Journal of Research in Innovative Teaching

An Affiliate of the National University System

Model of the Regional System of Distance In-Service Teacher Professional Development in Ukraine and Its Implementation

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Abstract

An innovative model of in-service professional development for Kyiv region school educators using distance learning format is described. Kyiv Regional In-Service Teacher Professional Development Institute offers its vision and experiences in providing effective, up-to-date professional development using online technologies.

Key Words

Teacher professional development, professional development, distance education, regional system

Introduction

In the process of information society development, the system of education has to meet the following requirements: correspondence of the changes that take place to social, economic, and environmental challenges; adequacy of education to the constantly growing volume of information and new expectations; and rapid deployment of new information technologies. Therefore, the innovative paradigm of "lifelong education," or continuous education (Bolubash, 1997) replaced the old "teaching," or "supporting" paradigm.

Nowadays, information and communication technologies are integrated in different branches of public life and specifically in in-service teacher education. The process of in-service professional development targets not only the development of teachers' general pedagogic competencies and deepening their subject knowledge, but also the formation of a high-level teacher information culture (Zhaldak, 1989; Kartashova, 2004; Kozlakova, 2004; Serdyukov, Hill, & Serdyukova, 2009; Smirnova, 2004). The teacher information culture needs to be of sufficiently high level to ensure effective use of information and communication technologies in teaching, in preparing the learning process, and in improving teacher professional capabilities via self-education.

Distance Education in In-Service Teacher Professional Development

One form of integration of information and communication technology (ICT) in education is distance education, which is gradually being implemented in the practice of in-service teacher professional development.

The expedience of introducing distance education in the system of in-service teacher education is justified by the following advantages:

- Flexibility in educational process (comfortable time, place, rate of studies).
- Modular learning structure (personal motion trajectory for every teacher).
- Cost savings (on travel, food, accommodations, and salaries for substitute teachers).
- Stability of the educational process (diminishing the number of substitutions, decreasing changes in the schedule).
- Increased motivation of self-education.

- The fact that online leaning induces teachers to upgrade their level of informational culture (mastering hardware and software, using information and communication technologies in the classroom).

At the same time, it is worthwhile to mention the problems that arise in the process of ICT application and in the distance-learning format. Technical equipment in our schools is obsolete and insufficient in the delivery capacity, and the telecommunications network in the country is of low quality when schools may not have access to the Internet. In 2009 only 85% of Ukrainian schools were equipped with computer technology that, incidentally, did not meet contemporary requirements. Other schools do not have computers at all. The important criterion that demonstrates the level of computer support for the educational process is the number of students per computer. In the beginning of 2007, the average number of students per computer decreased from 49 to 41 students, and in the beginning of the 2008–2009 school year it improved to 25 students per computer.

An important challenge is teachers' psychological unpreparedness for independent study, and non-acceptance of new, innovative ideas. The main reason for this is not teachers' unwillingness to improve their professional skills, but rather a lack of necessary conditions for self-education in educational institutions, and inadequate use of information and communication technologies in their professional activities. This problem is particularly critical for rural educational institutions. The computer classes available in these schools do not help solve the problem, because both the hardware and the software are obsolete and do not meet modern requirements. Many of the computers are not connected to the Internet.

Teachers' computer literacy proficiency is generally low. The conducted research revealed that in the past few years this question has become a concern for many teachers, especially those ranging in age from 35 to 55, whose work experience was from 15 to 35 years. Usually, these professionals were the teachers highly recognized not only within the school they worked for, but also within the district, city, or region. However, the research found that 65% of them were unable to use modern ICT in their teaching practice, which caused considerable psychological discomfort, impacting their professional ratings and reducing the demand for their educational services.

Access to the Internet in Ukraine is not free. Although there has been an improvement in the availability of computers in schools, the situation with connecting schools to high-speed Internet needs to be improved. It is especially important for remote rural districts, where the integration of distance education is particularly crucial. It is important to note that teachers still have low motivation to use Internet resources, because they do not know how useful these resources are and how to use them in their work.

