

# FROM THE E-LEARNING EXPERIENCES ON THE REMOTE TEACHING PLATFORM OF THE HIGHER SCHOOL OF LABOUR PROTECTION MANAGEMENT

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***Abstract:** E-learning enables the class tutor to prepare materials that reach students very quickly. Dispelling the limitations associated with the place and time of studying is an asset of this form of teaching for it enables the study both at home and in a college. It also allows for effective, objective and fast assessment of a significant number of students. In this paper, the experiences of the Higher School of Labour Protection Management in Katowice in the scope of educating students on the Moodle platform. Also, the survey research carried out so far has been presented, addressed to students and connected with the school's remote education platform.*

**Keywords:** e-learning, Moodle platform, Moodle components, e-learning course, remote education platform

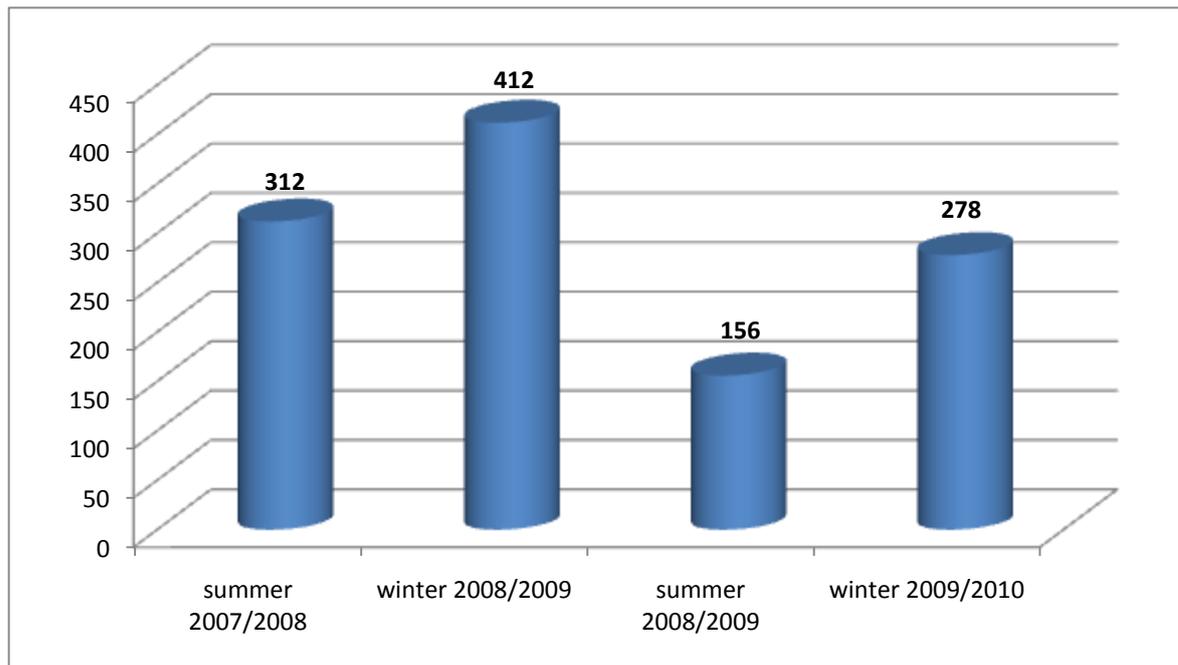
## INTRODUCTION

The Higher School of Labour Protection Management in Katowice has been operating on the educational market since 2002 and offers engineering, bachelor's and master's complementary daily and extramural studies in 20 specialisations within the framework of five labour market customised departments: Management, Management and Production Engineering, Cultural Studies, English Philology and Internal Safety. The school has been gaining experiences in e-learning since 2007.

## 1. STATUS QUO OF THE REMOTE EDUCATION PLATFORM

It is the Moodle platform, belonging to the most renowned solutions in this field in Poland, which is the practical e-learning support at the Higher School of Labour Protection Management in Katowice.

