

## **ADVANTAGES OF CREATING ELECTRONIC STUDY MANUALS**

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### **ABSTRACT**

*In this article, the current state demand for the development of education, taking into account the personality of the student, his aspirations, abilities and interests, and taking into account the prospective development of science, technology and technology, the basis for students' learning of subjects and science is to ensure the development of general competencies. At the same time, it was thought that the student's knowledge should be strengthened not by theoretical knowledge, but by visual perception, and in this context, the creation of electronic training manuals.*

**Key words:** *competence, student personality, electronic study guide, abstracting*

### **АННОТАЦИЯ**

*В данной статье рассмотрена современная государственная потребность в развитии образования с учетом личности учащегося, его стремлений, способностей и интересов, а также с учетом перспективного развития науки, техники и техники, основы обучения учащихся. предметов и наук заключается в обеспечении развития общих компетенций. При этом считалось, что знания студента должны подкрепляться не теоретическими знаниями, а визуальным восприятием, и в этом контексте созданием электронных учебных пособий.*

**Ключевые слова:** *компетентность, личность студента, электронное учебное пособие, реферат.*

### **ANNOTATSIYA**

*Ushbu maqolada hozirgi kunda ta'limni rivojlantirish bo'yicha qo'yilayotgan Davlat talabi talaba shaxsi, uning intilishlari, qobiliyati va qiziqishlarini e'tiborga olib, fan, texnika va texnologiyalarning istiqbolli rivojlanishini hisobga olgan holda, talabalarda fanlarni o'rganishda tayanch va fanga oid umumiy kompetensiyalarni rivojlantirishni ta'minlashdan iborat. Shu bilan birga, talaba nazariy bilim emas balki vizual ko'rish orqali bilimi mustahkam bo'lishi va shu asnosida elektron o'quv qo'llanmalar yaratish haqida fikr yuritilgan.*

**Kalit so'zlar:** *kompetensiya, talaba shaxsi, elektron o'quv qo'llanma, abstraktlash*

### **INTRODUCTION**

Educational material should be built in accordance with modern methods of teaching in the process of mastering, determining the level of complexity and depth

of studying educational material specific to the age and individual characteristics of learners. For example: experience, comparison, observation, abstraction, generalization, integration, similarity, analysis and synthesis, modeling method, and at the same time it is necessary to take into account the methods of mathematical modeling and systematic analysis. The e-learning manual is available with a number of conveniences.

1. A computer, smartphone or tablet is enough to use the electronic textbook.

It is possible to use it even in an environment without an Internet network.

2. Electronic training manuals are distinguished by the order of using the training manuals, the method of execution, having a clear sequence, saving time, interesting interface, and making search operations several times faster.

3. Elektron o'quv qo'llanma orqali talabanning internet resurslaridan samarali foydalanish natijasida intellektual salohiyatini va axborot kompetentligini oshiradi.

4. The ability of the student to understand his knowledge and skills and basic expressions through the glossary is improved through various types of created tests.

5. The fact that a number of electronic training manuals posted on the Internet are not in Uzbek language, among the electronic training manuals created in Uzbek language over the years, they are intended for learners of different ages interested in physics, naturally it is distinguished by the fact that there are no electronic training manuals suitable for the direction.

## **DISCUSSION AND RESULTS**

Currently, most of them do not fully meet the requirements of electronic training manuals, because the creation of electronic training manuals was not carried out in a systematic manner. In the conditions of innovative education, the presence of the electronic study guide in Uzbek in order to increase the prestige and prestige of the new generation electronic study guides designed for the natural directions of higher education and their use in gadgets The role of application development is important, such as creating mobile applications designed for performance. In particular, the creation of an electronic study guide will help to connect the ongoing research to create a new generation electronic study guide for natural science students. It will help to increase the content and level of the new generation electronic training manual created in the Uzbek language, improve the corpus, and adapt the experiences of creating the world electronic training manual created in the Uzbek language. Based on the student's age characteristics, the Electron study guide introduces students to the researches of physics scientists through the audio and video clips provided for each concept, and as a result, thoroughly learns the basic expressions. This e-learning

guide is necessary for at least 1 million users, including students, researchers and teachers of natural sciences.

With the help of an electronic study guide, it is aimed at teaching natural science students not only to learn the physical meanings of the necessary concepts in their field, but also to explain physical properties. Also, with the help of an electronic study guide, it is introduced to explain unfamiliar words in a visual form, and thus to direct the development and expansion of student thinking to scientific research. The e-learning manual also has a differential search and selection of letters and words to find key phrases. Later, students who use the electronic study guide Online can also be given opportunities to control the completion of assignments.

The electronic training manual is downloaded and installed on a personal computer, laptop, and tablet. In the course of its use, according to the requirements of users, it can be organized by showing on the projector in groups or using the display screen of an individual computer. It is planned to create an APK version of the electronic training manual as a program. The program can be downloaded to tablets and smartphones using the Play Market. After installing the Install program, all tasks are fully performed using the mobile version of the developed program, and an opportunity for education and individual learning is created.

The approximate size of the program is expected to be 110-120 MB for a desktop PC and 20-35 MB for a mobile application. The problem of scientific and theoretical study of electronic textbooks is more developed in developed countries. The first studies in this regard appeared in our country in 2010. The most important in this series is Abrahams Lee B., Williams L. *Electronic Discourse in Language Learning and Language Teaching*. – Philadelphia: John Benjamins John Benjamin B. V., 2009 and Stolyarova E. V., Fedotova M. G. *Professional and Personal Development: ucheb. posobie dlya magistrantov, izuchayushchix angliyskiy zyzyk / videtelstvo o register. Electric. Resource 20282; Gosudarstvennaya Academy of Sciences; Russian Academy of Education. July 2014.* – URL: [http://issuu.com/elenastolyarova/docs/professional\\_and\\_personal\\_developme](http://issuu.com/elenastolyarova/docs/professional_and_personal_developme) became a resource. For these authors, despite modern methods of imparting knowledge and serving as necessary information for the user, they raised a number of issues that have not lost their relevance even today. In particular, attention was paid to the importance of the electronic study guide in physics, its fundamental capabilities, and the practical study of all theoretical concepts. The physical foundations of the devices used in biology were revealed.

In contrast to these data, it is observed that the knowledge and skills of the learners are decreasing year by year, they are alienated from the physical knowledge

in their field, and at the same time, some deficiencies arise. Today, the problem of forming qualitative research in physical research in the field of biology is very poorly studied. And in the Western world, the role of the electronic textbook is incomparable and the level of knowledge of the learner, and they suggested their periodicity for the development of quality research practice.

If the electronic study guide created in Uzbek is created in Uzbek language, which is different from the electronic study guide, it will create a wide range of opportunities for learners and will be closely related to understanding the methodological aspects of their research. lib, which is also useful in their parsing. At the same time, the characteristics of natural research, the role of physical science in their foundation, and its importance, since it is clear that physical laws are the basis of the essence of every experiment, now the problem of finding physical laws from hypertext is solved. In the same way, it is also possible to make an electronic study guide on how to obtain semiconductor  $Bi_2B^{VI}_3$  and  $Sb_2B^{VI}_3$  ( $B^{VI}$  - Se, Te) thermoelectric materials. Its electrophysical parameters, thermodynamic and mechanical parameters can also be displayed visually through an electronic tutorial.

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