



## THE PROCESS OF ORGANIZING INTEGRATIVE CLASSES IN GENERAL PROFESSIONAL AND SPECIAL SUBJECTS

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Article history:	Abstract:
<b>Received:</b> 6 <sup>th</sup> April 2021 <b>Accepted:</b> 22 <sup>th</sup> April 2021 <b>Published:</b> 15 <sup>th</sup> May 2021	This article deals with organizational and methodological interdisciplinary integration in teaching special disciplines in higher education, ensuring the integration of general professional and special disciplines to achieve efficiency in the learning process, integrated information technology and the organization of integrated lessons. And also, about the structure of integrated lessons in the education process, the role of integrated lessons in the development of future specialists.
<b>Keywords:</b> integration, training, general professional disciplines, special disciplines, integrated lesson, learning process, interdisciplinary integration, teaching methods, specialists, lesson structure, knowledge assessment	

The decree of the President of the Republic of Uzbekistan from 07 February 2017 up-4947 "On a Strategy for the further development of the Republic of Uzbekistan" decree of the President of the Republic of Uzbekistan "On additional measures to improve the quality of education in higher education institutions and ensuring their active participation in large-scale reforms in the country" dated 14 June 2012 This article will contribute to achieving the goals set out in other regulatory documents [1].

Striving to become one of the developed countries, Uzbekistan, like all sectors of the economy, is trying to introduce advanced technologies in education and thereby bring the content of education to world standards.

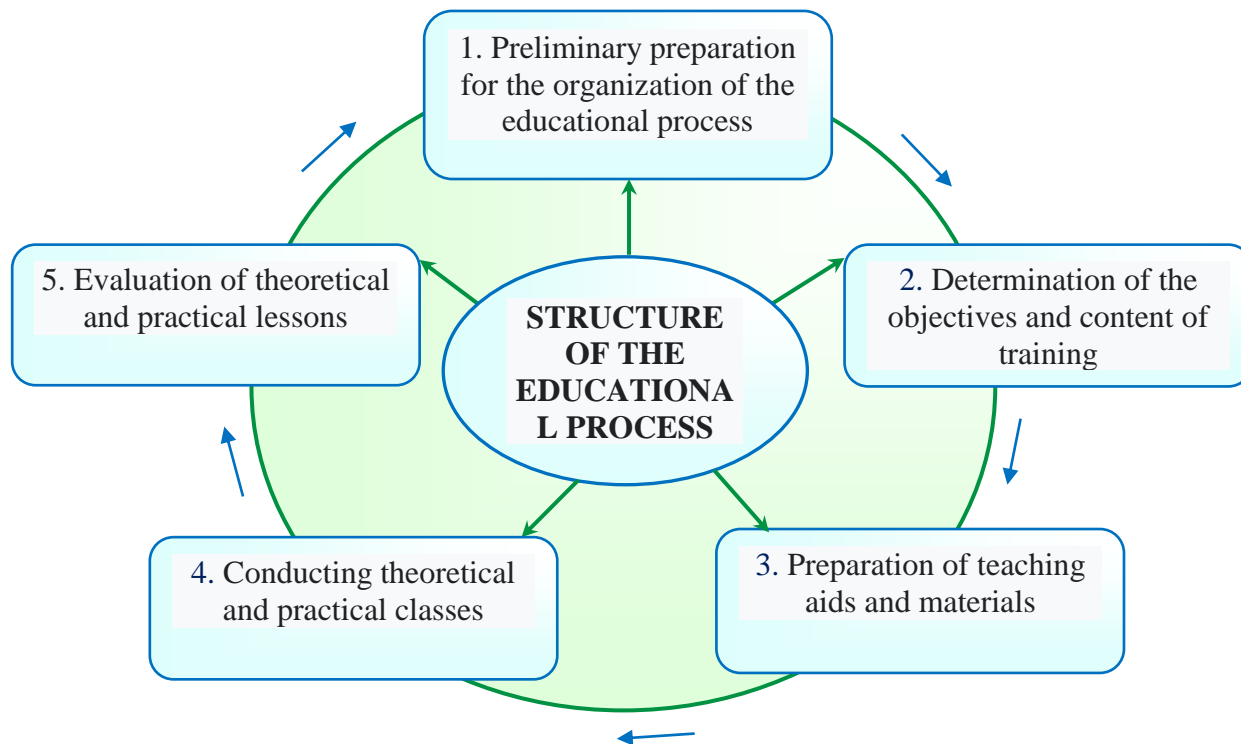
Currently, higher educational institutions are carrying out a number of noteworthy works on the use of new pedagogical and information technologies and the development of modern teaching materials. Also, in order to improve the education system, the experience of professional training of foreign countries is used. The implementation of this work is the basis for creating a methodological system in the field of education, combining the rich heritage of our people, the ideas of our great thinkers and the latest innovations of our time.