There are no legal standards for regulating the activities of educational institutions that offer distance learning programs. Contradictions that exist in the system of in-service teacher professional development also complicate the process of decision making, particularly a permanent growth in the number of trainees who cannot afford full-time attendance due to geographic location, travel expenses, the need to employ substitutes who may not be available in that area, the resulting changes in school scheduling, and other similar issues (Kozlakova 2004). Understanding the importance of modern ICT in providing equal access to high-quality education, especially for teachers in rural areas, was a motivation for the present authors to search for methods and tools to resolve these issues at a regional level.

Research in Distance Professional Development

Some of the results obtained during research are presented in this article. Having learned the national and foreign research and practical works where this problem has been studied (Polat, 2006; Serdyukov, Hill & Serdyukova, 2009; Smirnova, 2004; Irani & Telg, 2002), and using the experience of other Ukrainian educational institutions (The National Academy of Public Administration, Central Institute of Post-Graduate Pedagogical Education), Kyiv Regional In-Service Teacher Professional Development Institute developed the model of organization of in-service professional development for teaching staff of the Kyiv region schools, using a distance format of delivery.

The regional distance education center was established in the Institute in 2006. There are now 54 local distance centers in 31 districts and towns of Kyiv region. There were 74 instructors prepared to work in these centers. Advanced professional development of in-service teachers via distance-learning format is carried out in the institute in accordance with the following authorizations: Legislation of Ukraine in the field of Education, and the Concept of Development of Distance Education in Ukraine (hereafter termed "the Concept"); statute on organization of educational process in higher educational establishments, regional program of development of distance education of Kyiv region in 2006-2010; and statute on distance education in the system of in-service professional development of educational staff of the Kyiv region.

In accordance with the Concept, "distance education" is a format of studies, equal to full-time, part-time, evening, and external studies, which is delivered mainly via distance-learning technologies. An important notice was added in the Concept, regarding some of the educational processes of distance education that can be carried out in class (examinations, practicums, laboratory work, etc.).

The model for in-service professional development of pedagogical staff of Kyiv region combined on-site and distance forms of education. Such approach presupposed an integration of ICT, which ensured interaction and cooperation of trainees and high outcomes in the educational process.

For in-service distance teacher professional development, it was determined that the most reasonable form was a mixed approach to distance education (using case studies and network-ing), because it took into account the individual abilities and circumstances of every trainee. This combination also took into consideration the financial capacity of the majority of trainees and, therefore, was the most acceptable for them.

In-service teacher professional development was implemented via a blended format, and included three stages:

1. An organizational introductory session offered on campus.
2. Trainees' independent work, done online with instructor guidance
3. A final session done on campus.

During the intersession period, the trainees studied remotely, combining work and study. Distance lessons (lectures, seminars, practical assignments and individual sessions, independent work, study of learning materials, etc.) were conducted with the use of both traditional and modern ICT. The work performed by independent trainees was their principal way of gaining knowledge. Quality control of distance trainees' knowledge and skills was carried out by con-ducting assessments during on-site and online sessions. Throughout the learning process, trainees had to learn how to obtain and use knowledge, search and find the necessary sources of

information, work with this information, analyze it, and identify and address the problems of the intellectual and moral development of students. In order to receive certification, trainees who had taken the distance course took an online tutorial and defended a creative project.

Faculty of the Kyiv Regional In-Service Teacher Professional Development Institute developed 39 programs for teachers and administrators, the electronic versions of which are constantly being accumulated and integrated into the unique information system. Distance learning, which was mainly independent due the character of online learning, included the opportunities for communication with the instructor and other trainees and collaboration in the process of various cognitive and creative activities.

For organization and management of distance education, the traditional Learning Manager System (LMS) was used. This platform offered the two packages that supported creation of online courses, support-services registration of trainees, course management, administration of the learning process, assessment, and the generation of reports on educational achievements.

Specifically, Prometheus, the distance learning system used at Kyiv Regional In-Service Teacher Professional Development Institute (Prometheus, 2010) is used in many countries of the world. This system was developed for the organization of distance learning process and/or independent testing of knowledge. It can serve a large number of trainees, and it can be used as an additional means for traditional studies.

