

Architecture of a Digital System in Organizing the Process of Training Air Traffic Controllers

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Abstract: The article studies the stages of training air traffic controllers, describes the main factors indicating the need to introduce digital technologies into the process of training air traffic controllers. The structure of the digital system has been created on the basis of theoretical research methods.

Key words: air traffic control, air traffic controller, digital technologies, development of the transport system, aviation, training of specialists, flight safety.

Introduction

Today, in the training of air traffic controllers, a strictly regulated (formal) approach is used, which implies the division of blocks of theoretical and practical training within the following stages:

We consider the factors that indicate the need for changes in the training of air traffic controllers:

Human factor: The human factor is often the cause of incidents and accidents [1-3].

Modern teaching aids: The methodology for training air traffic controllers has undergone radical changes, in this regard, there is a great need to use the possibilities of new digital technologies in combination with new training methods [4-7]

A complex approach: The current approach to training air traffic controllers does not allow a systematic approach to the learning process. The use of digital technologies for the training of air traffic controllers is one of the ways to systematize the training process [8]

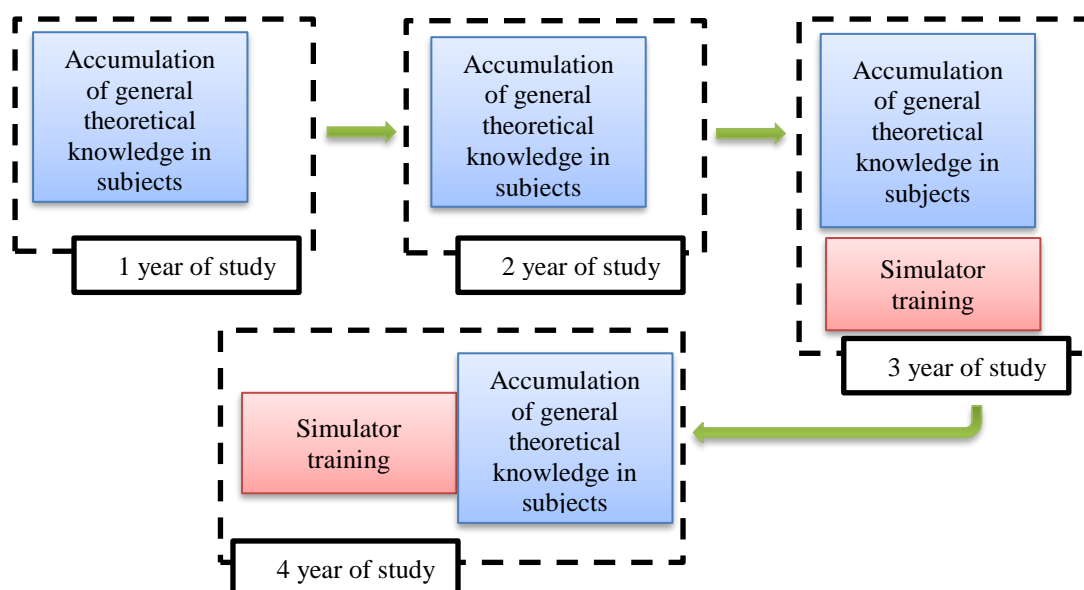


Fig.1. Stage of training air traffic controllers

It is also necessary to understand that there is a need to change the air traffic controller training system to solve the following tasks:

1. Formation during process training the relevant knowledge, skills and attitudes that are necessary for the safe, efficient and professional performance of job duties.
2. Development of strategic thinking and decision-making skills simultaneously with the acquisition of practical knowledge.
3. Reorganization of the training system for air traffic controllers is based on the analysis of mental activity and behavior of a specialist.
4. Formation of skills of interaction with related ATC units
5. Justifying the Benefits of Using Digital Technologies for Air Traffic Controller Training
6. Formation of spatial thinking skills in the object of studying
6. Formation of systematized knowledge in the object of studying.

Basing on the above factors and in order to solve the tasks set, we will consider the architecture of a digital system, which can be used while organizing the process of training air traffic controllers [9].

Methods

Theoretical analysis of the structure of the digital educational environment in the context of the development of digital technologies in the education system of the Republic of Uzbekistan was carried out using the methods of theoretical research

Results and discussion

To build the structure of the digital system, an analysis of the training process for air traffic

controllers was initially carried out. According to the results of the theoretical analysis, the structure in fig.2 was described.

Carrying out a structural and meaningful analysis of the process of training air traffic controllers in the modern scientific space, we can state the absence of a unified approach both to the definition and to its structural organization.

