

## A SYSTEM-FORMING COURSE OF “ANATOMY AND HUMAN PHYSIOLOGY” AS A MEANS OF FORMING THE MULTIMEDIA COMPETENCE

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### ABSTRACT

In Uzbekistan, an education is one of the priorities of the state policy. The most important factor determining the quality of student training in higher education is the professional competence of the teacher. An integral part of the professional competence of a teacher is multimedia competency. In the modern educational situation, multimedia competence is complemented with the ability to interact productively with innovative experience. An innovative approach to learning allows you to organize the learning process so that it contributes to the formation of personal qualities of students. One of the main properties of the innovative approach to learning is the use of multimedia learning tools. Adequate equipment of the learning process with multimedia helps to strengthen the individualization of learning. It is in the field of education that multimedia technologies have received the widest application: multimedia encyclopedias were created. Modern multimedia tools have for the embodiment of the principle of visibility ample opportunities that must be realized based on the psychological characteristics of the perception of information in the learning process. Therefore, the highest quality of assimilation is achieved with a direct combination of the teacher's words and the image is presented to the students in the learning process. Naturally, one should not forget that, nevertheless, in the classroom, the teacher is the main leading role, that is, precisely his degree of development of multimedia competence. The article involves the ways of creating multimedia competence by the example of studying the course of “Anatomy and human physiology” with the help of conducting the method of inquires of teachers.

**Keywords:** Competence, innovation, multimedia competence, multimedia tools of training, web - inquiry.

### INTRODUCTION

In the new millennium, the term of “modernization of education” has often been used. Under the term a complex and comprehensive update of all links in the educational system are described. The process of modernization of education is closely related to the introduction of multimedia teaching facilities during the educational process. Modern comprehensively developing Uzbekistan cannot be imagined without the use of modern teaching facilities and technologies such as multimedia teaching facilities, information and communication technologies. In the Decree of President on No. 4907 of February 7, 2017, “The Strategy of Actions in Five Priority Directions of the Development of the Republic of Uzbekistan” and also in Law of 2909 about “On Measures for the further development of higher education”, a special attention is paid to the tasks, that are directed at:

- Training of highly qualified cadres in accordance with the modern needs of the labor market;
- equipping the higher educational institutions with facilities of modern information and communication technologies.

There are a number of categories of people, who are distinguished by their ability to work with a computer: 1) user; 2) advanced user; 3) programmer; 4) system administrator. From the pedagogical point of view, teachers can be divided into two main categories: teacher-users of ready-made multimedia information resources and teacher-developers of multimedia software for pedagogical purposes. The actuality of the topic, studying by me lies in the fact that, in the constantly developing in 21st century, in the century of information civilization, it needs to solve the problem of training future teachers of specialists, who may be limited not by ready-made information structures, but by specialists who independently create information structures and manage them. In this case, the professional competence of the teacher will help to solve problems. The professional competence of the teacher is implemented in 3 levels:

1. Keyword, which is general and it is necessary for any professional activity;
2. Basic, which is necessary for building the professional activity of a pedagogic;
3. Special, which reflects the specifics of a particular area of professional activity of the pedagogic.

Multimedia competence is a type of professional competence and is carried out at a special level of professional competence.

### **LITERATURE REVIEW**

In the work of Henner E.K. (2008), the second chapter of the source contains questions related to the theory and practice of the formation of ICT competence of students and teachers, also examines the requirements for the competence of graduates in the continuing education system, the stages of controlling the level of competence at various levels of continuing education, forms monitoring the level of ICT competence, it is considered that the methodology of pedagogical testing allows you to get high-quality characteristics and on their basis to evaluate and compare. The author Gorokhova R.I. (2010) set aside the ICT-competence of the teacher to 2 aspects: the basic ICT - competence and the subject-oriented, the formation of the ICT - competence of the teacher can be represented in 3 stages: basic, general and professional. Gorokhova R.I. affirms that the process of preparing teachers for the use of ICT in the educational process should be continuous. According to the author's view, the main role in the methodological training of future teachers and in the formation of ICT- competence is given in the course of "Theory and Methodology of Education (on the subject)". Dr. Damodharan (2007) makes a comparative analysis on the traditional and innovative method of teaching method in his article, considers the role of multimedia facilities of teaching in the educational process. The author affirms that the advantage of creating multimedia projects contributes to the upbringing process, which students learn to work in a group. Albert Ritzhaupt, Florence Martin and Katharine Daniels (2010) are considered as educational technologists on the multimedia competence in this article. The authors approve that an important aspect of any field of activity is a professional competence. In the article of the authors, multimedia is considered as the main component in the field of educational technologies and its use affects to the learning. Matjaž Duh, Tomaž Bratina, Marjan Krašna (2013), the authors prepared a survey for primary school teachers, where 474 of teachers from all over Slovenia participated in the course of studying the multimedia competence. The survey consisted of the following questions: will the teacher create his own e-learning? What components will he take into account while compiling his e-learning?

