

## Application of electronic training in pedagogical statistics through methodology web platform

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**Abstract:** The article presents an author's realization of a web platform for creating plan-conspectus related to the disciplines of the training of students acquiring pedagogical qualifications - Teacher of Mathematics, Informatics and IT. Some of the platform's functionality through which students can develop their lessons in pedagogical internships are explored. Several screenshots are show, depicting some of the basic functions of the platform.

**Keywords:** education, math, informatics, IT, e-learning

Modern higher education is dynamically changing and evolving to adapt to the surrounding competitive environment, as well as to offer an interactive, contemporary learning to its students. The pursuit of higher education institutions to improve the professional skills and knowledge of students in the learning process has led to changes in teaching methods and tools. On the one hand, the quality of training is associated with regular changes in curricula and programs [1, 2, 6] to offer up-to-date titles related to the professional field. And on the other hand, to apply modern information and communication technologies (ICT) in the classrooms [8].

In order to ensure a complete educational and scientific process, a number of higher education institutions have modernized their computer rooms and laboratories with more modern computer equipment. Halls with mobile devices, interactive boards, 3D printers, servers, computing equipment, etc. were equipped.

In addition to the technological provision of the learning process, students are increasingly given the opportunity to flexibly choose their learning rate by applying e-learning. This form of study is preferred by the students because of their daily routine, work, place of residence and established itself as a modern and leading not only in Bulgaria but also world-wide. The ability of learners to learn through interactive methods and approaches has been proven by many authors [4, 5, 8, 10] to support the optimal learning outcomes.

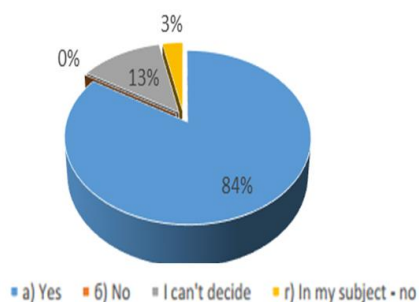
The aim of the article is to show that in modern higher education, web-based platforms can be used to train students with pedagogical skills to build skills and competences in their professional training. This article proposes an author's web platform [3, 9] to support the learning process during pedagogical internships and enables the creation of a mobile connection between students and teachers.

The platform successfully integrated into the learning process among students of Mathematics and Informatics, students qualification "Teacher" in part-time and full-time type of education, and students from the master's pedagogical courses. In a survey of 31 students, we study and analyze their attitude about using the methodological platform in their practices. Pooled results showed that almost 100% of students would use e-learning in education. On the question of whether it would be useful platform in tasks, didactic instructions and work files in

their practice, most of them 94%

would benefit from it. The majority of students (Fig.1) also believes that if there is a platform with unified plan - lecture notes, will facilitate their pedagogical training.

Will it be useful for your teaching practice to use the platform for the establishment of a unified plan syllabus?



**Figure 1.** The requirement of the platform to create a plan synopses

Each student develops lessons to be tailored to the specific requirements of both the methodology and the underlying teacher. They set goals, objectives and concepts enshrined in state requirements.

The approaches used in methodological platform can be two. The first is the development of lessons personally placed for each student. The theme of lessons can be set from both university teacher, and the base teacher in school, mentoring students in their internship practice. Here the emphasis is placed on verification and the note from the independent preparation of the student. System is tracking the methodological knowledge and the ability to draw different types of teaching tasks.

From the perspective of students, the possibilities of a web platform provides:

- 24 hour access to educational resources;
- Online contact with the teacher or teacher;
- Work on their development through personal computer or mobile device;
- Create lesson plans with pace and time convenient for the student;
- Add e-resources to the lesson;
- Teamwork with other students;

