



Shortcomings And Their Solutions in the Lesson Automation Schedule of Higher Military Educational Institutions

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ABSTRACT: We know that all our hands still do that in the old system, Besides taking up the time of officers and workers, the lesson schedule created by this manual system also means that they have to work in the evenings outside of work without enough time because of the work in the department and the tasks assigned by the superiors. In the age of 21st century "Information technologies" in which we live, in order to abandon this system, we can set up the automation of the lesson schedule and, making our work much easier, it will be possible to devote time to other tasks. Therefore, I believe it is necessary to develop a system for automating the lesson schedule in higher military educational institutions using modern programming languages.

KEYWORDS: development of civilization, digital resources, educational institutions, military educational institutions, principles, students and cadets.

INTRODUCTION

The automated lesson schedule allows the teachers and professors of the department to lighten the load through pre-created lesson plans, summaries and learning goals, and it is possible to automatically calculate their monthly and annual workloads. In addition, the automated lesson schedule calculates the annual workload of the departments, and in order to eliminate excessive paperwork with the departments, it also implements the service of sharing all the work with the departments via computer through "SET". There is also a need for teachers to monitor the use of digital resources in the classroom, as well as to request digital content based on the individual educational needs of students and trainees [1].

THE MAIN PART

Officers and employees working in the educational department of all higher military educational institutions are assigned the following tasks:

- The educational department controls the organization of the educational process in faculties and departments.
- The educational department provides the necessary documents for conducting the educational process to faculties and departments in a timely manner.
- Faculties and departments are required to provide educational and methodological documents related to the educational process and the activities of professors and teachers on time, accurate information and educational and methodological documents.
- The educational department allows the teachers of the department to work on the basis of employment contracts and substitutes.
- All applications of the educational department related to the implementation of work on ensuring the educational process are first implemented by the departments [2].

The above tasks are only based on the lesson schedule, which teacher teaches which subject, and the orderly structure of the subject, i.e. (lecture, discussion, practical, group and laboratory) activities are clearly visible in the automated lesson schedule and the officer inspecting the lesson. or does not cause any difficulties to the employee. Based on regular teaching technology, students and cadets listen to lectures, conduct discussion sessions and practical sessions according to the lesson schedule. Tests are accepted at the end of the semester, and according to this test, students and trainees pass the final control based on the specified lesson schedule [3].

In higher military educational institutions, the lesson schedule is mainly drawn up every month. The person making this lesson schedule enters the name, surname, and patronymic of all the teachers in the university into the database and begins to spread the lesson distribution to them for 1 month, the most interesting thing is to assign a lesson to one teacher from the last name of more



than 200 teachers. At the time of eating, it is necessary to check one by one whether the lesson is a stick (if the teacher is teaching 2 or 3 groups, they are parallel at the same time). In the case of the automated lesson schedule, the system is able to quickly find this system through a computer-generated program and automatically correct it.

It should organize educational activities based on a strict educational plan that provides for the continuity of the educational process during the day and the equal distribution of educational work during the academic week.

- For many training sessions, the academic hour is 80 minutes, the break between sessions is set at 15 minutes;
- In order to ensure the equal distribution of independent work of students and cadets on educational materials, educational subjects should be placed in days. It is unnecessary to spend the academic day only with lectures, as well as to conduct lectures, discussions and practical exercises on the same topic on the same day;
- If a few classroom hours are allocated during a semester, to ensure the distribution of groups, they should be carried out within a week;
- Lectures are one of the most complex educational loads, so it is recommended to limit the teacher's lecture load to 4 hours per day (2 lectures);
- Must be exposed before practical and laboratory training;
- Lectures should usually be included in the schedule at the beginning of classes, and 4-6 hours of practical training should be held on the same day as classes;
- Training in laboratories, especially in special training, must be carried out mainly in a practical manner in order to improve the knowledge level of cadets and students [4].