### **METHODOLOGY**

After gained independence in Uzbekistan, great changes took place in the education system. Great attention was paid to the fundamental reform of the education system. Taking into account the achievements of science and technology, the innovations of modern information

technologies, the State Educational Standards and educational curricula on 18 disciplines were improved. On the base of these State Educational Standards, a phased development of a new generation of textbooks is provided.

The purpose of my research is to identify the level of multimedia competence of teachers of a higher educational institution on the course of “Anatomy and human Physiology”. I developed a worksheet of inquirer, where the teacher gave questions (from table 1).

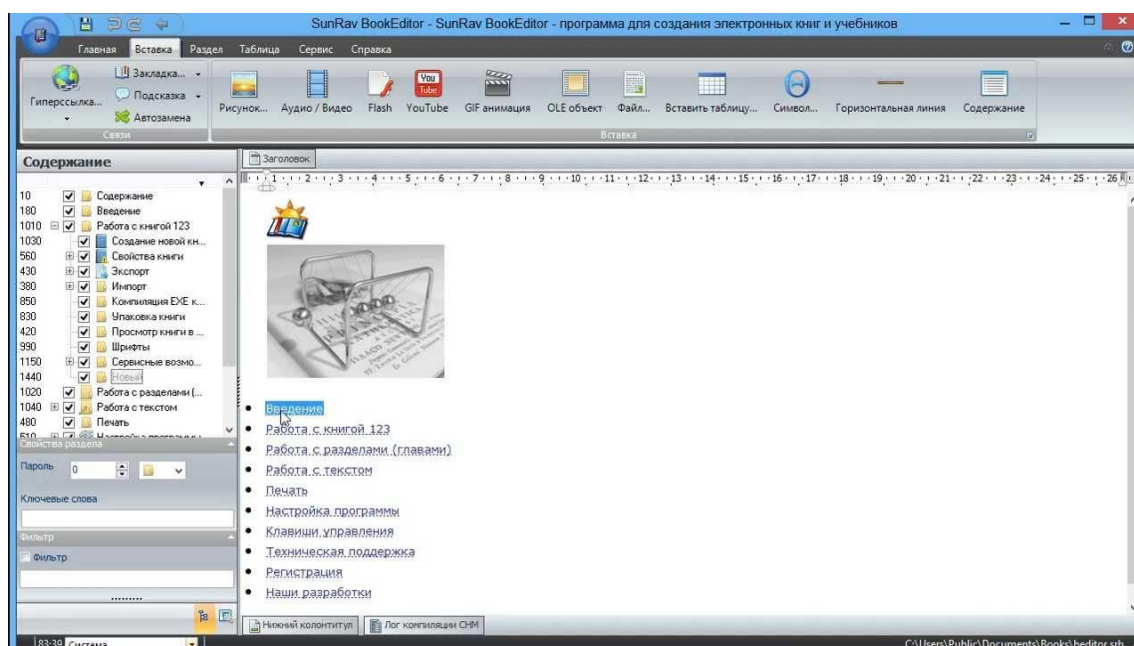
1. In your opinion, what category of teachers do you belong to?	A) teacher user of prepared multimedia materials B) teacher developer of their own multimedia materials
2. Have you developed your personal electronic textbook?	A) yes B) unsuccessful attempt C) never
3. How do you relate to develop your own website?	A) Positively, I want to try to create my own site. B) Good, but I cannot do by this knowledge. C) I am not interested.

