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Research Article

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Increasing the Effectiveness of the Educational Process Through the Integration of Technology and the Use of Modern Methodologies in Humanities

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Abstract

Technology applications in Albanian Pre-University Education have changed the way of teaching and learning. Teaching/learning theories have also evolved, which form the foundations of designing the learning process for increasing learning outcomes. The curriculum of pre-university education, based on the constructivist theory of learning "learning by doing", creates conditions for the use and integration of technology during the learning process. Technology and learner-centered teaching promote high levels of creative and creative thinking. The teacher's attitude and perception towards this approach often prevents them from integrating it into their subjects. The purpose of the work is the use of Information and Communication Technology for the improvement of the teaching process through the implementation of modern methodologies in the humanities. The methods used in the work are those of analysis, synthesis, evaluation, etc. . The use of technology in the classroom makes the learning process more effective and attractive when it is developed according to appropriate teaching methodologies, increasing its positive impact on the student and learning outcomes.

Keywords: information technology, digital competence, pre-university education, curriculum

1. Introduction

The paper "Learning with situations, constructivism and technology" brings concrete examples of efficient integration of technology through the use of appropriate teaching/learning methodologies in the humanities subjects of the Pre-University Education curriculum. The paper is not intended to simply show the use of technology in subject curricula or the teaching of technology through other subjects of the basic education curriculum.

Information and Communication Technology is developed as a separate subject in the basic education curriculum, so it is the duty of this curriculum to build subject concepts and competencies.) (Ministry of Education Sport and Youth, 2015) The application of modern methodologies and the use of technology in the teaching process aims the development of

competences for lifelong learning, the greatest engagement of the student during learning activities, encouraging creativity and critical reasoning, improving learning outcomes as well as increasing the quality of the entire learning process. (Ferrari, A., 2012). Information and Communication Technology helps teachers to:

- *the implementation of the constructivist approach to learning, which places the student at the center of the process teaching,*
- *development of key competencies and subject competencies*
- *achieving educational goals and ensuring quality in the implementation of the new curriculum reform.*

The paper explains the reasons and importance of using technology in the classroom, the efficiency of using technology in the learning process through the implementation of the constructivist approach, the development of learning through the use of technology and the different ways that teachers and students can use computers and communication technologies to share their ideas and information online in class.

The paper shows the competencies that the teacher must possess for building learning situations using information and communication technology, as well as explains the format of the learning situation.

Also, the paper brings examples from different subjects of humanities, English language and geography of Pre-University Education. Through concrete learning situations, Information and Communication Technology is integrated, thus enabling the efficient implementation of the learning process and the new Pre-University Education curriculum.

2. Communication Technology as a Teaching Tool. Learning Outcomes and Methodology

Technology has transformed the way of teaching and learning, but by transforming the process, it is also transforming the outcome (Fouts, 2000). In recent years, when technological applications such as video projectors, smart boards, computers, software, internet, tablets, mobile phones, etc. have been introduced into the education system, the resources for teaching have changed significantly. (Janie Cox , 2009)

The use of computer equipment supports learning methods for students with different learning abilities as well as students with special needs in acquiring new educational concepts. The use of technology has a positive effect as students feel motivated. (Brown, M. Warschauer, 2006).

Teachers use communication technology to foster the exchange of information with and among students, to enhance teaching and learning, and to foster interactive learning. Communication technologies are electronic tools that use computers and the Internet for the rapid exchange of information between people. Electronic communication involves various types of information exchanges between people.

The means of communication technology used during teaching activities are:

- *(Institute of Education Development, Learning with situation , constructivism and technology 2015 ; 10)*
- *E-mail (electronic mail) and instant chats are forms of online communication that represent short electronic exchanges between individuals such as: teacher-student, teacher-parent, teacher and management personnel.*
- *A teacher site or class site is a website that is built by the teacher to present lessons and communicate information with students, parents, school and educational staff.*
- *Blogs (diaries/news) are publicly accessible online magazines/journals written by individuals (such as teachers) for others (such as students, parents and other teachers) to be read and commented on.*
- *Online discussions are electronic forums where teachers and students discuss issues different educational.*

- *Wiki (meaning quick) are websites that teachers and students create together reading and reviewing each other's ideas and comments.*

At school, the teacher uses communication technology tools for various educational purposes. An essential step for the teacher is the construction of the information communication system, a process that is compared to the adaptation of the right components for a quality teaching. The teacher chooses the appropriate methodology to achieve the desired learning outcomes and the best information communication technology options that enhance the teaching methodology. (Janie Cox ,2009).

