

## SYSTEM OF DISTANCE LEARNING ADMINISTRATION IN CONTINUING EDUCATION FOR PRIMARY SCHOOL TEACHERS

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### ABSTRACT

The article describes the peculiarities of the organization of primary school teachers continuing education by means of web technologies, presents the website of the system of primary school teachers continuing education (<http://sno.udpu.org.ua>), and analyzes its content and structure. The website of the system of primary school teachers continuing education is created with the help of four instrumental platforms WordPress, Moodle, PhpBB and "cloud" technologies from Microsoft (SkyDrive, Padlet) which are analyzed and generalized in the article. The system of primary school teachers continuing education consists of program and methodical parts. The program part includes the following modules: registration module, "profile" module, administrative module, course development module, module of organization of educational and scientific methodological activities.

The content of the methodical part is presented in the organization of primary school teachers continuing education, namely on the webpage "Distance Education" developed in Moodle (see <http://sno.udpu.org.ua/дистанційне-навчання>). It offers more than 49 distance learning courses running on Moodle and developed in accordance with the Regulations on eLearning Certification at Universities and Ministry of Education and Science of Ukraine (see. [http://mon.gov.ua/images/gr/obg/2010/08\\_06\\_10.pdf](http://mon.gov.ua/images/gr/obg/2010/08_06_10.pdf)). Also this webpage can be seen by all logged in users. The access to courses is allowed to certain groups of students. The methodical part is supplemented by other webpages. The webpage "Scientific Methodological Work" shows organizing and convening the annual scientific and practical Internet-conferences on the problems of pedagogical education. The results of these conferences are reflected and discussed at forum (see <http://sno.udpu.org.ua/blog>). The webpage "Library" includes scientific and methodical journals, regulations and guidelines which are used by modern primary school teachers in their activities. The website of the system of primary school teachers is the answer of modern educational system to the needs of information society during specialists' training.

**Keywords:** system of continuing training of primary school teachers.

## **INTRODUCTION**

Modern continuing education is complex and dynamic system, which is closely related to the innovations in the state. Taking into consideration the objective relationship with social and economic processes in Ukraine, the system should develop, improve, and focus on production and the growth of social welfare.

Today, the continuing education for primary school teachers in Ukraine is in the process of significant changes when the dynamic technologies of distance learning are laid in the basis of the traditional model of education. Their use allows to achieve planned results only for a reliable, safe and productive control.

One of the main objectives of primary school teachers' continuing education is to ensure free and open access to gain knowledge taking into consideration needs, abilities and interests of students.

## **RESENT STUDIES ANALYSES**

The problem of continuing pedagogical education has always been in the focus of researchers. Such scientists as O. Andryeyev, V. Oliynyk, Ye. Polat, G. Kozlakova, G. Kravtsov, V. Kuharenko, P. Stefanenko, V. Soldatkin, Zh. Talanova, B. Shunevych pay attention to the issue of distance learning implementation into the educational process. However, the principles of practical management of distance learning in primary school teachers continuing education still remain not enough grounded.

## **THE PURPOSE OF THE ARTICLE**

Analyze the peculiarities of primary school teachers' continuing education. We present site of primary school teachers' continuing education, developed by four instrumental platforms (WordPress, Moodle, PhpBB and "cloud" technologies Microsoft).

## **MAIN MATERIAL STATEMENT**

### **Basic Notions**

Content Management Software (CMS)-is a content management system or content manager that allows automating the process of content management as a whole and its components: pages, templates of data output, structure, information content, users and access rights.

Now, most educational institutions have their own Internet web resources and one of the objectives of our study is to develop the continuous education system for primary school teachers in the form of a web resource.

We have developed the site of primary school teachers continuing education (<http://sno.udpu.org.ua>) based on four contents: WordPress, Moodle, PhpBB and "cloud" technologies from Microsoft. Its brief description is the following.