**Table No. 1. Questionnaire for teachers**

In my opinion, in the new millennium, every teacher of a higher educational institution could be able to create their own electronic textbooks and websites, since a competent teacher should be able to work on himself.

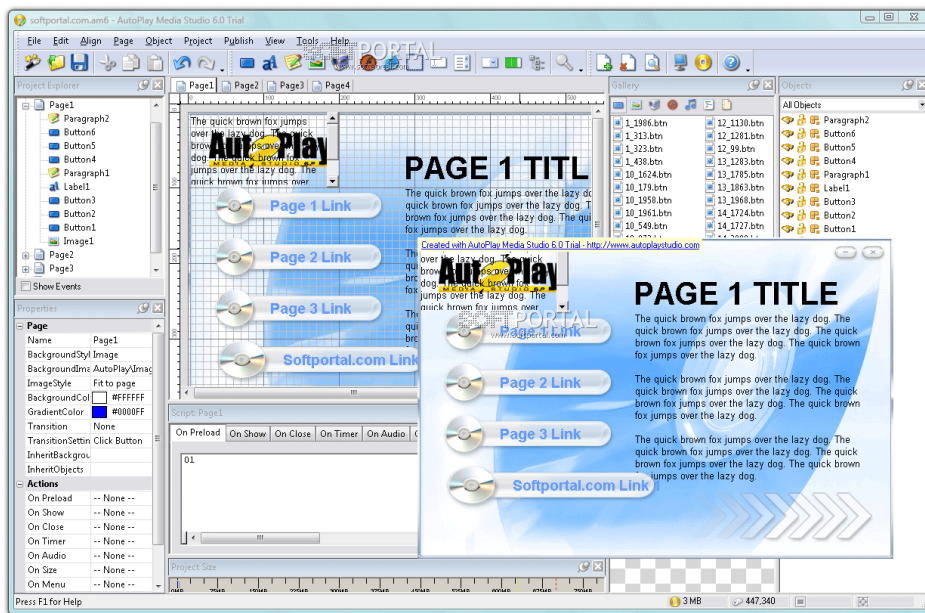
### Brief instruction for teachers. List of programs with help which you can create an electronic textbook and website

1. Sun Rav Book Editor is a universal and simple tool for creating electronic textbooks, which it makes possible to work on a textbook without any difficulties adding a picture, video, audio, gif animation, tables (with Fig. No. 1).



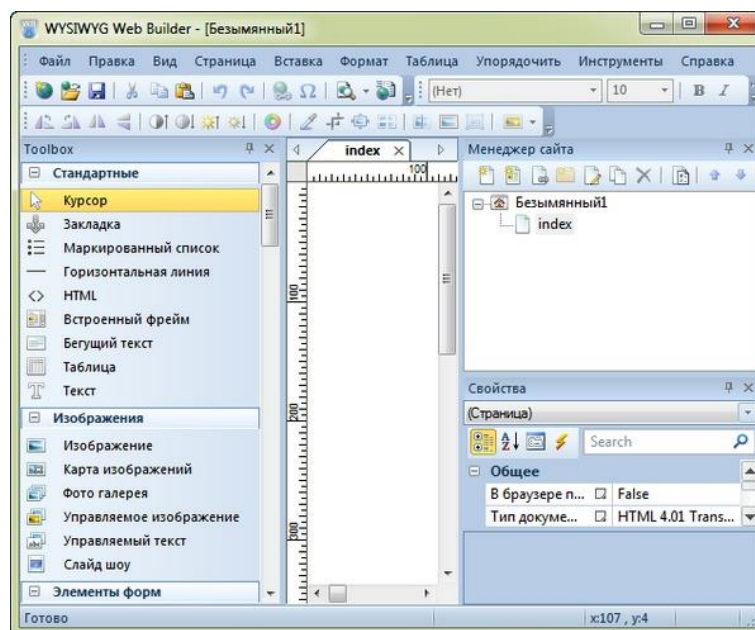
**Figure No. 1. PROGRAM Sun Rav Book Editor**

2. Autoplaymentia- allows you to create interactive programs, electronic textbooks, provides the ability to add themes of formalization, images and sounds. It is very easy to use, the teacher can independently use this program (with Fig. No. 2).