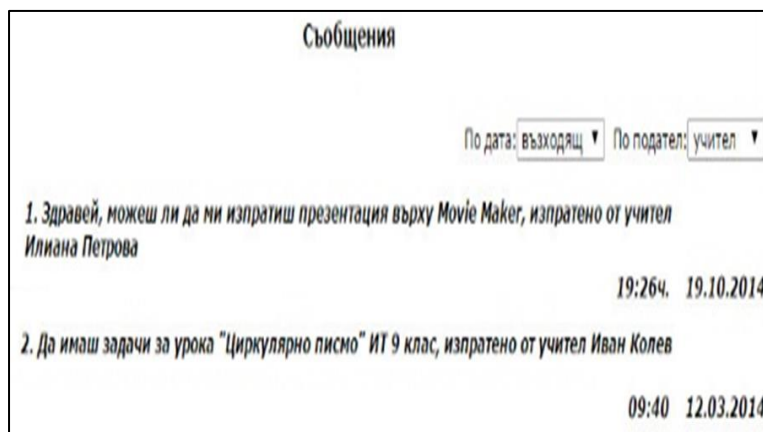


Fig. 2 Communications messages between users of the Web platform

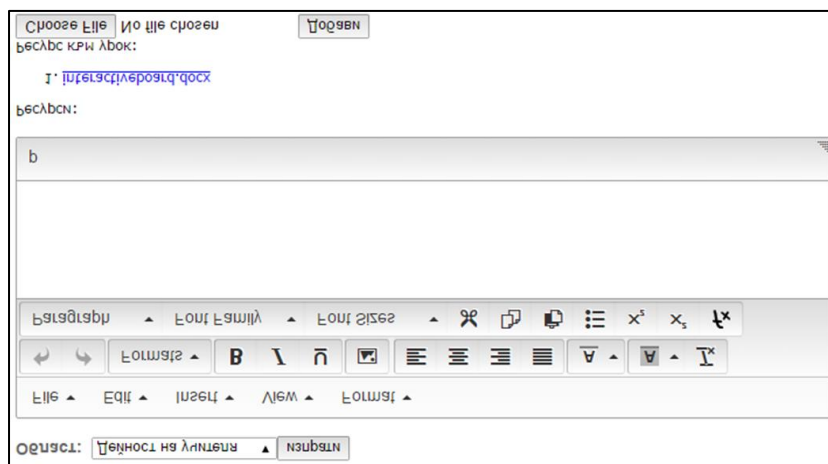


Fig.3 The main editor for entering / writing a lesson

- On the other hand, basic teachers and professors could:
- Create templates for plan - lecture notes;
- Powered constant monitoring of student developments;

- Supporting students with practical tasks and teaching resources;
- Communication with students viaonline mode or through messages;



Fig.5 Modeling the structure of the lesson for selected discipline

The second approach is associated with the preparation of this lesson by a group of students. They are separated in a team which methodology assign tasks associated with different challenges. In general, it is a parallel development of the same thematic lesson placed in different didactic situation that students must cope. They

develop parallel plan synopses as preparation, content and objectives for each lesson to be specific. Students independently examine and analyze additional scientific literature related questions situations. Find exemplary solutions to artists working in a particular learning environment and discuss them within the default group.