At the Higher School of Labour Protection Management (WSZOP) in Katowice, the e-learning classes have been led since the academic year of 2007/2008. In June 2009, 3,500 accounts were active on the WSZOP remote education platform, including c.a. 50 accounts for lecturers. In accordance with the regulations binding (act as of 27/07/2005 on Higher Education as well as the Decree of the Minister of Higher Education as of 25/09/2007) WSZOP has assumed that the number of classes led online may not exceed 40% of the general number of didactic classes. The remote classes are led in over ten subjects, chiefly for the students of Management and Production Engineering as well as Management and they comprise from 150 to 400 hours (depending on a semester) classes led through blended learning.



**Figure 1.** Number of e-learning didactic classes

So far, over 100 courses have been commenced on the platform, including among others:

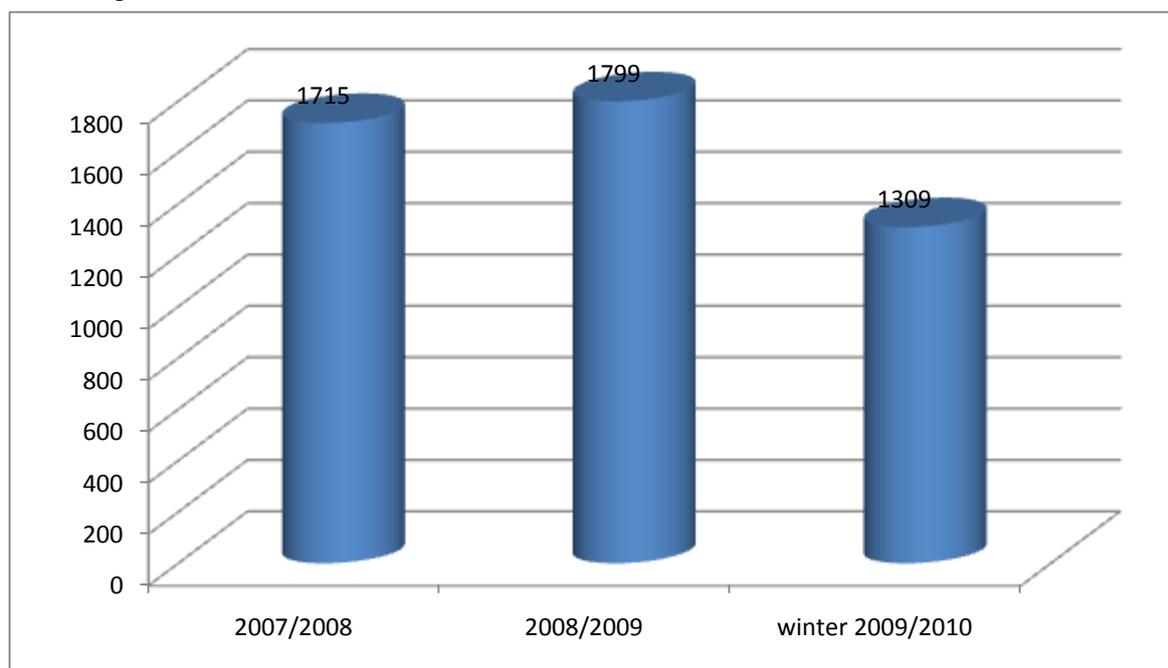
- 26 test courses for lecturers undergoing training
- 3 courses for the needs of diploma theses:
- 2 courses used in the platform management and monitoring and IT subjects didactics
- 2 librarian courses (including one test course)
- 2 courses for the needs of students' clubs:
  - SKI – Students' IT Club
  - WSZOP Scientific Club of Culture Scientists
- 1 course for the execution of a diploma seminar
- 2 training courses on e-learning (for students and lecturers)
- 65 subject courses in which the following classes were organised or are being organised:
  - English, German
  - History of Media
  - Macroeconomics
  - Financial Accountancy
  - Post-accidental proceedings and others.