Learning outcomes are why a lesson is being taught. The most frequent methods that teachers use during the lesson are: discussion, role play, simulation, case study, research-based activities, creative writing, reflective learning, exercises, games. (Lave, Jean & Wenger, Etienne. 1991).

Procedures are activities planned by the teacher to take place during a lesson, including the grouping of students and how long each activity should take place. Teachers combine learning outcomes, methods and procedures in their daily planning formats. Content, learning outcomes, methods and procedures support each other in a learning development process, where technology supports this process. (Lave, Jean & Wenger, Etienne. 1991)

The technologies that support the learning process are:

(Institute of Education Development, Learning with situation , Constructivism and technology 2015 ;16)

- *Presentation software*
- *Software for visual thinking*
- *Web-based charting and diagramming tools*
- *Websites created by teachers*
- *Threaded discussions and emails*
- *Links, blogs and wikis (Podcasts, blogs and wikis)*
- *Interactive software*
- *Internet search*
- *Intelligent teaching systems*
- *Digital cameras and software for creating movies*
- *Assistive technologies*

Assessment of teaching/learning occurs before, during and after teaching/learning, helping the teacher to assess the extent to which learning outcomes have been achieved by assessing student performance. Assessment can be summative at the end of a lesson, formative, throughout the lesson, or diagnostic to measure what students know.(Brooks, Jacqueline G., & Brooks, Martin G. 1993)

Assessment instruments include multiple-choice questions, mini-tests, essays, written assignments, discussions, teacher observations, student engagement in the classroom, projects, student portfolios, and student performance. The technological tools that support the student evaluation process are: electronic tests and quizzes, digital portfolio, online evaluation rubric. (Pre-University Education Quality Assurance Agency ,2021)

3. The Teacher's Competencies for Realizing Learning Situations Using Technology

The teacher's role in constructivist (Brooks, Jacqueline G., & Brooks, Martin G, 1993) classrooms is not the same as the teacher's role in behaviorist classrooms. In constructivist classes, the teacher often uses technology to create learning situations in the classroom. The integration of information and communication technology in the learning process is not limited to the installation of the network and the computer equipment connected to it. It includes the use of all the technologies that these devices provide in the school to improve teaching and facilitate learning in the process.

The basic knowledge that the teacher of the 21st century must possess also includes the use of information and communication technologies, especially computer and web technologies, as a methodology in the teaching process. These methodologies provide a more effective environment

and approach to the learning process. (Mishra, P., & Koehler, M. J., 2006).

The integration of the use of Information and Communication Technology in school programs brings changes in the quality of the learning process. In the new curriculum documents drawn up as part of the revision of the current curriculum for our education system, digital competence (Ferrari, A., 2012) is one of the seven key competences of the curriculum. This competence means the ability to use information and communication technology at work. The application of Information and Communication Technology in the classroom provides an increase in the quality of teaching.

The role of the teacher¹ aims to change from that of knowledge transmitter to that of knowledge builder, trainer, and creator of learning environments similar to those of real situations. However, the use of information and communication technology requires that both teachers and students be able to use new technologies for collecting, managing, selecting and evaluating information to solve problems and implement innovative practical ideas.

For the teacher to play this role, he or she must at least possess the competencies defined in the official Unesco² documents on technology in education (module 4 in the Unesco conference). What are the competencies that the teacher must possess for realizing learning situations using technology in the classroom according to Unesco documents?³

- *describe the use of different types of hardware, computers, laptops, printers, scanners and portable devices;*
- *describe and use word processors;*
- *describe and demonstrate the main qualities of presentation software and other digital resources;*
- *use a graphics software package;*
- *describe the Internet and the World Wide Web, as well as show how a browser works*
- *use a search engine*
- *create an e-mail account and use it;*
- *describe the operation of a software*
- *locate and file educational software packages and evaluate them for compliance with the school curriculum;*

For conceptualizing and writing a situation, the teacher follows the following format.

Format of the learning situation; In planning an ICT-based learning situation, the teacher takes into account: (Lave, Jean, & Wenger, Etienne.,1991).