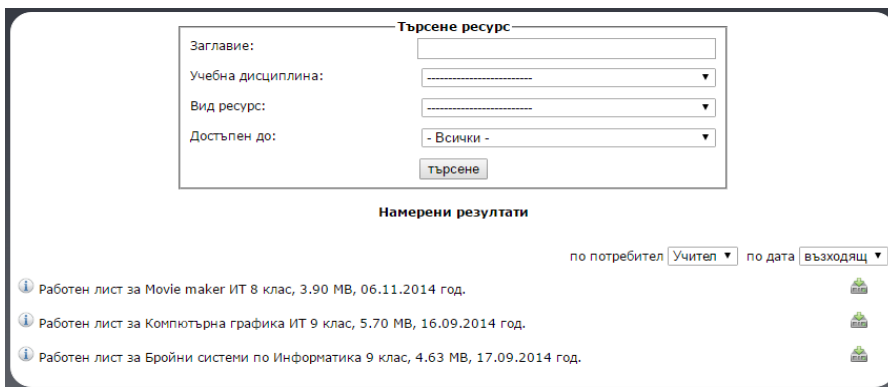


Fig.4 Search for electronic resources

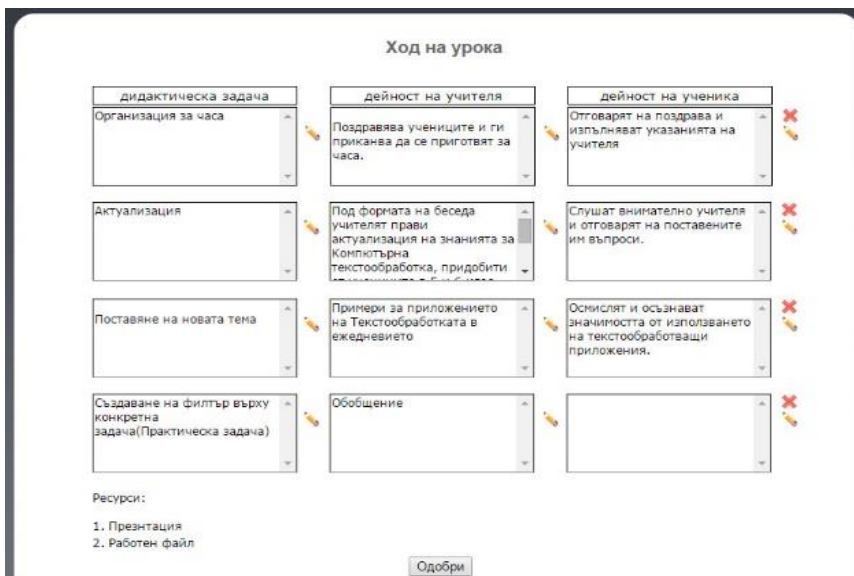


Fig.6 Edit student lessons and its resources

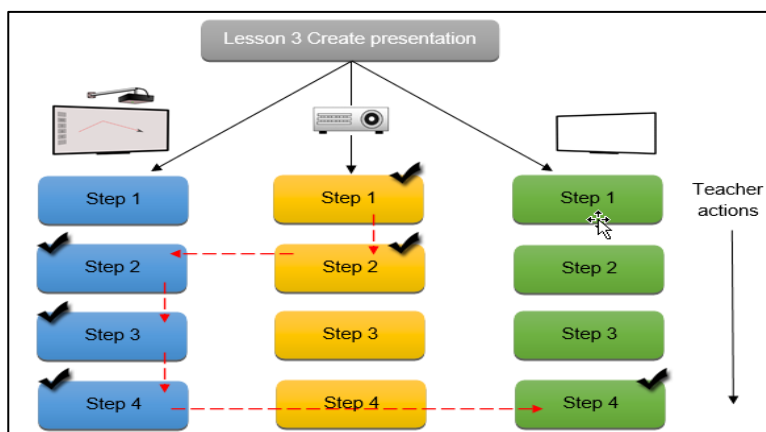


Fig. 7 Development of a parallel plan - syllabus

The creation of parallel lessons allows students to see different options for presenting a lesson. They can share with the difficulties accompanied each stage of development and what their appropriate solutions. Parallel lessons could be used to create lesson compilation (Fig. 7) of its various options. Combining various factors (technical, methodical and psychological) associated with a particular class or school practice would moglo to create lesson structure to support student interns.

In the future this approach will be used with existing

teachers from teaching graduate programs at the Faculty of Mathematics and Informatics of Konstantin Preslavsky – University of Shumen .", which will establish a base from various lessons developed by teachers acting so that their attempt to approbate among students.

A integrate new functionalities and promote the platform among teachers and students from different disciplines willing to use it in their work during the pedagogical practices.

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### Приложение электронного обучения в рамках педагогического стаж, с помощью методической web платформы

**Кр. В. Харизанов**

**Аннотация:** Статья предлагает авторское решение web платформы, с помощью, которой возможно создавать план-конспекты, связанные с практическими дисциплинами из цикла обучения студентов – будущих учителей по математике, информатике и ИТ. Рассмотрены некоторые возможности платформы, с помощью которых студенты смогут создать свои описания уроков во время педагогической практики. Показаны несколько скриншотов, визуализирующих некоторые из основных функций методической платформы.

**Ключевые слова:** *обучение, математика, информатика, ит, электронное обучение*