### **WordPress**

**WordPress is a website builder with open source freeware. Written in PHP, MySQL is used as database. It has a built-in system of "themes" and "plugins" that allows to construct any projects.**

**WordPress has the following advantages:**

- **Easy in use (for work with WordPress does not necessarily have a deep knowledge of web programming. This allows the user to create a quality site.).**
- **Easy in modernization (the system is easily updated without any installation).**
- **Firmly secure (the system has sufficient levels of safety and appropriate means for their improvement).**
- **It has many templates and plugins (the system has a wide selection of free templates and plugins).**
- **Quick operation (system takes up little space on server disc and has optimized system of server code) (V. G. Shemet'ko, 2013).**

**So, taking into consideration the positive benefits of WordPress, we have used WordPress content as a wrapper of primary school teachers continuing education. (<http://wordpress.org/download>).**

### **Moodle**

**Moodle is a software package for distance education in a global network.**

**Moodle is distributed as free software with open source (Open Source) licensed under the GNU Public License. This means that Moodle protects copyrights. An ordinary user also has certain rights: can copy, use and modify the code on your own, give another code, use the same license for all subsequent work (O. P. Mukoviz, 2011).**

**The system contains many components. Thanks to its modular structure (35 components of the course can be potentially applied) the decision to use one them may be taken at any time or even during the particular course of study. It provides enough flexibility – you can start using the system with necessary at this point, even individual components (e.g. a discussion forum, a glossary (glossary of terms), lessons, etc., gradually filling rate with other elements).**

**Moodle use allows:**

- **To give the educational materials to all interested students or a selected group of users through a network (Resources, Lesson, Glossary of terms (glossary), etc.);**
- **To provide and maintain the possibility of mutual communication between the participants of the educational process, studying courses using online**

(Communication participants should have access to the network at the same time and use chat tools, communicators programs, internal messaging system, etc.) and offline modes (simultaneous network access is not needed; contact is made with the use of the Forum, e-mail, Tasks, Journal (workbook), etc.);

- To document and save works, the discussions results, asked questions and received answers. Using the e-learning system you can create a kind of "portfolio" a whole group or individually for each participant;
- To give tools that provide the possibility of ongoing monitoring and evaluation of individual participants progress and delivery of return data on the each theme study, including ratings and reviews in their works (Forum, Tasks, Journal (Workbook), Reports, Surveys, Questionnaires, etc.);
- To analyze the participation and activity of separate course participants, their time devoted to working with materials; give an assessment of mastering course elements; quickly respond to problems, such as sending additional materials; maintain control over semantic (didactic) side of given assistance (Je. M. Smyrnova-Trybul's'ka, 2008).
- In the system of primary school teachers' continuous education, we used the distance education system of Pavlo Tychyna Uman State Pedagogical University developed in Moodle content (<http://dls.udpu.org.ua>).

### **PhpBB**

PhpBB is popular builder to create web forums, which is absolutely free and is distributed under GNU General Public License. This development of Open Source has open outgoing code, so any time you can change its functionality or add some features. Forum developed by PHP language can work with various databases. We use MySQL.

PhpBB is a versatile, easy to use and manage. Additional features can always be added by installing mods (small distributions of instructions allowing to add new features to the forum). Forum is multilingual. There is a simple template system that allows you to draw a forum in any design.

That is why we use PhpBB content as web forum in the system of primary school teachers' continuing education (<http://bb3x.ru/download>).

4. "Cloud" technologies. "Cloud" technologies are very important in strengthening the continuing education of primary school teachers. They are a new step in the development of education and cost-effective, efficient and flexible way to meet the needs of students in new knowledge acquiring.

With these technologies and their tools we can create a university "cloud" to use its resources in accordance with the current requirements of education.

"Cloud" technologies-are dynamically scalable way to free access to external computing information resources in the form of services provided via the Internet (M Miller, 2008).

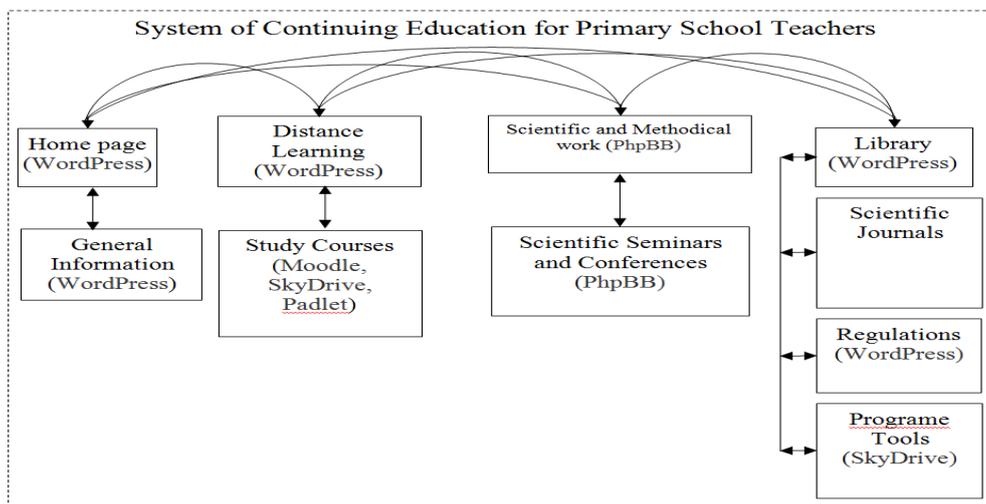
For the first time the term was used in 1997 in a lecture of Ramnath Chellappa as a new “computing paradigm where the boundaries of computing elements depend on the economic feasibility, not only from the technical limitations” (W. Y Chang, H. Abu-Amara, J. Sanford, 2010). Also, another technology from Microsoft -Padlet- is used in the system of continuing education for primary school teachers. It is intuitive, handy and many-functioned service for posting any resource on the online wall. One can work there without registration, and registered users are automatically notified about new objects on the wall and can make appropriate changes to them. To register on <http://padlet.com> it is enough to have one of the accounts Microsoft or Google. Service is free, has an English interface, but it is easy to use.