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>Zasoby</li> <li>Fora dyskusyjne</li> </ul> <hr/> <div style="border: 1px solid #ccc; padding: 2px;">         Szukaj w forum     </div> <div style="margin-top: 5px;"> <input type="text"/> </div> <div style="margin-top: 5px;"> <input type="button" value="Wykonaj"/> </div> <div style="margin-top: 5px;"> <a href="#">Zaawansowane ?</a> </div> <hr/> <div style="border: 1px solid #ccc; padding: 2px;">         Administracja     </div> <div style="margin-top: 5px;"> <a href="#">Oceny</a> </div> <hr/> <div style="border: 1px solid #ccc; padding: 2px;">         Moje kursy     </div> <ul style="list-style-type: none"> <li><a href="#">Zarządzanie jakością i bezpieczeństwem - AS</a></li> <li><a href="#">Biblioteka WSZOP</a></li> <li><a href="#">Obsługa platformy edukacyjnej - kurs dla studentów</a></li> <li><a href="#">Technologia informacyjna - wykład - ZZIP-13A</a></li> <li><a href="#">Technologia informacyjna - ćwiczenia ZZIP-13A - AZ</a></li> <li><a href="#">Procesy i techniki produkcyjne - ZZIP-13A</a></li> <li><a href="#">SKI - STUDENCKIE KOŁO INFORMATYCZNE</a></li> </ul> | <ol style="list-style-type: none"> <li>1 Wprowadzenie             <ul style="list-style-type: none"> <li><a href="#">Prezentacja Biblioteki WSZOP</a></li> <li><a href="#">Forum dla zagadnień związanych z Biblioteką WSZOP</a></li> </ul> </li> <hr style="border-top: 1px dashed #ccc;"/> <li>2 Jak zapisać się do Biblioteki?             <ul style="list-style-type: none"> <li><a href="#">Instrukcja zapisu do biblioteki</a></li> </ul> </li> <hr style="border-top: 1px dashed #ccc;"/> <li>3 Jakie katalogi pomagają w poszukiwaniu materiałów źródłowych w Bibliotece WSZOP?             <ul style="list-style-type: none"> <li><a href="#">Katalogi i kartoteki</a></li> </ul> </li> <hr style="border-top: 1px dashed #ccc;"/> <li>4 Czytelnia biblioteczna             <ul style="list-style-type: none"> <li><a href="#">Droga czytelnika podczas wizyty w czytelnii bibliotecznej</a></li> </ul> </li> <hr style="border-top: 1px dashed #ccc;"/> <li>5 Bazy danych dostępne w Bibliotece WSZOP             <ol style="list-style-type: none"> <li>1. Emerald Insight                     <ul style="list-style-type: none"> <li>• Emerald Management</li> <li>• Emerald Engineering</li> <li>• Emerald Backfiles</li> </ul> </li> <li>2. INFOR                     <ul style="list-style-type: none"> <li>• Personel i Zarządzanie</li> <li>• Biuletyn Rachunkowości</li> <li>• Monitor Prawa Pracy i Ubezpieczeń Społecznych</li> </ul> </li> <li>3. ELAMED                     <ul style="list-style-type: none"> <li>• Promotor</li> </ul> </li> <li>4. Wolters Kluwer                     <ul style="list-style-type: none"> <li>• Serwis Prawa Pracy i Ubezpieczeń Społecznych</li> </ul> </li> </ol> </li> <hr style="border-top: 1px dashed #ccc;"/> <li>6 Gdy rozstajesz się z Uczelnią...             <ul style="list-style-type: none"> <li><a href="#">Instrukcja obsługi obiegówki</a></li> <li><a href="#">Obiegówka - plik do pobrania</a></li> </ul> </li> </ol> |
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**Figure 2.** Fragment of the course existing on the WSZOP remote education platform