**Figure No. 2. PROGRAM Autoplaymentia**

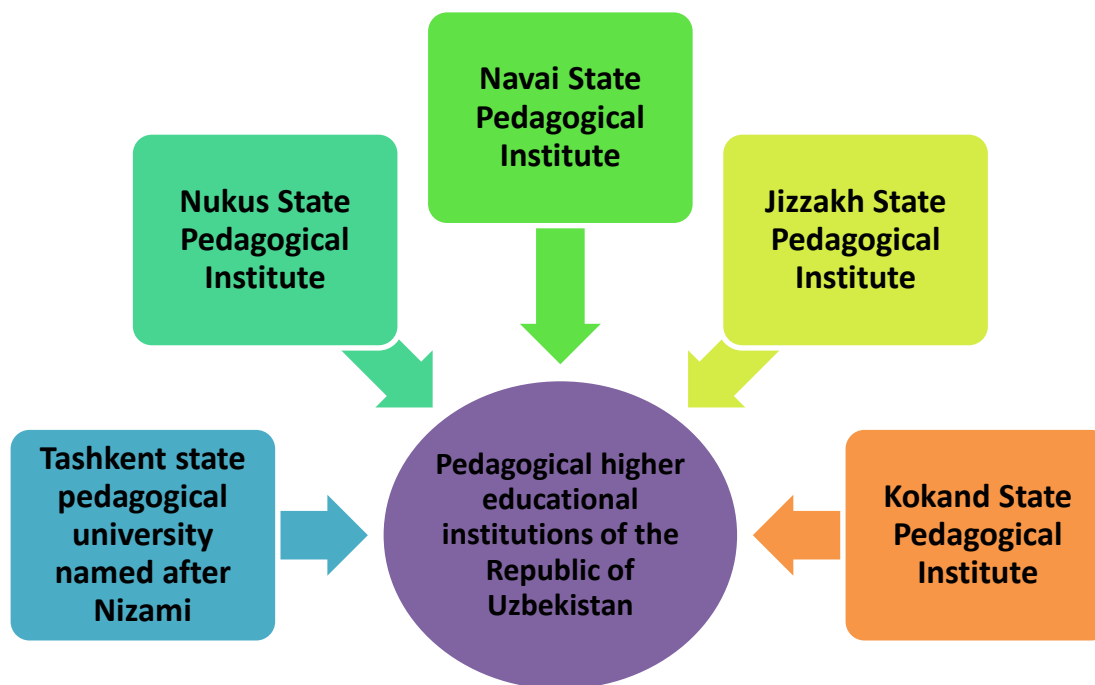
1. WYSIWYG Web Builder is a site designer that is easy to use even for the average user. (Fig. No. 3)



**Figure No. 3. WYSIWYG Web Builder Program**

## RESULTS

During the study, a questioners and web-inquiry were conducted among teachers of pedagogical higher educational institutions throughout the Republic of Uzbekistan. There are one pedagogical university and 4 pedagogical institutes in Uzbekistan (Fig. 4).