Table: 1 helps to summarize the peculiarities of contents for the system of continuing education for primary school teachers.

**Table: 1**  
**Generalized peculiarities of contents for the site of**  
**continuing education system for primary school teachers**

Content's Parameters	WordPress	Moodle	PhpBB	"Cloudy" Technologies Microsoft	
				SkyDrive	Padlet
Successful use in the educational institutions	+	+	+	+	+
Integration with the user's information environment	+	+	+	+	+
Open system code	+	+	+	-	-
Instrument panel for work with a content	+	+	+	+	+
Service support	+	+	+	+	+
Reliability	+	+	+	+	+
Ukrainian interface	+	+	+	+	-
System of patterns and plugins	+	+	+	-	+
Use of different types of print, plans, animations, videos etc.	+	+	+	+	+
Data warehouse	-	+	-	+	+
Means of communication:	+	+	+	-	+
exchange with text messages;	+	+	+	-	+
files exchange;	-	+	+	+	+
forums;	-	+	+	-	+
video-chat.	-	+	+	-	+

Using the above described content is schematically shown in Figure: 1 in the structure of continuing education system for primary school teachers (<http://sno.udpu.org.ua> -in the blast network of Pavlo Tychyna Uman State Pedagogical University).



**Figure: 1**  
Structure of site of continuing education for primary school teachers  
(<http://sno.udpu.org.ua> -in Pavlo Thcyna Uman State Pedagogical University network)

## INTRODUCTION TO THE SITE OF CONTINUING EDUCATION FOR PRIMARY SCHOOL TEACHERS

The system of continuing education for primary school teachers consists of program and methodical parts. The program part has the following main modules: registration module, the "profile" module, administrative module, module of organization of educational and scientific methodological activities. In order to make these pages fully available to users, you have to register on the site.

- Home page highlights general information and news on the website of continuing education for primary school teachers (see. <http://sno.udpu.org.ua>).
- Distance Learning. It offers more than 49 distance learning courses running on Moodle and developed in accordance with the Regulations on eLearning certification at universities and Ministry of Education and Science of Ukraine (Polozhennju pro atestaciju elektronogo navchal'nogo kursu na rivni VNZ ta MON Ukrai'ny) (<http://sno.udpu.org.ua/дистанційне-навчання>).
  - 2.1. Distance courses. As an example, we consider the structure of the window of the distance course "Modern Information Technologies of Education" (Figure: 2).