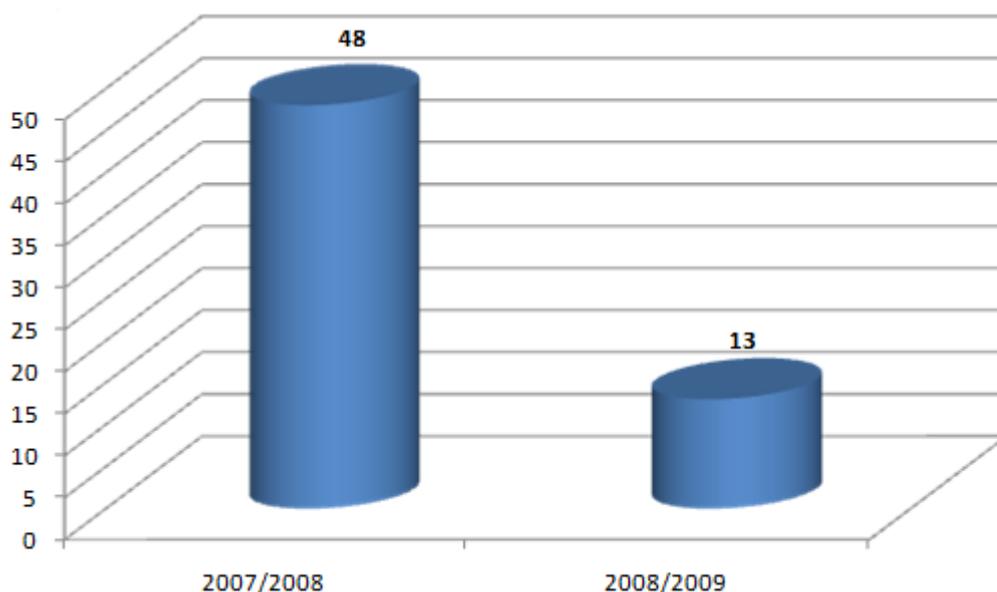
Every day, about 150 individuals log on the remote education platform. It is the E-learning Study Centre (SEL WSZOP)<sup>1</sup> that deals with the organisation of classes, administration of the remote educational platform, training courses and the widely-comprehended development of e-learning.

The figures below present the number of the WSZOP students and lecturers trained in the e-learning methods:



**Figure 3.** Number of the WSZOP students trained in the e-learning methods

<sup>1</sup> P. Tkacz, System szkoleń przygotowujących studentów do kształcenia z wykorzystaniem metody blended learning; Postępy e-edukacji, monografia po konferencji: IX Konferencja "Uniwersytet Wirtualny: model, narzędzia, praktyka" - Polsko-Japońska Wyższa Szkoła Technik Komputerowych w Warszawie, czerwiec 2009



**Figure 4.** Number of the WSZOP lecturers trained in the e-learning methods

The WSZOP remote education platform has also been used for training teachers in the scope of e-learning at one of the secondary schools in Katowice with which the college cooperates. 20 teachers of various subjects took part in the training course. In the preliminary discussions held prior to the commencement of the training course, it appeared that none of the teachers knew how to operate the Moodle platform, five of them participated in the training courses, organised via the Moodle platform of the District Examination Commission in Jaworzno, for the examiners of the secondary school final examinations. During the training course, such Moodle resources and components were discussed as the lesson, dictionary of terms, task, quiz, voting, questionnaire, chat, discussion forum. Based on a short survey carried out after the training course, it was determined that the majority of the teachers would like to gain further knowledge in the scope of e-learning. They considered the quiz as the most interesting component for it would make it possible to create tests that they would use while preparing the pupils for doing the secondary school final exam closed tasks.

## **2. RESEARCH CARRIED OUT SO FAR, ADDRESSED TO THE COLLEGE STUDENTS, ASSOCIATED WITH THE MOODLE PLATFORM<sup>2</sup>**

Apart from the training courses for the lecturers, SEL WSZOP organises and leads the courses for the students. The training course structure comprises: lecture – presentation, course on the platform as well as the individual consultation. The essential training materials in the form of traditional (printed) instructions are also available in the college library.

The training course system starts with a lecture – presentation during which the students receive the basic information on e-learning. Among others, the following subjects concerning the following are discussed:

<sup>2</sup> P. Tkacz, System szkoleń przygotowujących studentów do kształcenia z wykorzystaniem metody blended learning; Postępy e-edukacji, monografia po konferencji: IX Konferencja "Uniwersytet Wirtualny: model, narzędzia, praktyka" - Polsko-Japońska Wyższa Szkoła Technik Komputerowych w Warszawie, czerwiec 2009

- e-learning characteristics and specific nature (the differences in the comparison with the traditional education along with indicating the assets and disadvantages)
- configuration conditions essential for using LMS (concerning the browser, safety issues)
- rules for using LMS – graphic interface characteristics
- rules for using the didactic materials, chat, discussion forum, tests, platform internal communication and e-mail
- discussing other services associated or independent, among others, the Virtual Dean's Office
- handing over the data for authorisations.