Thus, the model of distance learning used in the system of in-service teacher professional development offers the following advantages:

- Makes the process of in-service teacher professional development more open, continuous, and flexible.
- Improves professional skills without abandoning basic activity.
- Individualizes the process of studies focusing on the abilities and professional level of the teacher and the conditions of his or her pedagogical activity.
- Upgrades the level of ICT competences.
- Offers in-service teachers of Kyiv region the opportunity for self-study and self-development through distance courses during a 4-year period.
- To make trainees' work active during in-service teacher professional development, the present authors developed a model of trainee's activity, as shown in Figure 1. All types of activities are assessed and evaluated by a certain amount of points. Two weeks before completion of studies, a trainee must have earned at least 270 points. The number of educators who choose such form of studies (an over five-fold increase compared to previous two years.
- The number of options for preparation offered for learning (an increase of 2.3 times compared to previous two years).
- The number of districts having teachers who take distance courses (an increase of 1.9 times compared to the previous two years).
- The number of district and city centers of distance learning (an increase of 1.4 times compared to the previous two years), which demonstrates that the important of this issue is understood.
- The number of trainees who have required knowledge of computer equipment.

Furthermore, during these years, positive dynamics were observed that demonstrated the growth of the following factors, as shown in Table 1:

Table 1. *Improvements Through Distance Education*

Years/Data	Number of Teachers	Number of Options for Preparation	Number of Districts	Number of Centers	ICT Skill Improvement
2009-2010 School Year	213	30	21	54	68%
2008-2009 School Year	42	16	13	38	32%
2007-2008 School Year	38	13	11	25	26%

№ з/п	Діяльність слухача	Кількість балів
1.	Взяти участь у форумах (участь у форумах є обов'язковою) Пропонуються форуми: 1) два загальнодоступних форуми (організаційний та по вирішенню загальних питань із курсів соціально-гуманітарної та професійної підготовки) 2) фахові форуми для обговорення питань викладання конкретного предмету (спеціальності) та загальних проблем, що виникають під час викладання предмета або трудової діяльності (тему для обговорення можете запропонувати Ви).	10 балів за кожне суттєве повідомлення (мінімум 5 повідомлень) Вимоги до повідомлень: – висловлювати власну точку зору; – робити посилання на Інтернет ресурси (якщо це можливо), – не дублювати чужі повідомлення, – створювати повідомлення не в один день і не в останній, – робити посилання на літературу, на власний досвід роботи; – повідомлення не повинно бути досить громіздким. Першими повідомленнями у групі мають бути повідомлення у яких розміщується: – інформація про себе, – тема, над якою працюєте, – цікаві напрацювання, якими Ви можете поділитись, – проблеми, що виникають під час викладання предмета або трудової діяльності
2.	Пройти поточне тестування знань	бали, набрані під час поточного тестування (у відсотках)
3.	Надіслати тьютору всі виконані Ваши практичні завдання до модуля 1 "......", модуля 2 "......", ... модуля n "......"	200 балів за повне виконання всіх практичних завдань
4.	Надіслати тьютору електронні повідомлення зі своїми зауваженнями та пропозиціями.	2 бали за кожне повідомлення (+3 бали за суттєві зауваження та пропозиції)
5.	Створити та надіслати тьютору авторський проект	50 балів за дотримання всіх вимог до виконання роботи та її оригінальність
		Всього 360 балів
Увага! За 2 тижні до завершення навчання Ви маєте набрати не менше 270 балів		

Figure 1. A model of trainee's activity during studies.

The model permitted the following:

- Transition from passive knowledge to active use of teaching methods.
- Activation of cooperation between the trainee and instructor and among the trainees.
- Increase in trainees' motivation.