 Форум до курсу	
1	<b>Робочі навчальні програми</b> <ul style="list-style-type: none"> <li>Напрямок підготовки 6.010102 Початкова освіта</li> <li>Напрямок підготовки 6.010101 Дошкільна освіта</li> <li>Напрямок підготовки 6.010105 Корекційна освіта</li> </ul>
2	<b>Глосарій</b> <ul style="list-style-type: none"> <li>Термінологічний словник до курсу</li> </ul>
3	<b>Друковані та Інтернет джерела</b> <ul style="list-style-type: none"> <li>Інформаційні технології та технічні засоби навчання - Буйницька О.П.</li> <li>Електронний навчальний ресурс "Інформатика +"</li> </ul>
4	<b>Модуль I.</b> <b>Тема 1. Інформаційні технології навчання як дисципліна</b> <ul style="list-style-type: none"> <li>Лекція. Інформаційні технології навчання як дисципліна</li> <li>Презентація до лекції</li> <li>Тестування до теми 1</li> <li>Інтерактивна дошка</li> </ul>
5	<b>Тема 2. Базова конфігурація персонального комп'ютера</b> <ul style="list-style-type: none"> <li>Лекція. Базова конфігурація персонального комп'ютера</li> <li>Презентація до лекції</li> <li>Відеозапис до теми "Базова конфігурація персонального комп'ютера"</li> <li>Тестування до теми 2</li> </ul>
6	<b>Тема 3. Робота з операційною системою Windows 7</b> <ul style="list-style-type: none"> <li>Лабораторно-практична робота № 1. Організація роботи у комп'ютерному центрі. Архітектура ПК. Операційна система MS WINDOWS 7.</li> <li>Лабораторно-практична робота № 2. Операційна система MS WINDOWS 7. Налаштування системи.</li> <li>Лабораторно-практична робота № 3. Операційна система MS WINDOWS 7. Структура типового вікна. Типи вікон, їх особливості. Робота з вікнами. Компоненти – меню, лупа.</li> <li>Лабораторно-практична робота № 4. Операційна система MS WINDOWS 7. Компоненти – гаджети. Вікна папок – Провідник. Робота з папками та файлами. Пошук файлів. Архіватори.</li> <li>Додатки</li> <li>Відеозапис до теми Робота з операційною системою Windows 7</li> <li>Звіт до теми 3</li> <li>Тестування до теми 3</li> </ul>
7	<b>Тема 4. Робота з текстовим редактором Microsoft Word 2010</b>
8	<b>Тема 5. Робота з табличним процесором Microsoft Excel 2010</b>
9	<b>Тема 6. Створення презентацій у Microsoft PowerPoint 2010</b>
10	<b>Тема 7. Робота в мережі Інтернет</b>
11	<b>Модуль II.</b> Індивідуальне навчально-дослідне завдання (Початкова освіта) <b>Для студентів факультету початкової освіти</b> Індивідуальне навчально-дослідне завдання (ІНДЗ) передбачає розробку навчального проекту на вільну тему за програмою <a href="#">Intel® Навчання для майбутнього</a> . ІНДЗ завантажуйте у ZIP-архів!
13	<b>Підсумковий контроль</b> <ul style="list-style-type: none"> <li>Підсумкове тестування (варіант №1)</li> <li>Підсумкове тестування (варіант №2)</li> </ul>

**Figure: 2**  
**Page of the distance course "Modern Information Technologies of Education"**

The window of a distance course consists of blocks. A Block is a group of links, combined with the particular category. The user may optionally expand or collapse a block by clicking on the arrow or box in the right corner of the block. The name of the block is always displayed. Let us consider the appointment of main blocks in the distance course "Modern Information Technologies of Education" (Figure: 2). The following headings are on the home page of the course:

- **Block "Studying Program".** Users can look through the studying program of their disciplines by clicking on it. It can also be downloaded in PDF format.
- **Block "Glossary" or "Terminological Vocabulary to the Course"** contains all the relevant key words in a subject. It involves a review of definitions in alphabetical order and by a special search.
- **Block "Print and Internet Sources".** Additional web resources complement and extend the distance course opportunities.
- **Block "Modules".** Distance course "Modern Information Technologies of Education" includes studying of seven topics (+ individual research task module). Lessons themes can be viewed in the browser or download in an appropriate format (PDF, Word, PowerPoint, video, etc.). There are lectures and presentations related to it, laboratory and practical work and video lessons, tests.

For example, if you click on the "Presentation for a lecture" you will see a window where you can look through the multimedia lecture materials. To view this video you need to press the bottom "Video lesson to the topic ...", and then open the following window where you can see video serially thus to consolidate the course material to the theme.

The button "Testing" allows you to check the level of knowledge and skills relevant to the topic and the course as a whole. Time limits in testing can be different depending on the number and complexity of questions. Choosing the correct answer, the user receives one point, for successfully compiled test-10 points, the number of attempts is one. The additional attempt reduces the assessment by one point.

Block "Individual research task" involves the studying project development on a free theme by Intel® Education for future program.

Blocks "Forum" and "Chat" are the interactive means of communication between participants of a distance course.

Forums are the powerful tools of communication between students and lecturers. This is an asynchronous type of communication, which allows not to hurry with answers formulation that can be given at any time.

Messages in the forum are stored in different formats and may contain attachments. A student who studies discipline is automatically subscribed to the forum and receives copies of all new messages in his email.