The model of interdisciplinary connections determines the quality of the student's professional training and, as a result, the future specialist's ability to master an independent study of this activity. Therefore, the time characteristic of this model is its dynamics, and it involves the acquisition of independent knowledge based on interdisciplinary communication in higher education institutions.

One of the most important features of the organizational and structural model that we developed is its integrity, because the research goal cannot be achieved by introducing any component of this model [5].

The task of the educational process is to ensure the unity of teaching, upbringing and development. The problem of developing the skills, consciousness and skills of students, deepening their scientific and practical knowledge is also relevant in the preparation of teachers in the field of vocational education in technical universities. These qualities help future students consciously increase their interest and responsibility in their profession, and develop their abilities. The problem of increasing the creative abilities of students in the learning process is complex and multifaceted.

Therefore, it is important to develop students' interest and abilities in the profession in order to enhance their scientific, theoretical and practical knowledge. Education, including education and upbringing, is aimed at developing the intellectual and scientific potential of the republic, the formation of a full-fledged free individual who is aware of his responsibility to society, family and state. Therefore, this is a priority area. Figure 1 below shows the structure of a traditional lesson process:



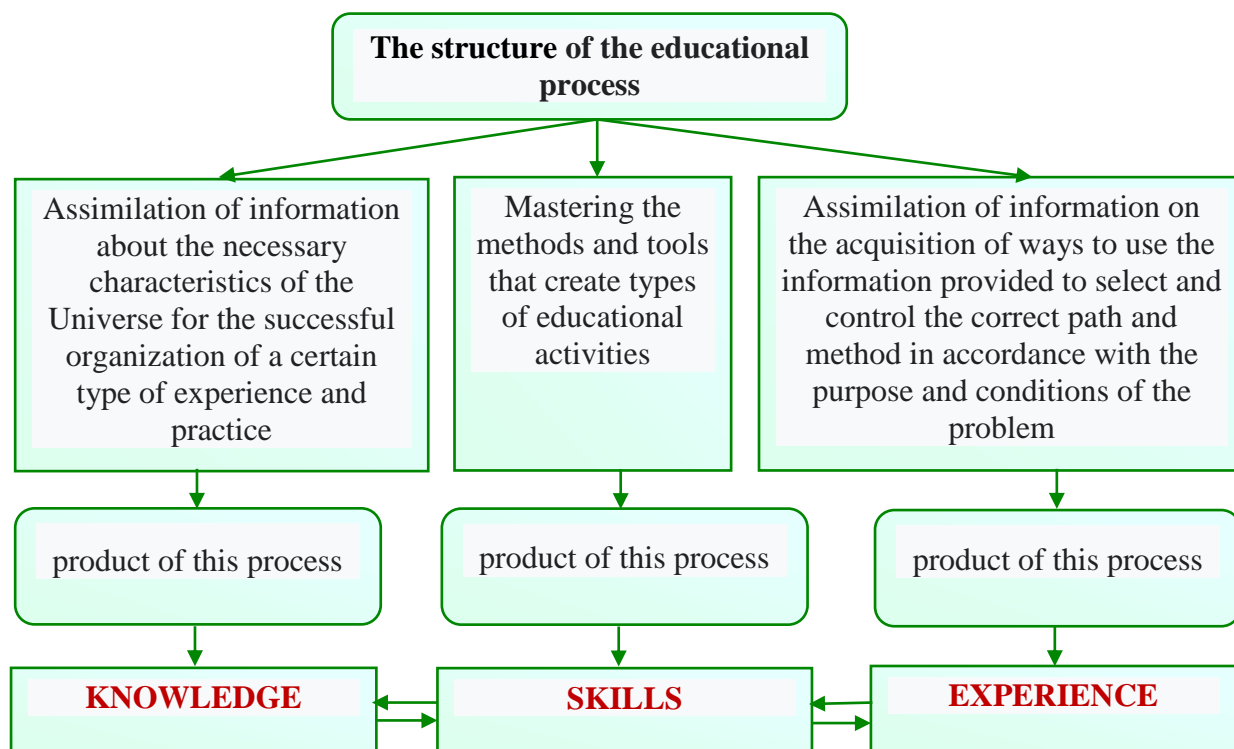
**Figure 1. The structure of the traditional educational process**