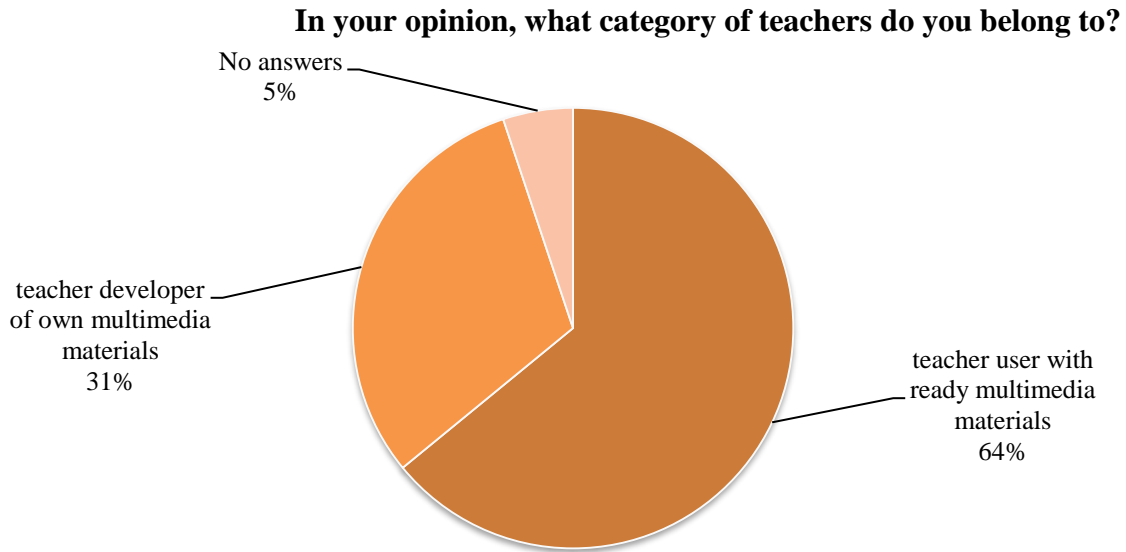
**Figure No.4 Pedagogical higher educational institutions of the Republic of Uzbekistan**

The course of “Anatomy and human physiology” is carried out in the 3rd course of undergraduate studies in all pedagogical higher educational institutions.

A total of 45 web teachers were sent web-inquires. After the conducting of inquires, the results were revealed, that which level provides the multimedia competence of teachers of the course of “Anatomy and human physiology”. The results of the survey were conducted in tables’ No. 2, 3, 4 and in diagrams of No. 1, 2, 3.

In your opinion, what category of teachers do you belong to?	teacher user with ready multimedia materials		teacher developer of own multimedia materials		no answers	
		25 from 39	64%	12 from 39	30,76%	2 from 39

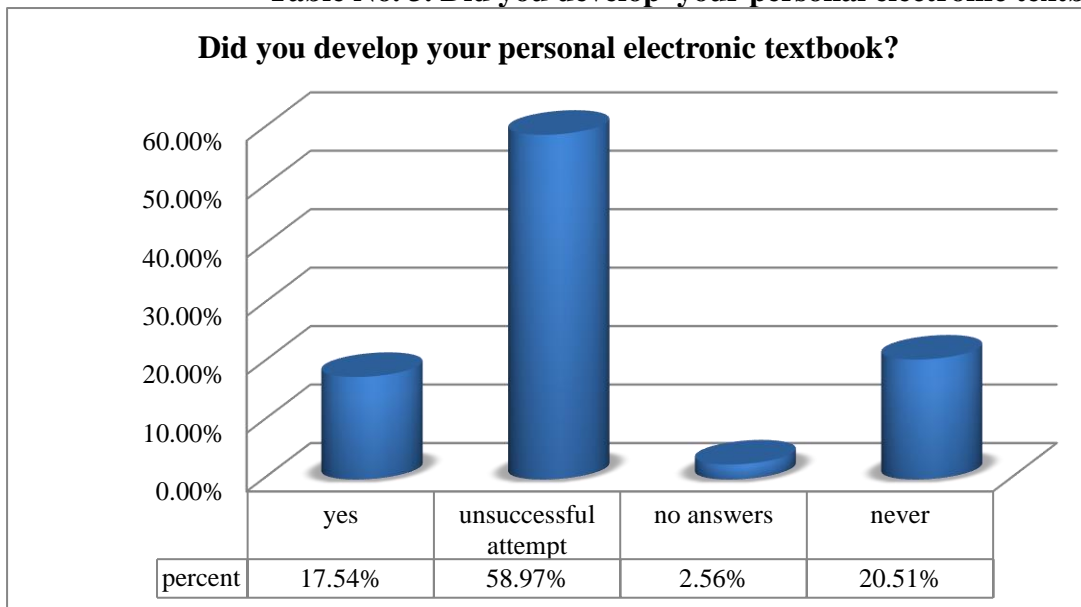
**Table No. 2. In your opinion, which category of teachers do you apply to?**



