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## IMPLEMENTING VIRTUAL LEARNING ENVIRONMENT WITH DOKEOS



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**Abstract:** With the emergence of Internet, advent transformations been observed in every discipline, then how education could be immune to it. Virtual Learning Environment (VLE) is one such tool that emerged, imposing the class room education even without attending it. There are several such tools available both open source and commercial type for creating such environment virtually. Though Moodle and ATutor gained wide importance, but there are also other tools available which have been observed for smaller training and content management needs. Present paper discusses one such open source software called Dokeos. It also deals with its pre-requisites, features, installations and implementation at the user end.

**Keywords:** Virtual learning environment, traditional learning, Dokeos, PHP, open source software.

### INTRODUCTION:

Virtual Learning Environment (VLE) brought revolution in the educational discipline. Not only the big institutes and educational organizations welcomed it, but smaller entrant also experimenting and adopting it to provide best to their students in terms of replication of not only class room teaching environment but also facilitating their students with various other information sources. Virtual learning environment itself is a set of web-based tools that are implemented and accessed via internet. The ease of using VLE and also its customised interface makes it more\*\*\*among students. Though traditional institute took longer time to implement it, rather small institutes initiated and adopted it to provide web-based courses. Many comparative studies have been carried out for VLEs with computer-aided learning. Computer-aided learning is limited only to the network it is accessible, but VLEs can break that network infrastructure limitations. Also VLEs provide high level of control over students in terms of interactions and students participation. Institutes and organizations using such VLEs used to upload various information like course details, credit details, notifications, announcements, apart from other administrative information like enrolments, assessment, and admission related information. Timely, students can access it and can be benefitted with its several other unlimited utilities also.

Much have been discussed about open source and commercial software, their advantages, disadvantages, features, and others. Also there are number of such VLEs software available both open source and commercial also. Some of the open source software are already adopted and implemented by some of the institutes like Moodle and ATutor (open source software) and Blackboard (Commercial

software), etc. But there are other small, simple, and more easy and handy to customize software available which can very well serve the need for smaller learning institutes. The present paper discuss one such software called Dokeos, i.e. how to install it, its features, advantages, disadvantages, and its use and comparison over such other similar softwares.

### DOKEOS: ABOUT

Dokeos is open source software meant for e-learning and virtual learning environment type web applications. It is free software and is available under GNU General Public License. It is available in more than 30 languages, SCORM compliant, and light, flexible, easy to be customized and used. It is a web application written in PHP that stores data in a My SQL database. It can be accessed using any web browser.

Dokeos is AMP software, i.e. it should work on any platform running Apache + MySQL + PHP. It is also supposed to work on the Operating Systems like Linux, Windows (98, Me, NT4, 2000, XP, VISTA), Unix, Mac OS X. Technically, It has been tested on Fedora, Mandrake, Red Hat Enterprise Server, Ubuntu, Debian, Windows XP, Windows 2000, Mac OS X 10.3, etc. As such Dokeos is a commercial service company that sells services for Dokeos like hosting, installation, custom developments, live conferencing, and training, etc. Dokeos is available in three versions:

**DOKEOS:** Dokeos offers rich learning suite that is free of charge, open source and will always be (as said by the company)

**DOKEOS PRO:** Dokeos PRO is an open source paying learning suite with extended features and services for mission-critical projects.

**DOKEOS MIND:** Dokeos MIND offers teachers and students a free and easy tool to draw mindmaps and diagrams, etc.

Dokeos support team also working further in developing and ergonomically designing the software and is constantly releasing its updated versions, as Dokeos 2.1 in September 2011, Dokeos 2.2 in January 2012, Dokeos 2.3 in July 2012, and its latest version Dokeos 2.4 in February 2013.

<sup>2</sup>One of the Project Hosting powered by Google Code which provides free collaborative development environment for open source projects says Dokeos 2.0 brings the web 2.0 experience to your e-learning and collaboration platform with a true social platform and a lot of drag and drop interactions. Dokeos 2.0 is a major release offering a complete revolution as compared to Dokeos 1.8. They experienced that teachers, trainers, students, and trainees tend to use only a few features in classical learning management systems for two reasons: Virtual learning remains complex and far from the kind of software usability one find on a telephone, an Apple or Ubuntu-based computer; and the rich variety of pedagogical scenarios (social networking, clinical case studies, serious games...) is hampered by software complexity. But Dokeos solves these two problems by offering an easy to use e-learning platform that offers scenarios and templates where needed. Dokeos 2.0 does not focus on adding new and trendy features nor does it follow the hype of adding features that are only useful to a limited set of very highly skilled and experienced users and simply because adding these features is possible. Instead they focus on the common user and good and solid e-learning solutions. They want to give the user control over the content and allow her/him to create the e-learning training that (s)he has in mind with as little effort as needed and answer quickly and easily as possible.

Dokeos 2.0 features a completely new design that has been realised by a unique collaboration between users, designers and usability experts a modern agenda with drag and drop functionality Pedagogical scenario assistance Advanced authoring tool Integrated Content Templates Quiz templates Mindmapping Widgets Social network

<sup>3</sup>Kineo one of the global learning companies recommends two VLEs software, Moodle and Dokeos. Moodle for professional users and Dokeos for starters. It also says, these tools provide high levels of customization, the ability to brand specifically to one's requirements, and most of them have all the reporting functionality that one can need. Also they serve wide range of rich features that beat many of the commercial proprietary VLEs.

