

# the Application of the Atutor Learning Content Management System in Teaching

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**Abstract.** Atutor is an open-source on-line LCMS based on Web, and it has nice adaptability and utility. Tutors can assemble the courses on Web immediately; they can also obtain and input packed courses easily and manage their on-line courses as well. Students are able to study under a adaptable circumstance. Referring to documents and materials, this article has discussed thoroughly the advantage and disadvantage in the use of atutor, drawing from modern teaching theory and functions of different modules, taking Television Video graphing On-line Course design as an example, expounded every step in how atutor is used in teaching design and concluded the practice and prospect of atutor in teaching.

**Keywords:** atutor, learning content management system, on-line course, teaching design

## 1. Introduction

The emergence and development of the internet has gradually changed people's work, life and learning method, which impacts the education in the first place. In the century of information transmitting as light speed, the sharp increase and communication of knowledge has broke through the limitation of time and space. People have to learn and get charged continuously in order to adapt to the fierce social competition and improve the self-competency.

Based on the traditional teaching and learning, using scientific technology to study efficiently has become the common sense for people in the information age. However, the continuous expansion of the internet information requires more for people's working ability of information technology. For the convenience of learning and resource sharing, it is vital to exploit efficient e-Learning platform to assist learning. As one of the e-Learning products, atutor, the powerful learning content management system (LCMS), would be more and more important in future education with people's constant understanding.

## 2. Definition of Key Concept

### 2.1. What is LMS and LCMS

The Learning Management System is a software used in education and automated training management. LMS is responsible for user registration, tracking courseware in the content list, recording data of the learner and submitting reports to manager. The typical Learning Management System can deal with several publishers' courseware, which usually does not include courseware authoring function (belongs to LCMS) but mainly provides courseware managing function.

Learning Content Management System is a new phase in the development of e-Learning. It combines the concept of LMS and CMS, which creates an e-Learning application system that can be made, storage, assembled and published by a non-experience courseware maker based on learner's individual learning content.

## 2.2. What is Atutor

Atutor is an on-line Learning Content Management System (LCMS) based on Web Open Source firstly advocated by the Canadian. Its design principles are strong operability and universal adaptability ---the administrator can install or upgrade atutor in a short time and replace a new user pattern (through self-defining template); Teachers can assemble, package and distribute again rapidly based on Web teaching contents. Moreover, they can acquire and import the contents packaged to administrate their on-line courses. The students can learn in an adaptable learning circumstance.

The most important is that atutor is a technology based on open source code, which makes it a low-cost but high-efficient tool able to publish teaching material on line and convey on-line teaching material automatically. You can acquire each language packages you need by atutor, which conquer the language obstacles and make atutor a multinational content management system.

## 3. ATutor System Framework and Function Analysis

### 3.1. ATutor Environmental Supports

Install atutor in local computer requires the following components (For the ordinary Windows users, it is fine to use the installation software EasyPHP includes the following three programs): Apache Server, PHP Lang Pack, MySQL Database Server.

### 3.2. The Key Operation in Software Installation

#### (1) Set up database information

After setting up atutor configuration, it is fine to enter into the installation of atutor. Having input “http://localhost:8080/ATutor/install.php?” in the address bar in the browser, you need to click “Install” to install. When reaching the database setting-up page, pay attention to fill in the correct account code. (as Fig.1 shows:)

* Database Port: The port to the database server. Default: 3306	<input type="text" value="3306"/>
* Database Username: The username to the database server.	<input type="text" value="root"/>
* Database Password: The password to the database server.	<input type="text" value="admin"/>
* Database Name: The name of the database to use. It will be created if it does not exist. Default: atutor	<input type="text" value="atutor"/>
? Table Prefix: The prefix to add to table names to avoid conflicts with existing tables. Default: AT	<input type="text" value="AT_"/>

Fig. 1: Database Information Setting-up

#### (2) Build up “Content” Directory

Under the root directory of atutor, first build a folder named ”Content” and set up its permission as “Everyone”. Otherwise, it would report error during the installation that the correct file can not be found. (as Fig. 2 shows:)

**Content Directory**

**Error**  
• Content Directory entered does not exist.

\* Content Directory:  
Please specify where the content directory should be. The content directory stores all of the courses' files. As a security measure, the content directory should be placed outside of your ATutor installation (for example, to a non-web-accessible location that is not publicly available). On a Windows machine, the path should look like C:\content, while on Unix it should look like /var/content. The directory you specify must be created if it does not already exist and be writable by the webserver. On Unix machines issue the command `chmod +rwx content`, additionally the path may not contain any symbolic links.