The authors followed the recommendations of Dr. Peter Serdyukov, Professor of National University, USA, who had been advising since 2008 that, for every new distance course developed, a set of practical tasks should be devised to test the trainees' skill levels. Thus, in the 2009–2010 school year, 69% of all trainees completed practical tasks, as shown in Figure 2.
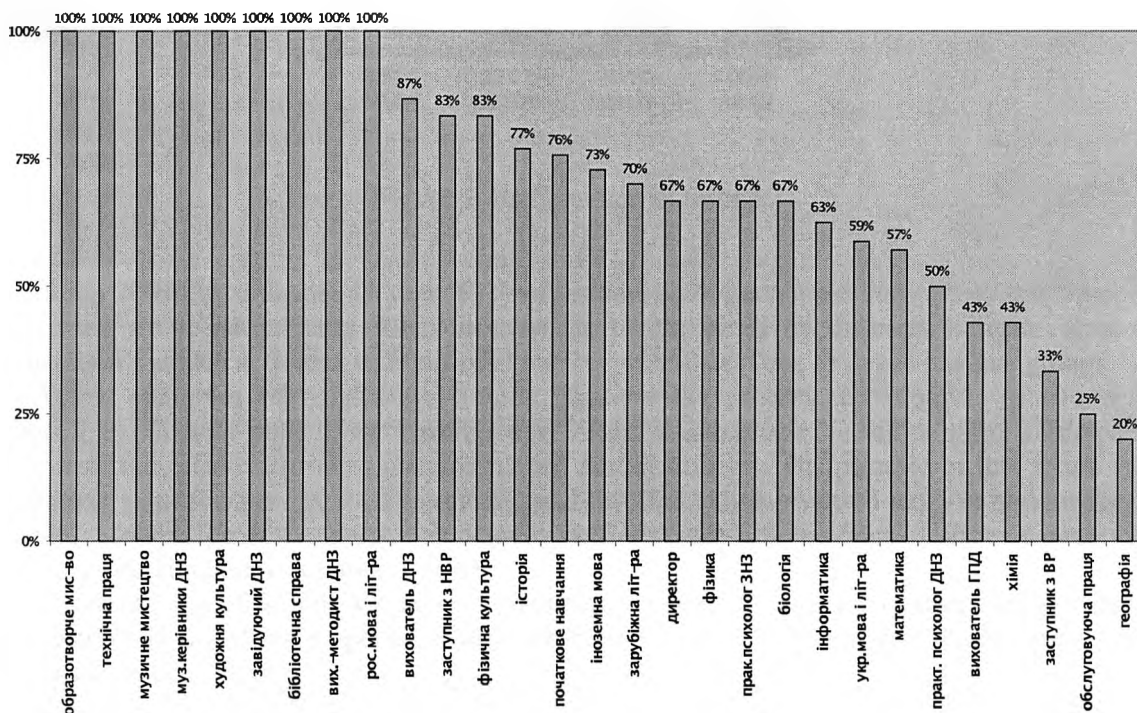
Figure 2. Trainees' activities in 2009–2010.

Examples of the learning tasks offered to the trainees (Tasks 1.1 and 1.3 in the module titled "Theory and Methodology of Teaching Foreign Languages" for teachers), are as follows:

- Task 1.1. Teachers were asked to revise part of the lesson using modern methodological terminology, to write the script of this fragment, specifying students' age, their proficiency level, educational goals, educational tools, sequence of task implementation, and time spent.
- Task 1.3. Teachers were asked to familiarize themselves with a sample of the student's work. They had to correct mistakes, specify their types, comment on the work and give the students an explanation, and assess the work in accordance with current assessment criteria.

For the communication and interaction of the participants (trainees, tutors, and organizers), forums are actively used. Every year, growth was observed in the number of trainees who take part in the forums, as shown in Figure 3.
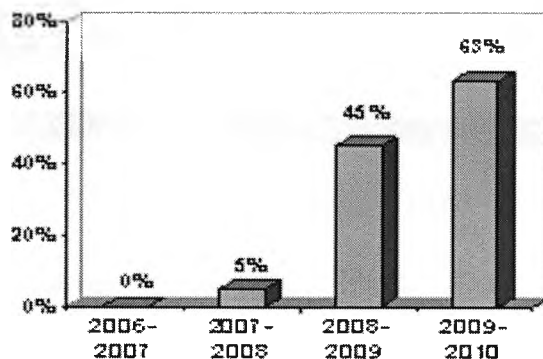
Figure 3. Participation in forums.

In the 2009–2010 academic year, 63% of trainees took part in the forums; of this number, 36% were active participants. Such indexes can be explained by different trainees' level of preparation for such activities and the small number of trainees (one to three) in some groups.