**Chart No.1**

<i>Did you develop your personal electronic textbook?</i>	<i>yes</i>		<i>unsuccessful attempt</i>		<i>never</i>		<i>No answers</i>	
		<i>7 from 39</i>	<i>17,54 %</i>	<i>23 from 39</i>	<i>58,97 %</i>	<i>8 from 39</i>	<i>20,51 %</i>	<i>1 from 39</i>

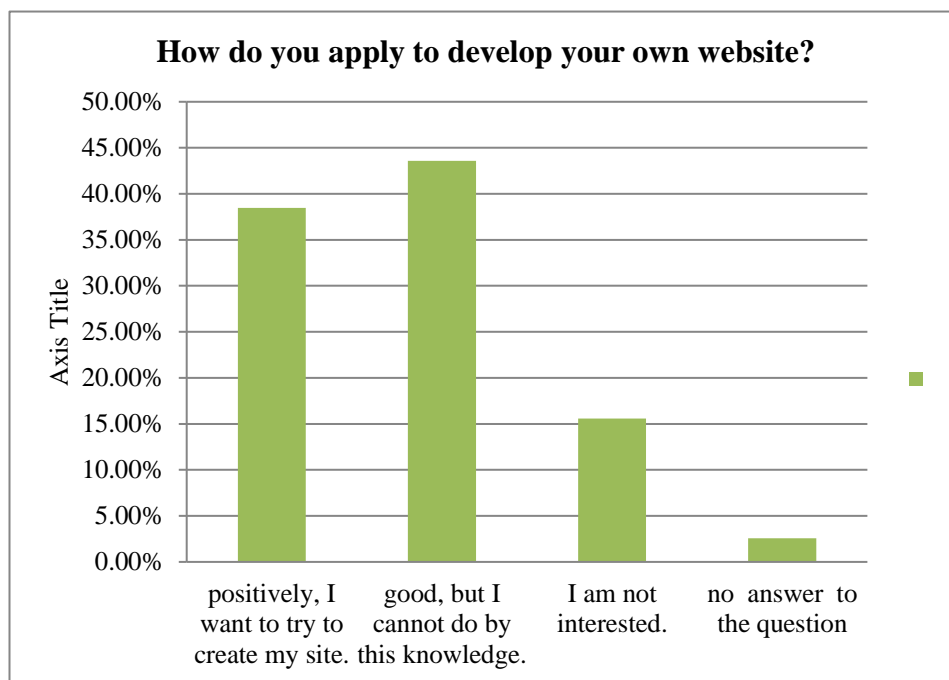
**Table No. 3. Did you develop your personal electronic textbook?**



**Chart No.2**

<b>How do you apply to develop your own website?</b>	positively, I want to try to create my site.		good, but I cannot do by this knowledge.		I am not interested.		no answer to the question	
	15 from 39	38,4 6%	17 from 39	43,5 9%	6 from 39	15,3 8%	1 from 39	2,56 %

**Table No. 4. HOW DO YOU APPLY TO THE DEVELOPMENT OF YOUR OWN WEBSITE?**



**Chart No. 3**

**DISCUSSION**

Of course, with such inquiry it is impossible to fully assess the multimedia competence of teachers, since the answers to the above questions may be false, not accurate, there were such cases that we did not receive a response to the web-inquiry sent via e-mail, but we tried to increase desire of teachers to work on themselves directly through the questionnaire and increase professional competence. The questionnaire was attended by 39 teachers from 45. In the tables under the numbers of 2,3,4 and in the charts under the numbers of 1,2,3, the results of the questionnaire were given.

**CONCLUSION**

So as we see, in the above-mentioned proposals, all the conditions for improving the educational process for the better were created. One question remains, the professional competence of the teacher, in particular multimedia competence. It all depends on the teacher; the more he will work on himself, the better the quality of classes that he will conduct. This article discusses the types of professional competence, analyzes the work of specialists who conducted their research on the formation of multimedia competence. The paper provides brief information about programs that are easy to use and allow you to work on your multimedia material.

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