The planning of educational activities should begin with the selection of a combination of subjects based on the following principles:

- - the subjects studied in one day should differ in terms of labor intensity and psychological perception;
 - - "every two days" principle, in order to give students the opportunity to adequately prepare for classes, it is necessary to take into account the assignment of pairs of other subjects to the next day's schedule and the replacement of subsequent pairs during the week;
 - - it is necessary to set the duration of classroom training on a certain subject to no more than 2 academic hours per day, i.e. one "pair", in exceptional cases, the audience time for learning science can be increased to 4 hours per day - up to two "pairs", if after that students and trainees should be given at least two days for independent work;
 - - the distribution of classroom time for studying subjects during the study day of each student and cadet is determined by the classroom fund and the availability of teachers, in which students are engaged in physical education and optional subjects in the study hall or methodical room and other laboratory rooms are poisoned;
 - - it is not allowed to hold lectures and seminars on the same subject on the same day.
- The following preliminary documents and information are required for the automation of the lesson schedule:
- - working study plan for each course for a given academic year;
 - - schedules of the educational process made in accordance with the working educational plans;
 - - thematic plans and wishes of the departments regarding the intensity of study of academic subjects;
 - - information of the departments on the distribution of the teaching staff for lecture courses and practical training, as well as the characteristics of individual workloads of teachers;
 - - information about the capacity of group rooms and available room numbers;
 - - computer class allocation table;

It is not particularly difficult to make a schedule for small educational institutions with a small number of study groups and subjects. The situation is different in large educational institutions, which are characterized by: the presence of a large number of students and trainees in each course; the number of academic subjects that each student takes during the semester, and the presence of lectures, practical, discussion and laboratory exercises in different groups, as well as the large number of military subjects in connection with the fact that the main part of our University is organized by the military, and these subjects are mainly it is distinguished by 4 or 6 hours of laying in one day. Therefore, we need to consider the above when automating this process. Also, certain parts of our professors and teachers who teach in our educational institution work part-time creates a problem for us because



we must not neglect to spread the lesson to them 3 days a week under the schedule. In order to implement the above operations, we have to turn to the genetic algorithm.

The Deputy Head of the University for Educational Affairs, the Head of the Faculty, "University Education Department" controls the level and quality of education of cadets and students. When cases of violation of the lesson schedule of training sessions (consultations) are observed, the group leaders inform the educational department, and the officers of the educational department carry out the work on this missed lesson. Sometimes, I changed the approved schedule of training sessions with the permission of the head of the educational and methodological department and the deputy head of the University according to the presentation of the head of the faculty. All changes are made before the start of training sessions [5].

In order to avoid the lessons of our professors who are training in the lesson schedule do not fall on the same hour at the same time, we find a solution to this problem by turning to the Python programming language. Also, in the automated lesson schedule that we create, the full name of the subject should be shown, if the name of the subject is more than the specified amount, we should shorten it in a way that we understand, and the sequence of subjects should be written in the form of (lecture, discussion, practical, laboratory), professor - the full name and surname of the teacher, the number of the classrooms, and which subject will be taught in which pair of lessons are indicated.

The description of the planning algorithm is that, according to the rule, the experienced dispatcher schedules the group into 2 or 3 subgroups in one pair lesson at the same time, mainly in foreign language classes, and the benefit of this algorithm is great when a separate teacher is assigned to each subgroup. Some lessons are already included in the schedule, the rest are numbered consecutively. A number of occupation numbers are considered genetic, although in principle only the order of occupations matters here. To create a schedule, we extract the group numbers and include the selected lesson in the schedule, taking into account the necessary requirements and maximizing the target function for students, teachers and listeners.

The officers and staff who prepare the class schedule should prepare the class schedule in a quality manner taking into account the annual holidays. For the quality organization of this process, the above should be taken into account when creating a schedule of training sessions. When the teacher is absent for a long time (vacation, business trip, or illness), the head of the department may transfer the lessons to another teacher of the department only after writing a notice to the head of the Educational and Methodological Department. and after his permission is granted, a copy of the notice will be stapled in the folders.

The program developed by us is intended to improve the quality of the educational process of the higher military educational institution, to create, edit, store, transmit and print information using new technologies. In addition, it ensures that the workload of teacher-professors in the department and the sequence of lessons go according to the logical-orderly structure [6].

CONCLUSION

With the growth of technology year by year, the modern stage of the development of civilization is characterized by a rapid increase in the volume of information flows and a clear recognition of information as the main source of development of human society. Currently, information is a necessary resource in all fields of education. It is known that high-quality information allows specialists in various fields to carry out their professional activities purposefully and effectively. Therefore, in the conditions of increasing the size and role of such information, it is necessary to use information technologies that allow collecting, compiling, storing, searching, process and providing it according to the personnel required by users. Based on the above thesis, I would like to recommend automating the lesson schedule in higher military educational institutions through programming languages.

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