Thus, from Figure 1. above, it can be seen that, in fact, the pedagogical process is the result of joint activities of the participants. In the process of learning, the worldview, abilities and qualities of a person change. Throughout the learning process, students master the socio-historical experience of human society, and in this way they provide a spiritual, cultural, economic and social heritage between generations [4].

All actions of a person guided by a conscious goal in obtaining certain knowledge, skills and abilities are associated with education. The methodological basis of teaching is the theory of dialectical knowledge. The educational process includes:

- a) obtaining information about the characteristics of the universe, necessary for the successful organization of a certain type of experience and practice (the product of this process is knowledge);
- b) mastering the methods and tools that lead to this activity (the product of these processes consists of skills);
- c) mastering the methods of using the information provided to select and control the correct path and method in accordance with the intended purpose and conditions of the problem (the product of this process is a skill) [3].

We represent this in Figure 2 below:



**Figure 2. Product of the traditional educational process**

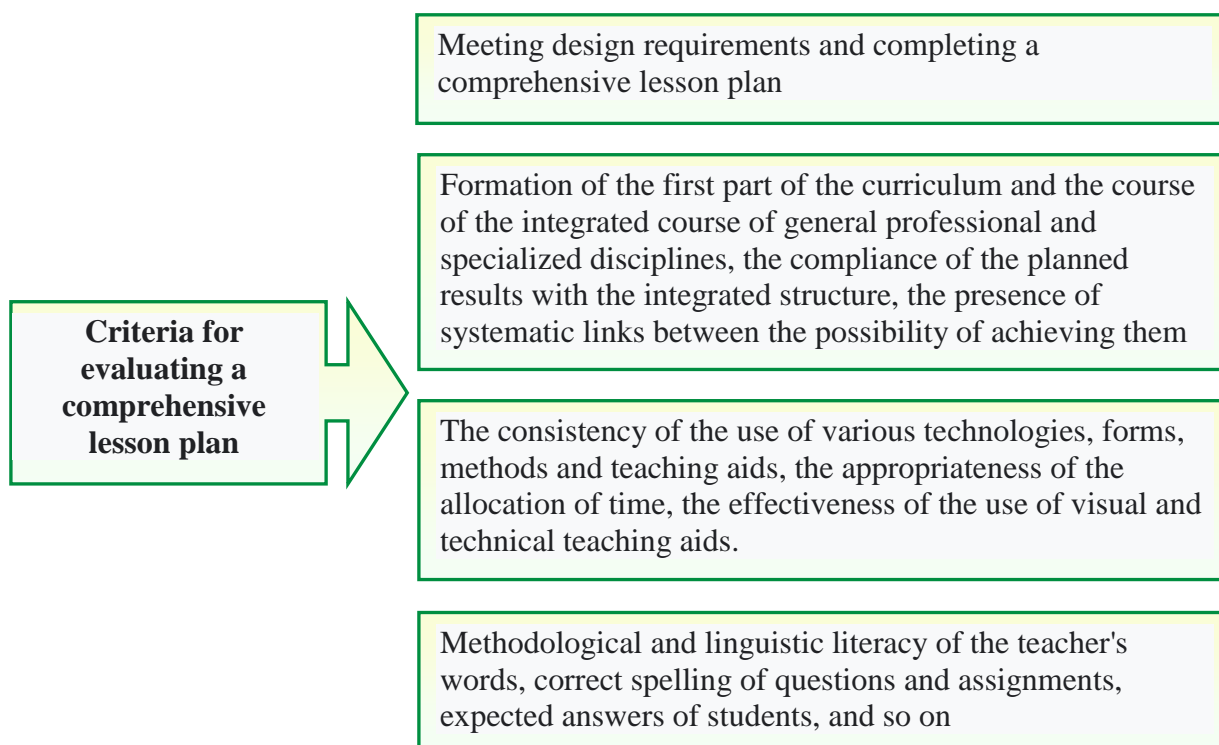
Consequently, education is the process of transferring knowledge, skills and abilities, the main means of preparing a person for life and work. In the process of training, knowledge is acquired and upbringing is carried out. Education is a narrow concept of learning. But this is not only a learning process in various educational institutions, but also a process of acquiring knowledge in the family, in production and in similar areas.