Structure of forum:

- **Discussion (teaching themes) – each module has topics for discussion. It is clear that the distance course instructor should follow them and strictly moderate (check, approve, delete);**
- **Answers-students share their knowledge and write comments during the discussion.**

**Another important element in a distance course is a chat – “Interactive whiteboard” – Padlet resource from Microsoft. It is installed under each theme and allows communication in both synchronous as well as asynchronous mode. Distance course participants can see and hear each other using web-camera. This resource also allows you to save messages with attachments to further views.**

Administration	Allows to edit the content of a course: themes, modules etc.
Course administration	Allows the user to change main parameters and settings of distance course: title, date of start and ending of study, language of interface
Turn editing on	Allows to define the group of students in the framework of a distance course
Edit settings	It is the depository of marks: the system automatically evaluates students for each theme
Users	Allows to save information for renewing the chosen course
Filters	Allows to renew the previous data on the course
Reports	Allows to import courses where the user is registered as a lecturer
Grades	Allows to clean the course from users without any data changes
Badges	Gives the access to bank of questions of Moodle system to make tests form questions in the base
Backup	
Restore	
Import	
Publish	
Reset	
Question bank	

**Figure: 3**  
**Window of Settings**

Block "Latest News" contains links to the latest news of the distance course that automatically updated on the main page. They show new messages, notes on adding users, etc.

Block "Settings" is the main tool of study administration within a distance course. Main items of the block are as following (Figure: 3).

Block "Calendar" displays all events related to the distance course. These events can be added to the calendar. They can be for individual users (blue color), for groups (yellow color) or for the entire course (pink color). Course lecturer can enter information about the event to all users, or only certain groups of students.

Additional blocks of distance course can be added to the main window, depending on the configuration of the Moodle system.

- Scientific and methodical work involves organizing and conducting the annual All-Ukrainian scientific and practical Internet-conference "Continuing Pedagogical Education in Ukraine: State, Problems and Prospects" (see. <http://sno.udpu.org.ua/blog>). The results of this conference are reflected on the following page.

Internet-conference specificity allows determining its some advantages:

- No restrictions for participants regardless of geographic distance;
- Availability for participants-no special hardware requirements and communication channels;
- Cost effectiveness connected with the lack of travel and accommodation expenses;
- Expansion of the time frame of the conference conducting;
- Ability to connect to the conference at any time within the conference;
- Possibility of online discussion of current issues;
- Access to all proposed conference materials.

Thus, the main research results of technology of Internet-conference conducting are the realization of four targets: the publication, training, organization of scientific communication and the creation of constantly functioning scientific community.

4. The library consists of three additional pages (see. <http://sno.udpu.org.ua/sample-page>):

- "Scientific and Methodical Journals" where over 38 electronic publications with links to other Internet resources are presented (<http://sno.udpu.org.ua/журнали>);
- "Regulations" guidelines which are used by modern primary school teachers in their activities (<http://sno.udpu.org.ua/нормативні-documents>);
- "Educational Software" where large collection of computer applications to support the learning process in elementary school is available for downloading (<http://sno.udpu.org.ua/педагогічні-software-tools>).

## PERSPECTIVE DIRECTIONS OF THE SITE FOR PRIMARY SCHOOL TEACHERS USAGE

Using the site of continuing education for primary school teachers in the future allows to implement six priorities identified in the Memorandum of the European Commission in 2000:

- Recognition of the value of knowledge (understanding the importance of learning, especially informal and spontaneous).
- Information, counseling and career guidance (system of continuous access to quality information about learning opportunities throughout life).
- Investment in education (a significant increase of investment in human resources for the development of valuable capital – Europe's population).
- Approaching of learning opportunities to learners (development of distance education).
- Basic skills (guarantee of entry and constant updating of skills necessary for established participation in society, based on knowledge).
- Innovative pedagogy (development of effective methods for lifelong learning and a comprehensive training that includes formal, informal and out-of-formal (spontaneous) study) (O. Gulaj, 2010).

## CONCLUSIONS

Thus, the creation of a system of continuous education for primary school teachers is the answer of modern educational system to the needs of information society during specialists' training. Successful use of continuous education for primary school teachers depends on their level of information technology training, means of distance support, guidelines for work with it. Further our research will base on development the methods of distance learning in the system of continuous education for primary school teachers.

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Now he is working on his Doctor of Sciences (Pedagogics) dissertation "Theoretical and Methodical Basics of Distance Learning in the System of Continuing Education of Primary School Teachers". He has published more than 16 works on the problems of distance education. O. Mukoviz teaches the courses "Modern Information Technologies of Education" and "Basics of Distance Education" to future primary school teachers. He is a creator of the websites <http://sno.udpu.org.ua/> and <http://komeniana.udpu.org.ua>.

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