After the end of the presentation lecture, the training course is continued: through the existence of a special training course on the remote education platform as well as via consultation duties held by the SEL WSZOP employees. The course existing on the platform contains the training material in the electronic format (in most cases in the flash or pdf format), the forum where the students may raise any technical problems or provide other comments. Also, additional materials are included in the course, useful for IT education, e.g. auxiliary materials for the preparation for obtaining the ECDL certificate.

The students were subject to a probing survey the aim of which was to determine the rate of approval for the materials placed on the remote education platform as well as for the printed materials. The survey was carried out among 583 students. The average age of those surveyed was 28.

The question – “Which of the forms presented below was the most useful for you while using the e-learning?” was answered as follows:

**Table 1: Training Materials Form**

| <b>Form</b>        | <b>Number of Students</b> | <b>Percentage Index</b> |
|--------------------|---------------------------|-------------------------|
| Printed Version    | 212                       | 36.5%                   |
| Electronic Version | 190                       | 32.5%                   |
| Lecture Form       | 181                       | 31.0%                   |

*Source: Probing Survey*

The question: “*In the situation in which only one instruction version would be available, as the best form, I would choose the instruction*”: was answered as follows:

**Table 2: Training Materials Form**

| <b>Form</b>        | <b>Number of Students</b> | <b>Percentage Index</b> |
|--------------------|---------------------------|-------------------------|
| Printed Version    | 256                       | 44%                     |
| Electronic Version | 327                       | 56%                     |

*Source: Probing Survey*

Further surveys among the students referred to the optimisation of the platform contents and services.<sup>3</sup>

<sup>3</sup> G. Ballion, P. Tkacz, Zapewnianie jakości kształcenia zdalnego poprzez optymalizację treści platformy edukacyjnej; Współczesne problemy kształcenia na odległość, pod. red. T. Lewowicki, B. Siemieniecki, Toruń, 2008.

In order to get acquainted with the students' opinion concerning the creation of the didactic contents and the organisation of the remote classes, two student groups were surveyed: the students that initiate their studies with the use of e-learning and the ones that have studied remotely for at least two semesters. The first group had already undergone the training courses aimed at getting familiar with the remote educational techniques and operating the educational platform. They replied to the following questions concerning the:

- moment of the didactic materials publication
- time of the didactic materials publications
- student's expected time for the response to one's own activity at the discussion forum or e-mail
- assessment of records on the discussion forums
- effective forms of communication
- need for attaching links to other web pages in the materials
- need for unifying the didactic materials visualisation
- preferred forms of the didactic materials forms
- frequency of holding chats

When analysing the results, the following conclusions were reached:

- gradual placement of the didactic materials may ensure more frequent students' visits on the platform and, at the same time, the greater participation in the discussion forums or other services;
- placing all the materials needed for education may result in the student's downloading them in the complete set at the beginning of a semester and in their losing motivation to further using the educational platform;
- the materials that appear on the platform ought to be available until the end of the classes duration in the relevant semester. It is mainly due to the individuals that (for various reasons) may have failed to log onto the platform;
- the majority of students chose 3 days as the maximum time for expecting the reply from the tutor to their own post at the discussion forum or e-mail;
- it is not required by the students to introduce the assessments of the records on the discussion forums;
- the most effective form of communication according to the students that already study remotely are: e-mail, chat, Internet (external) communicators and according to the other group of beginners in e-learning: e-mail, Internet (external) communicators, discussion forums;
- the preferred forms of the didactic materials are text files in case of the students that is starting study remotely. The students having experience in e-learning indicated additionally the sound files;
- as for the frequency of holding chats, one may assume that the monthly frequency may be the optimum for this activity.

### **3. USING THE MOODLE PLATFORM IN EDUCATION AS PER THE EXAMPLE OF THE INFORMATION TECHNOLOGY SUBJECT**

The syllabus of the information technology e-learning subject comprises the following issues:

- organisational matters:
  - lecturers' duties and contact
  - subject syllabus and literature
  - academic year organisation

- conditions for getting credit for the lecture
- history of the calculation and computerisation technologies development, hardware and architecture of the contemporary computers
- operational systems – basic and advanced activities in MS Windows
- introduction to the MS Office package – bases for the MS Excel calculation sheet

Wykonaj  
Zaawansowane ?