A few examples of conducting forums illustrate the process. Example 1, as shown in Figure 4, exhibits the page of an organizational forum, which is open for all program participants (trainees from different groups, instructors, and administrators). The purpose of this forum was to discuss general organizational questions, and to offer online-program support and advice to trainees. Moderation of the forum was done by A. Borbit, the administrator of distance in-service teacher professional development courses.

Different types of forums were also used during the courses, with access restricted to trainees and instructors in different specializations. Problem issues in different educational areas were discussed in such forums.

Example 2, as shown in Figure 5, exhibits the page of a forum for the methodologists of preschool educational institutions. (The forum moderator is T. Korzh.) A question of children's preparation for school was of concern to the preschool teachers. Therefore, it was suggested to read and discuss the article by G. Dzhemula (2009), "Not a Ready Knowledge, but the Readiness to Obtain It," and to express individual opinions. The trainees shared the experience of their pre-school institution related to this question, providing an overview of the aspects of preparation, forms of work with parents, forms of cooperation of preschool institution and primary school, etc.

Example 3, shown in Figure 6, exhibits a page of the forum for the teachers of the Ukrainian language and literature. (The forum moderator is N. M. Grabar) The teachers were asked to describe their attitude towards the language situation in Ukraine, the introduction of the second official language, and argue their position. Teachers of languages supported bilingualism but agreed that there must be only one official language of the country. It did not mean the role of national minorities' languages was diminished. As the saying goes, 'The more languages a person knows, the more personable [human] he is.'

Повідомлення	Виділити	Автор	Дата
• Запитання-консультація	Г	Жупина В. В. [с]	15.02.2010:15:10

Шановна Тетяно Михайлівно, як не намагалася, ніяк не вдається відправити завдання 5.1 і 6.1 до модулів 5 та 6. Завдання грузяться, а потім пише "помилка підключення".

| • Запитання-консультація | Г | Борбіт А. В. [а о т] | 16.02.2010:08:19 |

Спробуйте відправити через електронну пошту.

| • запитання | Г | Корнієнко І. С. [с] | 11.02.2010:17:30 |

Серед завдань є два, які передбачають створення презентацій. Чи є якісь обмеження щодо обсягу файла? У мене один пройшов у систему Прометей без проблем, а другий ніяк не йде, система видає як помилку. Порадьте, будь ласка, як бути

| • запитання | Г | Борбіт А. В. [а о т] | 12.02.2010:08:17 |

Обсяг презентації до завдання 3.5 зазначено 10 слайдів. А у завданні 2.1 можна розробити фрагмент заняття (текстовий файл), а якщо це презентація, то гадаю не більше 10 слайдів.
Стосовно розміщення файлів у системі Прометей. Практично будь-який файл будь-якого обєму має розміщатись у системі, якщо він не завірусований. Я не знаю чому виникла така проблема. Тому перевірте на наявність вірусів і спробуйте ще раз розмістити. Якщо ні, то можливо спробуйте стиснути його.

| • Запитання. | Г | Губарева М. М. [с] | 10.02.2010:21:10 |

Скажіть, будь ласка, чому не зараховано творчий прект та деякі відповіді до модулів ?Щось не так виконано? Чи ще не оброблена інформація?

| • Запитання. | Г | Борбіт А. В. [а о т] | 11.02.2010:08:17 |

Дана таблиця ще не розміщена, оскільки щодня надходить багато інформації від слухачів.

| • Запитання | Г | Єрміліна Є. В. [с] | 10.02.2010:12:45 |

У завданнях є вправа, де треба розробити фрагмент уроку з використанням сучасних інформаційних технологій. Я так розумію, це створення презентації (PowerPoint). Чи не так? Але при розмові з Бендерець, я зрозуміла, що презентація при переселанні через електронку погано запускається. У мене не буде проблем? Чекаю відповіді.