The following is the architecture of the educational environment when using digital technologies (Fig.3.).

Comparison of digital and non-digital educational environment allows us to determine that the digital educational environment is part of the general educational environment for the training of air traffic controllers, designed to provide various tasks of the educational process.

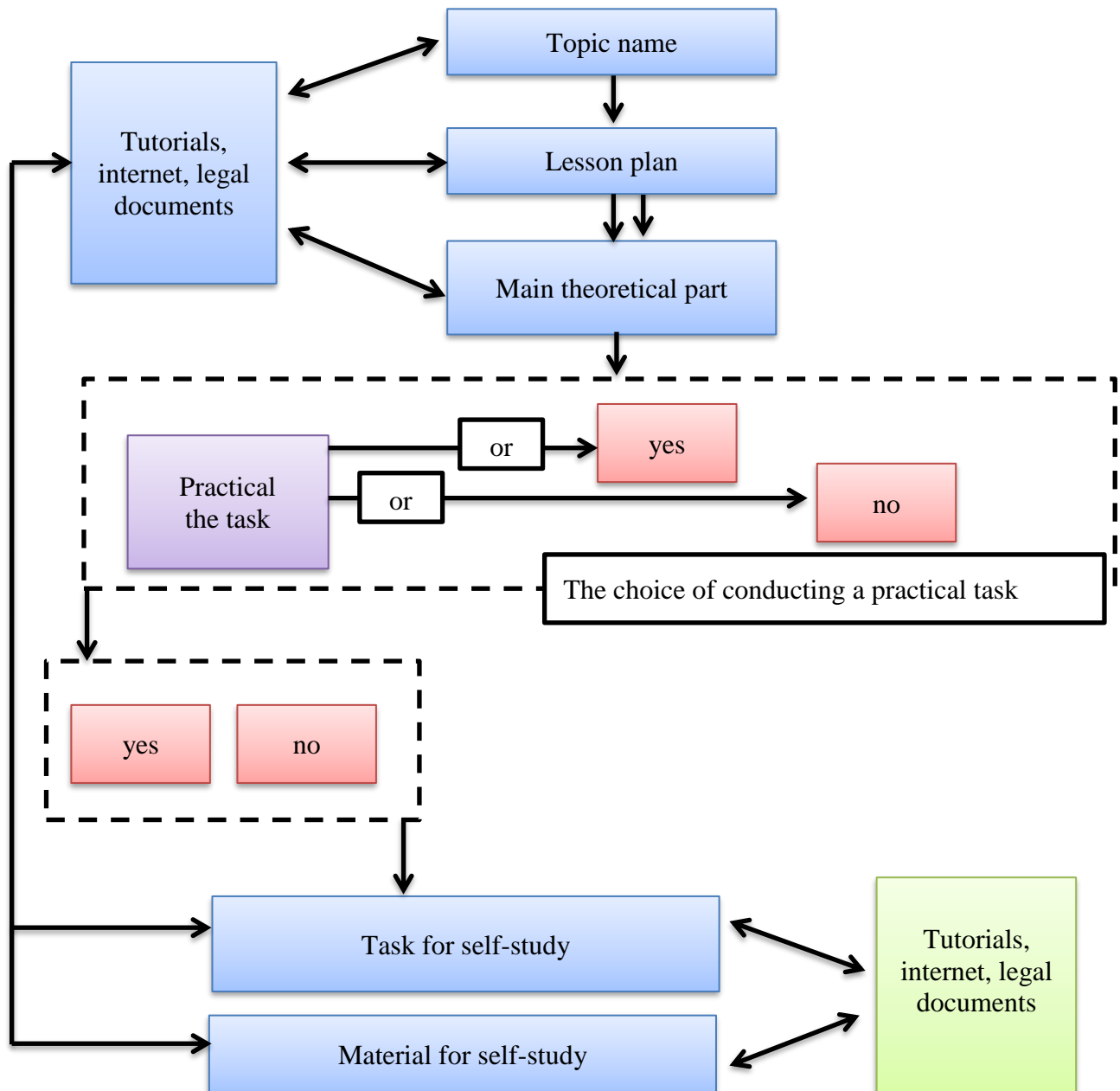


Fig.2. The structure of the process of training air traffic controllers.

