups. By means of a pre-test we will see if all the users are on the same level of knowledge in Croatian. We will also test the users' information literacy. The questions will be designed to assess the users' understanding of the specific language lesson. The results of these tests will be compared to measure the users' performance.

The usability evaluation will be performed by distributing a set of questionnaires to the experimental group after they have learned a specific lesson using the AFILC. Four usability factors will be used to evaluate the system: learnability, efficiency, screen design and satisfaction. Those factors will also be used to evaluate the usability of the specific multimedia elements integrated into the system.

References

- Abhaya Asthana. Multimedia in Education - Introduction, The Elements of, Educational Requirements, Classroom Architecture and Resources. <http://encyclopedia.jrank.org/articles/pages/6821/Multimedia-in-Education.html> (19th May 2011)
- Alessi, Stephen M, Trollip, Stanley R. Multimedia for learning. Needham Heights: Alyn and Bacon; 2001.
- Betrancourt, Mireille. The Animation and Interactivity Principles in Multimedia Learning.//The Cambridge Handbook of Multimedia Learning. Cambridge University Press. University of California. Santa Barbara. 2005.
- Bratanić, Maja. (1993) Nastavnik stranog jezika kao tumač strane kulture.// Trenutak sadašnjosti u učenju jezika. Zagreb: Hrvatsko društvo za primijenjenu lingvistiku.
- C.W. Debusse, Justin; Hede, Andrew; Lawley, Meredith. Learning efficacy of simultaneous audio and on-screen text in online lectures. // Australasian Journal of Educational Technology. Vol. 25, No. 5 (2009), 748-762
- Ferbežar, Ina; Požgaj-Hadži, Vesna. Kako izgraditi jezični test.//Lahor. Vol 2(2008), No.6; 165-182
- Fowler, B.T. The effectiveness of computer-controlled videodisc based training. Unpublished doctoral dissertation, University of Iowa, Iowa City, 1980
- Grgić, Ana; Kolaković, Zrinka. Primjena stilova i nastavnih strategija u nastavi hrvatskog kao inog jezika.//Lahor. Vol.1(2010), No.9;78-96
- Levy, Michael. Computer-assisted language learning: context and conceptualization. Oxford: Oxford University Press, 1997
- Mayer, Richard E.; Moreno, R. (1998). "A Cognitive Theory of Multimedia Learning: Implications for Design Principles". <http://www.unm.edu/~moreno/PDFS/chi.pdf>. (17th May 2011)
- Najjar, Lawrence J. Multimedia Information and Learning.// JI. of Educational Multimedia and Hypermedia Vol. 5 (1996), No. 2, 129-150
- Udier, Sandra Lucija; Gulešić-Machata, Milvia; Čilaš-Mikulić, Marica. Gramatičko-semantički pristup obradi padeža.//Lahor. Vol.1(2006), No.1; 36-48
- Underwood J. Linguistics, computers and the language teacher: a communicative approach, Rowley, Massachusetts: Newbury House, 1984