Administracja

Oceny

Moje kursy

Zarządzanie jakością i bezpieczeństwem - AS

Biblioteka WSZOP

Obsługa platformy edukacyjnej - kurs dla studentów

Technologia informacyjna - wykład - ZIP-13A

Technologia informacyjna - wiczenia ZZIP-13A - AZ

Procesy i techniki produkcyjne - ZZIP-3A

**2 Wykład 1 - Historia rozwoju technik obliczeniowych i komputeryzacji, hardware i architektura współczesnych komputerów**

*UWAGA: wszyscy którzy chcą (szczególnie chodzi o osoby niezaawansowane w tematyce) mogą korzystać z zasobów Studenckiego Koła Informatycznego WSZOP. Publikuje się w tych zasobach materiały pomocnicze do uzyskania certyfikatu ECDL E-Obywatel. Jak się zapisać do zasobów koła - patrz. opis poniżej.*

🔍 Wyszukiwanie i zapisywanie do Studenckiego Koła Informatycznego

w cz. 1 należy obejrzeć prezentację interaktywną - wykonać notatki które trzeba porównać z materiałem cz. 1 podanym w pliku pdf. W prezentacji interaktywnej proszę klikać w przyciski nawigacyjne, regulujące skalę czasową (suwak u góry) lub w poszczególne wydarzenia (ikony z plusami)

📄 cz. 1 prezentacja interaktywna na temat historii

📄 cz. 1 - plik pdf

w cz. 2 należy obejrzeć prezentację - jest ona uzupełnieniem do pliku pdf, którego zawartość merytoryczna będzie stanowiła podstawę do pytań kolokwium, przeprowadzanego dla wszystkich grup na ćwiczeniach.

📄 cz. 2 - prezentacja - hardware i architektura komputerów

🔊 wersja dźwiękowa wykładu

📄 cz. 2 - plik pdf

📄 forum aktywności studentów

🔍 Komputer - jak to jest zrobione?

🔍 Ekran LED - jak to jest zrobione?

🔍 Karta graficzna - jak to jest zrobione?

🔍 Mikroprocesor - jak to jest zrobione?

3,62

😊 Marcin ... 4

😊 Andrzej ... 4

😊 Sylwia ... 12

😊 Lukasz ... 2

😊 Tomasz ... 1

Najświeższe wiadomości

Dodaj nowy temat.

22 sie, 22:22  
Piotr Tkacz  
wrześniowe wpisy Więcej...

14 cze, 22:02  
Piotr Tkacz  
Wpisy Więcej...

21 maj, 22:03  
Piotr Tkacz  
Najaktywniejsze osoby Więcej...

**4 Wykład 3 - Wstęp do pakietu MS Office - podstawy arkusza kalkulacyjnego MS Excel**



*- wykład poprzez e-learning w planie podany na 9.04.2010*

- 📄 podstawy pakietu MS Office
- 📄 MS Excel cz. 1
- 📄 MS Excel cz. 2
- 🕒 szkolenie pt. Poznaj doskonale program Excel 2007 - czas 30 - 40 min
- 🕒 jak przestawić się z MS Office 2003 i starszych na MS Office 2007
- 📄 forum problemowe nt. Excela
- 📄 opis dla dodatków Slox i Slox2
- 🕒 dodatek Slox - zamiana liczby na kwotę tekstową
- 🕒 dodatek Slox2 - zamiana liczby na tekst

- creating charts in the MS Excel calculation sheet
- MS Word programme

**Figure 5.**  
Content for the lecture No 3 on the Information Technology

Students may gain more knowledge and skills by using optionally the resources of the other course of the WSZOP Students' IT Club which comprises:

- WSOPEZIN – ezine published by the Club
- e-Citizen Certificate – auxiliary materials associated with ECDL e-Citizen certifier

## 2 Certyfikat e-Citizen



**Figure 6** Contents of the course published by the Students' IT Club

- ECDL Certificate – auxiliary materials associated with the ECDL-Core certifier
- Information Technology – interesting pages

Each subject in the course, in the scope of the information technology, contains:

- PDF files
- Students' activity forum

Zdalna edukacja WSZOP > Tech inf - rzpl3a > Fora dyskusyjne > forum aktywności studentów

