

Xue Han Zi: Using Multimedia to Teach Chinese

Sun Lam, Alexandre Oliveira, Tony Lavender, Luís Cabral, Adérito Marcos

German Abstract

Wenn man die Einzigartigkeit der chinesischen Sprache bedenkt, und den dürftigen Bestand des vorhandenen Lernmaterials zu dieser Sprache, so kann man wohl durchaus behaupten, dass es eine Herausforderung der besonderen Art ist, eine CD-ROM Multimedia-Anwendung mit Web-Support zum Erlernen von geschriebenem Chinesisch zu erstellen.

Semiografische, piktografische, spezielle und Bewegungs-Charakteristika kennzeichnen die geschriebene chinesische Sprache und verlangen nach intuitiven Lernformen mit Hilfe von multimedialen Mitteln.

Das Xue Han Zi Projekt schafft eine Multimedia-Umgebung zur Unterstützung des Lernprozesses von geschriebenem Chinesisch. Der Unterricht zielt darauf ab, dem Lernenden die Bedeutung der Schriftzeichen und korrekte Schreibgewohnheiten beizubringen, wobei die Schulung der Räumlichkeit und Balance ebenso wichtig ist wie die richtige Reihenfolge der Pinselstriche.

Das Projekt wurde vom CCG in enger Zusammenarbeit mit dem Zentrum für orientalische Studien des Instituts für Kunst und Geisteswissenschaften sowie dem Fachbereich Informationssysteme der Universität von Minho durchgeführt.

Introduction

As the Chinese-speaking areas are becoming the focus of the world economy, more and more people are attracted by their language and culture. The number of beginners in Chinese language is growing rapidly. Although the Chinese language has unique characteristics, there are still very few teaching and learning materials which serve the basic needs for starting the acquisition of Han Zi. A multimedia application, both in CD-ROM and on-line, can provide a virtual teacher for understanding and learning Chinese writing at an elementary level and, without doubt, can attract more learners.

The Project

It is not easy to learn Chinese characters, and this has discouraged many curious people to learn Chinese.

The project Xue Han Zi is being developed by CCG in close partnership with the Centre of Oriental Studies of the Institute of Arts and Human Sciences of the University of Minho and the Dep. of Information Systems of the same university.

Our aim – based on our teaching and learning experiences with the Chinese language for Portuguese and other European students – is to create an easy tool to start Han Zi using a vision of its visual and motor dimensions of writing for beginners of any age group. To achieve this, the use of multimedia technology together with civilization, visual and mnemonic criteria is crucial. All the semiographic, pictographic, special and motional characteristics of Chinese writing enable a more intuitive study of the language. The inherent rules, the (de)composition of its characters and the existing associations should benefit from the help of multimedia in the sense that attractive graphical visualization can be vividly created and navigational characteristics can also be provided.

The development of this project will include the following:

Correct writing habits

The writing of the characters must obey an economy of gesture and space as well as a body-cosmos-mind harmony. An exploration of the »specific way« of writing



Figure 1: One shot of the system

strokes is shown through the execution of real calligraphy. This enables the learner to follow all of the movement of the brush at its normal rhythm and also to get a deeper impression of the correct direction of each stroke.

The sense of space and balance and the correct sequence of the order of strokes are also important elements for the process of the »embodiment« of Chinese writing. A selection of eight main structure patterns are shown together with a colored division of the »space blocks« and a numbered sequence, so that the learner is trained to be able to analyze the structure of a character and to follow the rules for executing the writing.

All of the characters chosen in the program (about 450) are demonstrated using »Kaishu« calligraphy. The rhythm of the natural movements and pauses of the brush can stimulate the mnemonic devices of the learner, so that the »recalling« of a character is based on observation or even on a sub-conscious imitation of the hand movements using repeatable video demonstrations of the calligraphy. This selection of a limited number of the most typical sinograms (pictograms, ideograms and phono-ideograms) permits a neurological and mental internalization for the further acquisition of other characters.

A logical and visual organization for the acquisition of characters
Radicals were divided in their semantic genus: Human Being, Human Activities, Habitat, Working Instruments, Nature and Animals. Each figure leads to the page of a group of radicals and the meaning of each radical is demonstrated by a visual image, sound and legend. Further searching of each radical will lead to a page of characters composed by that radical.

By clicking each character under a radical group, one can find an animation that shows the basic meaning of each character, the sound of its pronunciation, the legend, and a video that shows

Figure 2: Example of a character writing



the calligraphic writing process in action. The video image can be controlled by the user to stop or to repeat each character.

When a component of a character also serves as a radical in another character, for example in case of »wen« (to ask) and »jian« (division of time or space), one can find the character either in the radical directory of »kou« (mouth) or »ri« (sun), and between these characters a horizontal navigation is also possible. This function can allow endless casual visits to different semantic groups of radicals, thus helping the learner to achieve a visual understanding of the semantic-based association between characters.

A set of »games«, contextualized with the navigation, will be provided for practicing the learned material. Different levels will be created to provide challenging tasks.

Main features of this multimedia application Xue Han Zi:

- No age limit
- Suitable either for classroom use or individualized learning
- Enables either Chinese character acquisition or the practice of calligraphy (investigation with graphic tablets is required).
- Allows both semantic guided consultation and casual navigation
- Can be used on either a personal computer fitted with CD-ROM or on-line teaching through the WWW

This project »Xue Han Zi« – a multimedia method of learning the Chinese language from its roots – may be further developed with a second and a third version in the future: for a lexical acquisition of »ci« or »cizu« based on individual characters; and the acquisition of simple, contextualized sentences based on »ci« or »cizu«.

Points of contact

Prof. Adérito Marcos
CCG, Guimarães, Coimbra, Portugal
Email: Aderito.Marcos@ccg.pt

Alexandre Oliveira
CCG, Guimarães, Coimbra, Portugal
Email: Aoliveira@ccg.pt

Dra. Sum Lum
CLCO/ILCH/UM, Braga, Portugal
Email: slc@ilch.uminho.pt