**Requirements for a comprehensive lesson plan:**

1. The topic of a comprehensive lesson.
2. Planned results for the formed knowledge, skills and abilities (personal, metaphors, science).
3. Modern technologies, methods and techniques.
4. Training equipment and equipment.
5. Desktop educational process: the stage of formation of knowledge, skills and abilities, showing the leading activity of the lesson, teacher activity, student activity.

**Methodical recommendations for the development of a unified curriculum:**

1. Define a comprehensive lesson topic using a topic calendar.
2. To get acquainted with the educational and methodological complex, compiled on the basis of literature (textbooks, teaching aids, lecture notes and methodological instructions, etc.) to study this topic.
- Determine the scope of the issues to be discussed, the scientific concepts that need to be considered during the preparation of the lesson, taking into account the integration of the course content. In this lesson, create an atmosphere of discussion about how smart it is to engage in interdisciplinary integration.
4. In this lesson, show what knowledge, skills and competencies you can form and what results you can achieve (individually, in several disciplines, in a specific subject).
5. Create a system of questions and tasks for the lesson, prepare handouts. In the process of work, you can refer to the recommendations for the work program, educational literature for science.
6. Define the stages of the lesson, paying attention to how consistent the integration process is at each stage.
7. Form the approximate answers of students, indicate the criteria for their assessment.
8. Determine what equipment and methods are appropriate for use in the lesson.
9. Fill in the flow chart of the lesson on the relevant topic and make a program.
10. Check the correctness of the structure and content of the annotation (technological map)



**Figure 3. Criteria for evaluating a comprehensive lesson plan**

After developing a lesson plan that combines general and specialized teaching, the quality of its content can be assessed according to the assessment criteria shown in Figure 3.

**An integrative plan of practical training is developed on the basis of the following stages:**

1. Create a multimedia presentation for an integrated lesson.
2. In the process of preparing the presentation, combine several similar topics, use one content to complement the other, determine the temporal distribution (based on the flowchart of the lesson).
3. Develop a cluster or mental map of the topic.
4. Create a page on the topic on the social network.
5. Create a collage (sketch for coat of arms, cover, poster, portrait, costume, etc.) on the main concepts of the subject using ICT.
6. Create video booklets or playlists.

**Instructions for working on the project.**

1. Choosing a topic, organizing a project group (for example, a group project)
2. Drawing up the name of the project, the planned results, the format of the final product, the distribution of responsibilities.
3. Monitoring the progress of the project (stages of orientation, planning, data collection and processing, implementation, presentation of results, presentation, evaluation and reflection).
4. Development of a sample project (table 1).
5. Preparation of the project presentation

**Table 1  
Types of projects of integrative lessons and stages of their preparation**

Project types	Stages of work on the project
Creating a thematic page on a social network	<ol style="list-style-type: none"> <li>1. Select key phrases.</li> <li>2. Select the page type (static, chronological) and social network.</li> <li>3. Find information to fill out the questionnaire from text and non-text sources, enter them on the page.</li> <li>4. Get photos, videos, quotes you need to fill the page.</li> <li>5. Establish links to other social pages related to the topic.</li> </ol>
Create a cluster or mind map	<ol style="list-style-type: none"> <li>1. Select a topic on which a cluster or mental map is created (the topic should reflect a system of relationships, for example: theoretical understanding, terms, construction, composition, image system, descriptions, and so on).</li> <li>2. Think about the idea of a cluster or mind map, the content of</li> </ol>