Szukaj w forach

Subskrypcje niedozwolone  
Nieprzeczytane wiadomości są śledzone

forum do wykładu nr 1 - proszę pamiętać, że każdy może rozpocząć swoją nową dyskusję tematyczną (do tego służy przycisk poniżej *Dodaj nowy temat dyskusji*), natomiast odpowiadając w w konkretnym temacie, najpierw klikamy w temat dyskusji i tam zamieszczamy swój komentarz (post).

| Dyskusja  | Rozpoczęta przez | Odpowiedzi | Nieprzeczytane | Ostatni post                           |
|---|------------------|------------|----------------|--|
| telewizory 3d juz niedlugo w naszych domach :)            | Agnieszka        | 60         | 0              | Agnieszka<br>sob, 29 maj 2010, 22:02   |
| Czy komputer jest w stanie w pełni zastąpić człowieka?    | Anna             | 60         | 0              | Agnieszka<br>pią, 28 maj 2010, 11:59   |
| Dotykowy wyświetlacz praktyczny, czy nie?                 | Anna             | 82         | 0              | Agnieszka<br>pon, 24 maj 2010, 11:59   |
| Rozwój (lub jego brak) sieci teleinformatycznych w Polsce | Piotr Tkacz      | 29         | 0              | Irena Nowak<br>sob, 13 maj 2010, 22:02 |

**Figure 7** View of the discussion forum of one the lectures

- Presentation of the lecture contents in the sound or interactive form
- Links to the selected web pages

Additionally, during the exercises on the subject the module *task* is used.

In February 2010, short survey research was carried out concerning the lecture on the Information Technology. The survey was completed by 242 students of 2<sup>nd</sup> daily course studies. The tables below presents the results collected during the research.

**Table 3.** Please, indicate whether you used the e-learning lectures on Information Technology?

| Answer | Number of Students | Percentage Index |
|--------|--------------------|------------------|
| yes    | 199                | 82.1%            |
| no     | 43                 | 17.9%            |

**Table 4.** I assess the lecture in the form of e-learning as:

| Answer                         | Number of Students | Percentage Index |
|--------------------------------|--------------------|------------------|
| very useful                    | 114                | 47.4%            |
| useful, but should be improved | 89                 | 36.8%            |
| average                        | 35                 | 14.7%            |
| of no use at all               | 4                  | 1.1%             |

**Table 5.** I did not use the e-learning lecture because:

| Answer                                  | Number of Students | Percentage Index |
|---|--------------------|------------------|
| I could not be bothered                 | 25                 | 10.4%            |
| I am not interested in it               | 25                 | 10.4%            |
| lack of access to the Internet/computer | 47                 | 19.5%            |
| due to the impossibility of logging on  | 7                  | 3,0%             |
| I prefer a traditional lecture          | 97                 | 40,3%            |
| other reasons                           | 41                 | 16,4%            |

**Table 6.** A better form for the lecture on Informational Technology is:

| Answer             | Number of Students | Percentage Index |
|--------------------|--------------------|------------------|
| e-learning lecture | 22                 | 9.5%             |
| blended learning   | 168                | 69.2%            |

#### 4. CONCLUSION

Between 2007-2010, the Moodle platform was used in the e-learning education executed in the Higher School of Labour Protection Management in Katowice. Throughout the entire period concerned, the following facts are note-worthy:

- e-learning educational platform ought to serve not only for the purpose of leading the courses associated with the class schedule, but it is also perfectly fit for additional activities, such as: seminars, academic circles, training courses, diploma theses execution, activities resulting from the co-operation with other centres;
- it is necessary to carry out interim probing surveys which allow for the collection of the information on the expectations on the part of the users, both those concerning the method for leading classes, level of satisfaction concerning the contents provided for and also the factors for motivation to study with the use of e-learning;
- training courses preparing for e-learning are an essential element of the entire remote education system. During courses, it is worth paying attention to such problems as: failure to understand the e-learning asynchronous nature, specifications for using such services as chat or forum, different didactic resources used as well as the information sources (both as far as students are concerned and tutors);
- it is necessary to perform the works over the IT systems unification in order to improve the communication and information exchange; most frequently, apart from the e-learning platform, also other IT system is operated in the form of the so-called virtual dean's office or additional contents management system. Proper integration enables the unnecessary duplication of the same information and the lack of the necessity to authorise the user in each system on separate basis.

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