- *Learning outcomes (learning outcomes of the program that are realized through this situation).*
- *Naming the situation (title of the situation).*
- *The contextual description of the situation (the content of the situation in the context of the realization of learning outcomes).*
- *Actions taken to deal with the situation.*
- *Resources (tools, equipment, various resources, links used, knowledge and skills prior to the students).*
- *Evaluation (when the situation is called realized).*

¹ UNESCO-Bangkok Office » Education » ICT in Education » Themes » Training of Teachers » Guidelines » Teachers' role and needs in the ICT environment (2007)

² UNESCO-Bangkok Office » Education » ICT in Education » Themes » Training of Teachers » Guidelines » Teachers' role and needs in the ICT environment (2010)

³ UNESCO (2011). UNESCO ICT competency framework for teachers (ICT CFT). IIITE Conference Teacher Competencies in Knowledge Society: Policy, Pedagogy, Social Skills

4. Models of Situations to Learn Based on Information and Communication Technology in the Humanities (Geography and English Language)

4.1 Model situation to learn based on Information and Communication Technology in Geography

Geography creates connections with other fields of learning and the subjects that make them up, such as Technology (apparatus for measuring temperature, humidity, wind, atmospheric pressure, etc.); ICT (for researching various information and data, using Google map for location determination, etc.); Arts (drawings, schemes, building models, such as the solar system, volcanoes, etc.).

Table 1. Institute of Education Development, Curriculum subject guide for geography 2018 ; 11

Geographical discoveries
Learning situation
Around the world in five days
<ul style="list-style-type: none">• Students are asked to construct a "travel" itinerary around the world where they identify five countries in which they will stay. Students are put in the role of discoverers.• Students should use Google Earth to find places, directions, distances.• After determining the places of stay, the students are asked to create a power point presentation, which will include:<ul style="list-style-type: none">- The starting point- Location no. 1 (photo of the location, distance from the starting point).- Location no. 2 (photo of the location, distance from the starting point).-- Location no. 5 (photo of the location, distance from the starting point)• The student describes the features of nature, population, culture, settlements of the five locations.• The student must cite the internet sources from which he got the photos

Geography creates connections with other fields of learning and the subjects that make them up, such as Technology (apparatus for measuring temperature, humidity, wind, atmospheric pressure, etc.); ICT (for researching various information and data, using Google map for location determination, etc.); Arts (drawings, schemes, building models, such as the solar system, volcanoes, etc.)

Table 2. Institute of Education Development, Curriculum subject guide for geography 2018 ; 20

Topic: Developed countries and developing countries
Grade 8
Learning outcomes
Student:
<ul style="list-style-type: none">- Distinguishes between the features of developed and developing regions through typical examples.- Expresses one's opinion orally or in writing, as well as in other forms of communication.- Researches various sources of information.- Use ICT for data collection, data processing and presentation of findings.
To fulfill the learning outcomes of this topic, the teacher can give the students as task to prepare a poster with the theme "The rich and the poor in the world". Proposed topic is very broad, therefore the teacher offers students to choose some of the subtopics:
<ul style="list-style-type: none">- Inequality in the world between countries;- Differences in the field of health between rich and poor countries;- Differences in the field of education between rich and poor countries, etc.
Interdisciplinary connection with ALBANIAN LANGUAGE, ICT and ARTS
Students should search for information about the proposed topic, starting from the terms

key to the learning topic (connection with ICT). It is good for the teacher to determine beforehand addresses and web pages in which the student will search for information. The information of collected must be selected, processed and organized.

- The students will prepare the poster, which should present (the connection with the Albanian language and the Arts):
 - various documents (photos, drawings, diagrams, maps, graphics) accompanied by one explanatory legend.
 - text including: title (clear and precise), subheadings (short), paragraphs (of short, with stressed words or expressions).
 - Respecting the rules of spelling and being careful in the balance of the texts with the illustrations.

Methods, techniques, learning/teaching strategies in the subject of geography are important factors for a successful teaching that promotes students' interest, inclusiveness, interaction and research work. (Institute of Education Development, Curriculum subject guide for geography 2018; 3)

4.2 Model situation to learn based on Information and Communication Technology in the English language.

Table 3: Learning situations Destinations, England 136-152 (Institute of Education Development, Learning with situation , constructivism and technology 2015 ; 136)