#### DOKEOS: FEATURES

Dokeos serves wide features range of features apart from the basic requirements needed for any of such VLE software tool. Some of its features are shown in the Figure 1.

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Figure 1. Dokeos features4

It also offers some of the other features like

- Administrative reporting
- Course authoring
- User roles defining
- Privilege and access controls
- Course interactivity
- Goal setting
- Multimedia features
- Skills Tracking
- Student Tracking
- Testing
- Templates
- E-Commerce
- Generate Reports
- Instructor Scheduling
- Report Management
- Email
- Online self serve
- Remote Training, etc.

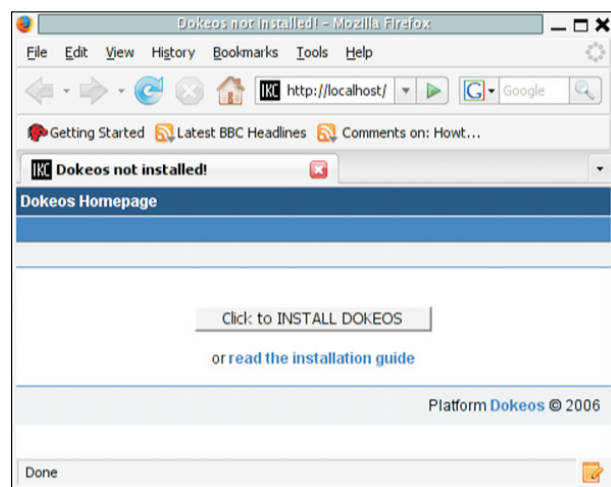
#### DOKEOS: INSTALLATION AND IMPLEMENTATION

Before installing Dokeos on any system, its prerequisites check can be carried out. Dokeos can be installed on any system with Windows, Linux, Mac OS X and UNIX as operating systems. Still Linux is recommended for optimal flexibility, remote control and scalability.

Dokeos is actually a VLE which is running Apache, MySQL and PHP, sometimes called AMP trilogy. All these software are open source and also freely available. To run Dokeos on any server, one need to install WAMP, LAMP or MAMP. A login and password is required which allows to administrate and create at least one database. By default, Dokeos also create a new database for each course created. But for this your host should allow you to create and administrate several databases. One can also install Dokeos using only one database, but for this option has to be selected while installation.

One can also test and check the Dokeos on a localhost server on the port 80. For this a server toole like easyPHP, XAMPP, or WAMP, etc should be available on the system. One can download the Dokeos (latest available version is Dokeos 2.0) from its official website, i.e.

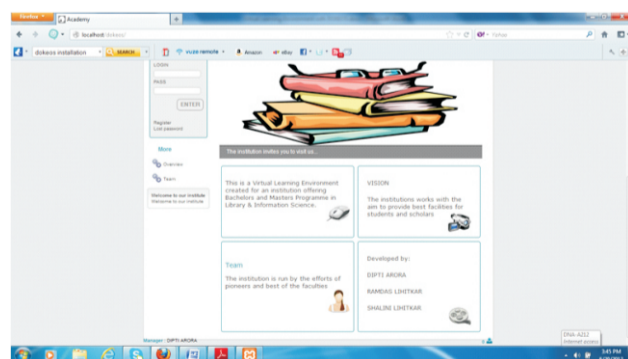
<http://www.dokeos.com/en/download.php>. It is 53.6 MB zip file. One can unzip it in the web folder of the server. Authors tested Dokeos using the XAMPP 1.8.1. After unzipping, open the localhost on your web browser. If everything is ok, it will show a screen like as shown in the Figure 2.



**Figure 2. Dokeos installation on localhost.**

After this follow the instruction on the screen. No need to create the database from the PhPmyAdmin (as for the other similar open source software), Dokeos itself create the database. But either one database for all courses or several databases for each course option have to be manually chosen. After the complete installation, it can again be opened on the localhost. One can customize the home screen as per its individual requirements, as shown in the Figure 3. One can create a course, can make a course list, design course categories, make automatic enrolments, or can import users list. It also provides several portal features like:

- Configuration settings
- Portal Backup
- Portal news
- Languages
- Edit portal home
- Registration page
- Traffic Reporting
- Global calendar
- Automatic emails



**Figure 3. Customised home page on Dokeos.**

Above all, it also provides a search facility both simple and advanced search. One can also generate, export, or can print the reports for the individual students for each course.

### CONCLUSIONS

Dokeos is one of the best and easy to use open source software available. Its handiness to implement and customise and also its detailed documentation made available by its developing team make it very easy to install even if one is technically not that sound. At present it has more than 4 million users and its implemented in various other sectors like corporate, government, education, & medical etc. Its official website also update with various case studies and problems faced by individual users with their solutions provided. Its Mobile version 2.2 is very smooth and easy on tablets and iPads. Authors downloaded, tested, created various courses, created users profile, and gave the liberty to its users to explore it in their way. It was felt and observed very quick and efficient for its every available option. It also provides data interoperability and sharing materials and data among users apart from providing basic communication like e-mail, etc. Dokeos help is also available on their official website through its support team. One can always use it for their institution specially for the smaller organizations and institutes.

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