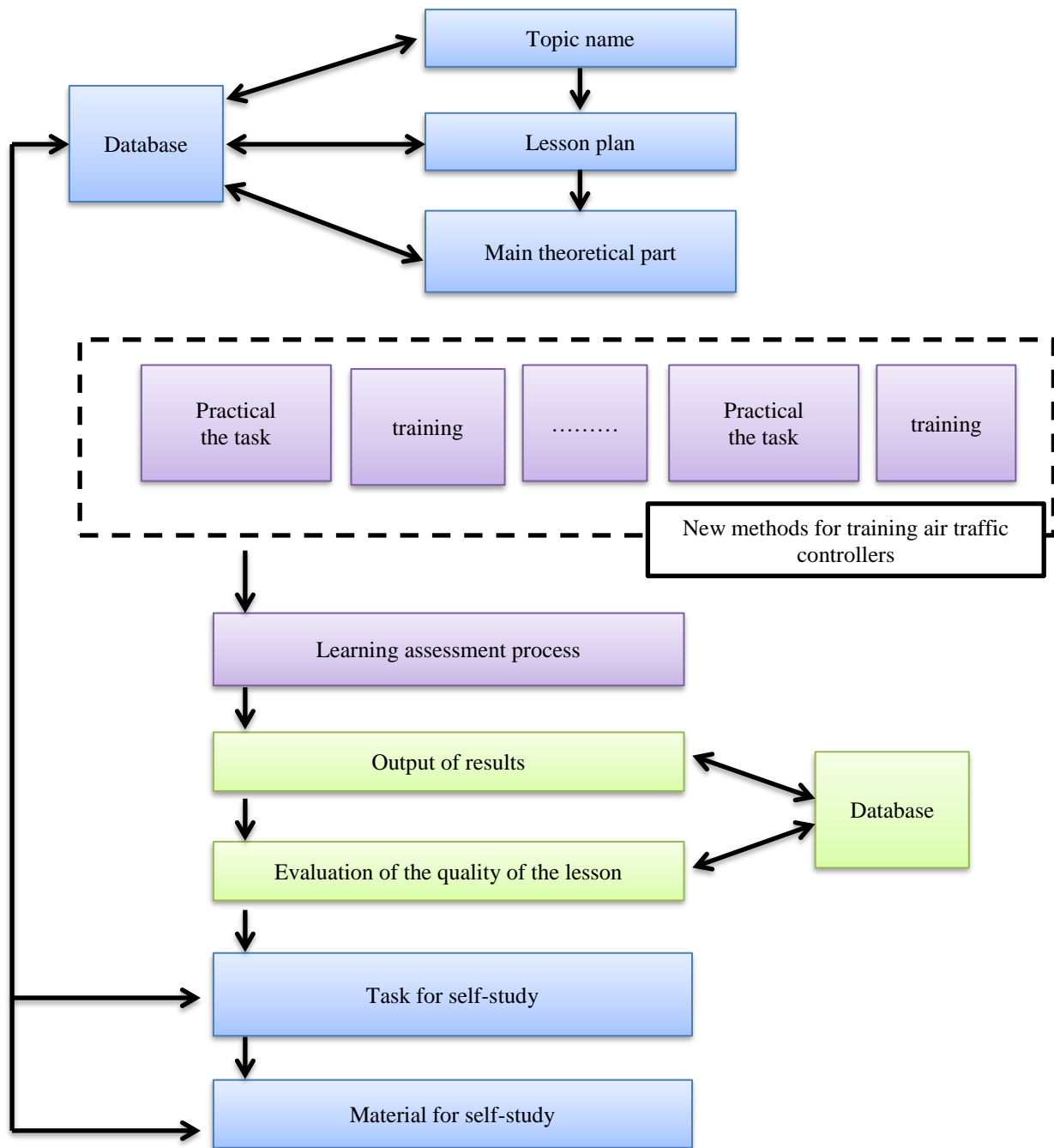


Fig.3. The structure of the digital system of the process of training air traffic controllers

Conclusion

It should be noted that digital technologies provide a lot of opportunities to improve the training of air traffic controllers, but their integration into the educational process is far from being simple. By itself, equipping educational organizations with digital technologies does not lead to an increasing in educational results, but the use of digital technologies specially developed for the professional training of air traffic controllers allows full using of new training methods that previously could not take their worthy place in 5education due to the complexity of their implementation. , also receiving information systematized, consolidating the acquired knowledge with practical tasks and trainings, which, in turn, will allow air traffic

controllers to develop the necessary professional qualities to perform their tasks. Thus, the use of digital technologies in the training of air traffic controllers creates an unfolding new stage of the digital revolution, which makes it a widely available and reliable means of solving the tasks set for the education system.

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