| • Відповідь на запитання | Г | Борбіт А. В. [а о т] | 10.02.2010:13:40 |

Дійсно, презентація дуже важка для пересилки електронкою. Хоча можна спробувати. І ще є вихід з даної ситуації - це розмістити презентацію у системі Прометей. Для цього потрібно:
1) вибрати у розділі СПІЛКУВАННЯ — ФАЙЛИ
2) вибрати ВІДПРАВЛЕНІ
3) натиснути СТВОРИТИ
4) зі списку вибрати ТЬЮТОРИ і напроти цього напису натиснути СКЛАД
5) з'явиться ПІП тьютора і навпроти Бендерець Н.М. у квадратику поставити галочку
6) натиснути ОК (зелена кнопка з галочкою)
7) заповнити поля ЗАГОЛОВОК і через ОБЗОР вставити потрібний файл
8) ОК.
Спробуйте виконати дану інструкцію, має все вийти.

| • Запитання | Г | Олійник М. В. [с] | 09.02.2010:21:23 |

Скажіть, будь ласка, поточний контрольний тест, який оцінюється, буде якось особливо позначатись(- тестування-екзамен -) чи це звичайний тест на самоперевірку, який можна виконати будь-коли? Дякую.

| • Запитання-відповідь | Г | Борбіт А. В. [а о т] | 10.02.2010:08:22 |

Поточний контроль - це тест для самоперевірки. Його можна виконати в будь-який час і кількість спроб необмежена. результат обереться найкращий.

| • Привітання | Г | Горніцька А. В. [с] | 06.02.2010:16:43 |

Вітаю організаторів та колег-філологів, які проходять курси дистанційного навчання. Не думала, що ця форма підвищення професійної майстерності мені сподобається. Але це здорово. За таким навчанням майбутнє. Бажаю всім успішно справитися із завданнями, творчості і натхнення на педагогічній ниві, взаєморозуміння з колегами та учнями, особистого щастя.

Figure 4. One of the pages of the organizational forum.

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Figure 5. A page of the forum for methodologists of preschool institutions.

Сторінка:[1][2][3][4][5][6][7][8]

Figure 6. A page of the forum for teachers of Ukrainian language and literature.

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All trainees were required to take diagnostic tests during the courses. As a result of entrance and exit surveys, the average indices of self-evaluation of trainees' knowledge and skills in the beginning of the course and after course completion were learned, as shown in Figures 7 and 8, which demonstrated that the main goal of distance in-service teacher professional development courses was accomplished.
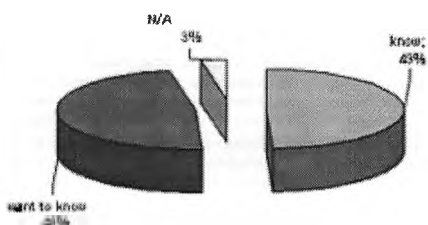
Figure 7. Average index of trainees' self- assessment of present knowledge and abilities *(entrance survey).*
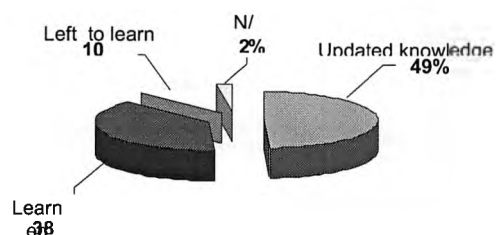
Figure 8. Average index of trainees' self-assessment of the learning outcomes *(exit survey).*

Trainees confirmed that during the course they not only obtained professional preparation but also improved computer skills, as shown in Figure 9:

- Computer use in the learning process grew, from 68% in the beginning of the course to 91% after completion of the course.
- Communication using Internet technologies (e-mail, forum, chat) grew from 33% in the beginning to 80% after course completion.
- Searching for and finding necessary information on the Internet grew from 50% in the beginning to 86% after course completion.

Figure 9. Level of computer skills in the beginning and in the end of the program.

These results confirmed the conclusion that the program motivated teachers to raise their level of ICT proficiency and became a stimulus for self-education, as shown in Figure 10.