Fig. 2: Content Directory Error

### (3) Chinese Package Installation

When successfully installed, download the matched language package under the website root catalogue. Use the account of the super administrator to enter the back office, input the language package needed (as Fig. 3 shows). Then modify the constant to “1 ” from the AT\_DEVEL\_ TRANSLATE in “/include/vitals.inc.php.” Lastly, designate the language by clicking the “Translate” button in the bottom of the page. After translating, modify the constant to “0” of the AT\_DEVEL\_ TRANSLATE, so other non-administrators can not change the language arbitrarily.

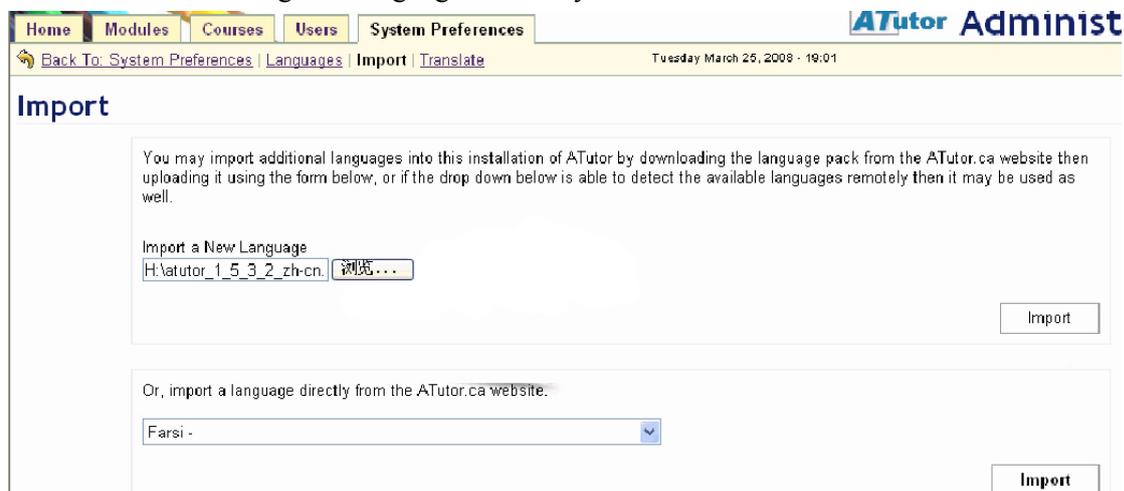


Fig. 3: Chinese Package Importing

## 4. Atutor’s Application in Teaching

Atutor is an open source Learning Content Management System. It can easily set up course management platform. With the help of powerful, easily operating atutor, we can save time, effort and money to set up a good online course management platform. It provides an effective supporting role for general course management staff.

On the atutor platform, if the user has the super administrator’s or teacher’s permission, he can build up his own on-line course according to the actual demands. Design and develop the on-line course includes the following several steps:

### 4.1. Prior Design of On-line Course

The preceded design is very vital for developing a high-quality on-line course. The Chinese E-Learning Technology Standardization Committee announced in the On-line Course Assessment Specification which is published on Nov.9th, 2002 that assessing the quality of the on-line course should be based on the following four dimensions: course content, instruction design, interface design, technology. However, the course content is the core that decides the quality of on-line course. It contains: course instruction, content chunk, content organization, content link, resource extent etc. The requirement for interface design is style uniform, screen arrangement, cognoscibility; navigate orientation, link identification, e-bookmark and operation help, etc.

### 4.2. Course Creating

On atutor platform, teacher can create a course. While creating the course, he or she can classify and add essential description to the course and set up browse right (public, protected or private), course icon, content capacity and the size of the largest file.

### 4.3. Course Management

After creating the course, you are allowed to enter the management panel in which the picture has been disposed) to add learning content.

## 5. Conclusion

Atutor is a Web-based Learning Content Management System which is developed on practicality and ease of use. Through it, teachers can easily develop online learning content learn in a structured environment. Learners can browse course contents by all kinds of ways and make it suitable for their own preferences. This paper discusses setting up a "television cameras" online course with the help of atutor in detail and demonstrates its' using process. It is believe that atutor will play an increasingly important or even irreplaceable role in education with ours thorough understanding and atutor's own continuous improvement.

## 6. References

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