	<p>the topic, the interdependence of the parts of the plan, the way of expressing the relationship.</p> <p>3. Determine the characteristics of the cluster and the mind map: name / topic, the presence of thematic blocks and the connection between them, simplicity and intuitive perception of their content.</p> <p>4. Create a cluster or smart map.</p>
Create a collage (emblem, cover, poster, portrait, costume sketch, etc.) on the topic using ICT.	<p>1. Choose a didactic tool or term that matches the topic on which the collage is being created.</p> <p>2. Create a set of basic phrases that can be part of the collage.</p> <p>3. Based on the existing images, come up with an idea for a collage. Think about the content of the topic, the interdependence of the parts.</p> <p>4. Rethink the selected terms, adapt the content to a single topic, complement the concepts, combine the content.</p> <p>5. Place holistic concepts in the content of the topic, process the collage.</p> <p>6. Write text-based.</p>
Create video booklets or playlists	<p>1. Select the part of the theme that reflects the main content (for playcast).</p> <p>2. Create a set of images, video and audio files that can be turned into book trailers or playlists from basic concepts.</p> <p>3. Think about the idea of the video, the content of the work (titles, sources, interconnection of parts).</p> <p>4. Processing of images and video, audio files on the technological map of the lesson, combining them into one project.</p> <p>5. Save the trailer for the book or playcast in the desired video format.</p>
Creating a multimedia presentation	<p>1. Consider the idea of the presentation, decide on the type of presentation.</p> <p>2. Build the structure of your presentation by specifying a theme for each slide and making an outline.</p> <p>3. Choose an appropriate format for your slide design. The template should not contain bright decorative elements that distract the viewer.</p> <p>4. Find the images and place them on the slides. Images must be of good quality, proportionally enlarged or reduced. The contrast and brightness of the image should be normalized according to the possible display conditions.</p> <p>5. Write and paste text on the slides. Text should contrast with tone, and font and design should match the same style.</p> <p>6. Set the conditions for the presentation.</p>
Create time table	<p>1. Consider the idea of a timeline, determine the start and end times of the session, determine the number of basic phrases provided, and select teaching methods.</p> <p>2. Make thematic plans, show clear texts, give a title and a short description for each plan.</p> <p>3. Find and place images (and other multimedia sources) on cards.</p>

**Table 2**  
**Criteria for evaluating project activities**

Criteria for evaluation	Points (estimates)
Material feeding quality:	
➤ compliance of the project structure with the set goals and objectives;	10-15
➤ relevance, novelty and originality of the proposed solutions;	10-15
➤ completeness of the content of the topic, the depth of the disclosure of the topic;	10-15

➤ compositional integrity and consistency of presentation;	10-15
➤ compliance with speech norms.	10-15
The practical value of the proposed developments	15-20
Compliance of the project with the standard requirements for text formatting and video presentation.	10-15
Project defense (the ability to present material and conduct scientific discussions in the process of discussing the results)	10-15
<b>Total points : min. – max.</b>	<b>85-100</b>

At the end of the lesson, students will be provided with a list of recommended literature and teaching aids for independent work on a new topic.

Thus, the technology of teaching natural sciences plays an important role in organizing the educational process on the basis of an integrated curriculum and teaching materials. Interdisciplinary integration in style, didactic tools, methodological support of the course, the appeal of students to the content of other topics of the subject, along with general and specialized subjects related to the topic, depends on the structure of the curriculum and learning objectives.

For our time, the integration of sciences is characteristic, the desire to get the most accurate picture of the general picture of the world. These ideas are reflected in the concept of modern education. But to solve such a task is impossible within the framework of one academic subject. Therefore, in the theory and practice of education, there is a tendency to integrate academic disciplines (integrated courses, integrated lessons), which allows students to achieve interdisciplinary generalizations and approach an understanding of the overall worldview. This is especially important for teaching mathematics, the methods of which are used in many fields of knowledge and human activity [2, 70].

This connection is also reflected in the development of criteria for assessing students' knowledge on the topic, the correct choice of types of assessment.

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