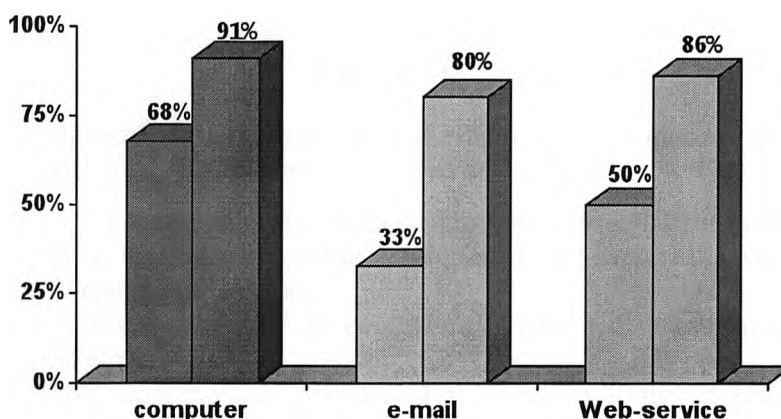| Текст повідомлення (всього: 61)	Автор
Щира подяка усім організаторам дистанційного навчання. Досить сучасна, практична, цікава і доступна форма навчання. Спочатку у колі колег було багато нарікань. Але сьогодні, коли залишилось лише тиждень навчання, думаю, що мені буде не вистачати цієї для мене цікавої форми роботи і спілкування. Можу зізнатися, що вихід на форуми чи робота по виконанню модульних завдань вже стала частиною мого щоденного робочого графіка. Думаю, що мені буде не вистачати цієї нової сторінки творчого спілкування. Спасибі усім, хто працював з нами, хто переймався нашими проблемами. Дякую усім за цікаву роботу, можливість спілкування, шанс самоосвіти і самоудосконалення, відкриття нових творчих можливостей усіх не байдужих до себе і до роботи моїх колег. Це хороша практична допомага учителю як предметнику, так і класному керівнику. Багатий матеріал лекцій, бібліотеки дав можливість відновити призабуте і дізнатися багато нового. Впевнена, що більшість зі слухачів піднялися на щабель вище.Спасибі, що створили атмосферу взаєморозуміння, взаємодопомоги, здорового змагання і співпереживання. Спасибі і творчих успіхів усім у подальшій діяльності.	Дерев'янко Людмила Петрівна
Дякую за зручні та змістовні дистанційні курси! Дуже багато корисного матеріалу для проведення сучасного уроку.Хотілося б працювати з Вами не лише у період навчання. Чи можливо мати доступ до цієї програми протягом всього навчального року? Бажаю всім успіху та жіночого щастя.	Чайка Наталія Олександрівна
Спасибі організаторам курсу за дистанційне навчання!!! До сьогодні горить вогонь бажання: працювати в інтернеті,який Ви запалили наприкінці серпня.	Діхтіренко Тетяна Петрівна
Дуже цікаво і ново. Спочатку було страшно. А тепер - нічого. Виявляється не боги горшки ліплять	Назаренко Ріта Григорівна
Нарешті я працюю на комп'ютері Дякую всім, хто надав нам, вчителям, таку можливість. І хоч компа власного не маю, в школі він є, але інтернету немає. Бігаю до Володарки на навчання. Все одно цікаво. Значить будем жить!	Назаренко Ріта Григорівна
Курси закінчились, але за звичкою все одно заходжу на сторінку. Спасибі. Ви прищепили любов до спілкування і пізнання через інтернет.	Діхтіренко Тетяна Петрівна
Дякую організаторам дистанційного навчання. Це зручно, цікаво і змістовно, і сучасно	Циганкова Олена Григорівна
На мою думку дуже зручна форма навчання.маєш змогу навчатися, працювати, бути разом із сім`єю. Дуже вдячна за змістовні курси.	Жупина Валентина Володимирівна
Невідоме сприймається з острахом. Таке відчуття було спочатку. Якщо захоплюєшся роботою в інтернеті, то дистаійні курси саме для таких. Цікаво. Нові навички. Дякую за можливість удосконалюватися.	Дерев'янко Людмила Петрівна
Вітаю всіх прогресивних сучасних дошкільників з обраною формою навчання на дистанційних курсах. Працювати за такою схемою зручно, цікаво, доступно. Інновації в дошкіллі починаються з іноваційного мислення вихователя Я вірю у вас всіх. Ми початківці, а за нами будуть широкі ряди однодумців	Басюк Наталія Михайлівна

Figure 10. Trainees' comments on the distance in-service
teacher professional development.

Conclusion

Though the present authors' research demonstrated effectiveness of distance in-service teacher professional development, these concerns remain to be addressed:

- District and town methodologists need to promote the possibilities and specifics of distance in-service teacher professional development, and explain the work of district and town centers of distance education.
- Teacher ICT proficiency should be continuously upgraded in preparation for distance professional development.
- Quality of instructional methodology should be improved at district and town centers of distance education. For that, the Institute developed a thematic course, "Organization and Content of Distance In-Service Teacher Professional Development Courses," for novice methodologists and instructors.

As has been established, the quality of distance education is as high as the quality of on-site learning, because the best faculties are involved in the preparation of instructional materials for professional development programs, and the most current educational and methodological mate-

rials are used. However, individual skills, knowledge, experiences, and professional level of trainees play an important role in the system of distance education. The outcomes of the trainees' professional development depend on the trainees, their willingness to learn, their motivation, and the responsibility they take in the process.

The use of ICT in the system of in-service teacher professional development offers new methods of presenting educational materials, stimulates trainees to engage in effective self-educational activities, enables teachers to realize their own potential, and to adapt learning to trainees' individual capabilities and requirements. Overall, the use of ICT in the in-service teacher professional development system can be effective only after the development of scientifically grounded technologies of studies, in relation to both the subject matter and the educational establishment as a whole. In addition to the need to modernize materials used in the educational environment, there is a need for substantial modernization (scientifically grounded and pedagogically expedient) of organizational forms of studies and instructional methodology, as traditional organization of the educational process does not meet current requirements related to the educational process and results.

References

Bolubash, Y. (1997). Organization of the instructional process in higher education institutions. In [first initial, last name] (Ed.), *Textbook for the institutions of professional development* (pp. 64). Kyiv, Ukraine: Kompas.

Bullen M. (1998). Participation and critical thinking in online university distance education. *Journal of Distance Education, 13*(2), 1–32.

Crumpacker, N. (2002). Faculty Pedagogical Approach: Skill and Motivation in Today's Distance Education Milieu. *Online Journal of Distance Learning Administration, 5*(4). Retrieved January 31, 2011, from http://www.westga.edu/~distance/ojdla/winter44/crumpacker44.html

Dzhemula, G. (2009). Not a ready knowledge, but the readiness to obtain it. *Preschool Education, 9,* 10–16.

Irani, T., & Telg, R. (2002). Building it so they will come: Assessing universities' distance education faculty training and development programs. *Journal of Distance Education, 17*(1), 36–46

Kartashova, L. (2004). Learner-oriented system of information technology integration in foreign language teacher preparation. Unpublished candidate doctoral dissertation, Kyiv State linguistic University, Kyiv, Ukraine.

Kozlakova, G. (2004). Readiness for the application of computer technologies as a component of professional preparation of future specialists. *Annals of National Pedagogical University, 3,* 52–60.

Polat, Y.(2004) Pedagogic Theories off Distance learning, *Педагогические технологии дистанционного обучения.* Moscow, Russia. Retrieved October 12, 2010 from http://rcio.pnzgu.ru/vio/03/cd_site/Articles/art_1_1.htm

Prometheus—distance learning system (2010). Retrieved January 31, 2011, from http://www.prometeus.ru/actual/08_about/about.html

Serdyukov, P., Hill, R., & Serdyukova, N. (2009). Current approaches in teacher professional development. *Annals of Nizhin Pedagogic University, 3,* 14–19.

Smirnova, I. (2004). Formation of information cultures of future elementary school teachers. Doctoral dissertation, Izmail State Humanitarian University, Izmail, Ukraine.

The concept of distance education development in Ukraine (2000). (Approved by the Ministry of Education and Science 12/20/2000). Retrieved October 1, 2010, from http://udec.ntu-kpi.kiev.ua/.

Zhaldak, M. (1989). The system of teach preparation for the application of information technologies in teaching and learning. Unpublished doctoral dissertation. Academy of Pedagogical Sciences, Moscow, Russia.

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