Field: Languages and Communication	Subject: English language	Level: III	Class: VI
Learning topic: Destinations, England			Learning situation: Different countries – cultures
Learning outcomes according to competencies Student: - uses facts to solve educational problems related to England and argues his/her position. - demonstrates the implementation of an imaginary trip to a hotel in England, through a group dialogue; - integrates knowledge and language skills with situations. - expresses the opinion after viewing the photos (oral or written). - identifies characters, time, place, etc. for a topic. - follows the instructions given in a text to carry out a task -uses sources of information for the preparation of a given topic. - Expresses and respects the opinion of each member of the group. - identifies characters, time, place of a read material; - creates original works using found figures.			
Resources/ Materials/Tools: Student's book; Laptop; Video projector; Boxing; Internet connection; photos provided by the teacher; Encyclopedia of different in the English language.			Key words: Attraction - Attraction Fee - Fee Mixed herbs - Mixed herbs Raw salt - Kosher salt Meat fat - Beef drippings Melted butter - Melted butter Preheat the oven - Preheat the oven Beat (eggs) - Whisk in puffy - Puffy deflates- Deflates
Connection with other curricular areas Contextual description of the situation: Development of the situation This situation gives students the opportunity to learn more about England, people, culture and the English language. The teacher gives the students clues about England without mentioning the name and the students have to guess what it is about. Then the teacher divides the students into teams and presents them with a questionnaire about England on the video wall. The teacher presents a poster about Liverpool and the students answer questions about it. Then the teacher presents a picture of a cooking on the video wall. Students give ideas about the type of cooking. The teacher explains the vocabulary related to the recipe and then they discuss their favorite dishes. at the end, students are asked to perform a dialogue that they will create themselves in relation to a situation given by the teacher.			
Events Brainstorming - The teacher directs the students to listen carefully to the information she will give to understand which country they will talk about during this topic. The data are as follows: <ul style="list-style-type: none">• Its population is around 53 million people.• It's an island.• One of its computer scientists Tim Berners-Lee is credited with inventing the World Wide Web. Tim Berners-Lee• It's an english-speaking country.			

- It's a kingdom.

Students are divided by the teacher into teams. He/she presents on the video wall a questionnaire about Angina and language English. Student teams will answer the questions and a winning team will emerge.

The questionnaire is as follows:

- What is the capital of England? (London)
- How many days are there in a fortnight? (14)
- Which river flows through London? (The Thames)
- Which is the largest city in Wales? (Cardiff)
- What's special about London's subway system? (It was the world's first subway system.)
- In England you drive on the left – unlike 70 % of the world. How did the rule get started there?
- (Cavaliers kept left so they could draw swords with their right hand)
- The fabled bluestones used in Stonehenge came from where? (Wales.)
- What is the Queen's name? (Queen Elizabeth II)
- What is a double-decker? (a bus)
- Chelsea is a popular _____ team. (football)

At this moment, the teacher presents the students with a poster about Liverpool. Students will read the poster individually and then in groups they will answer the questions about the poster.

Match the sentences with the events in Liverpool, England.

It's open every day except

at Christmas.

It opened in 2008.

You can tour the stadium.

Children have to pay £7 to enter.

The price is the same for students and under - 16s.

There is free entry for everybody.

It closes at 5p.m.

This is located in the centre of Liverpool.

The Beatles Story

Liverpool ONE Shopping Centre

Liverpool FC

Liverpool Museum

Circle True or False.

- The Beatles were a famous rock group in the 1970s. True False
- There are 2008 shops at Liverpool ONE. True False
- It costs £15 for adults to tour Anfield stadium. True False
- Liverpool FC play their games at Liverpool ONE stadium. True False
- You don't have to pay at the Liverpool Museum. True False
- Young children can go on the Anfield tour for free. True False

The teacher presents a picture of a cooking on the video wall. Students give ideas about the type of cooking. The teacher explains the vocabulary related to the recipe

Ingredients 3 eggs 1 1/4 cups milk 1 1/4 cups all-purpose flour 3 tablespoons chopped fresh mixed herbs Kosher salt and freshly ground black pepper 1/4 cup reserved beef drippings or melted butter	Directions Preheat the oven to 450 degrees F. Place an 8 by 12-inch enameled cast iron baking dish in the preheated oven for 10 minutes. Meanwhile, in a mixing bowl, beat the eggs until foamy and light. Whisk in the milk until combined. Add the flour, herbs, a big pinch of salt, and some pepper, beat just until the batter is smooth. Pour the beef drippings into the bottom of the hot pan. Immediately pour in the batter and bake for 10 minutes. Reduce the oven temperature to 350 degrees F and continue baking for 15 to 20 minutes until the pudding is puffy and brown. Serve immediately; it deflates rapidly.
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The teacher asks the students:

What is the most unusual thing you have eaten so far?

What is your favorite food?

Role-play

Students are given a situation and they will construct the dialogue. The dialogue will be presented in front of the class.

Student A: Present yourself to a travel agency and you want to travel to England but you don't know which countries you want to visit more interesting to visit. Ask for opinion.

Student B: You are the operator of the tourist agency. Provide alternatives to keep the customer satisfied.

Rating:

The situation is called realized if the students manage to understand which country it is based on to the data provided; When students arrive they answer a quiz about England; When students answer them questions about a text just read; When students discuss about unusual foods and those favorite When students present a dialogue in front of the class.

Tasks and independent work:

The teacher gives the students as homework to describe the recipe of a traditional Albanian dish. task it will also be accompanied by a photo of the dish that the students have chosen to describe.

5. Some Challenges of Using Technology and Communication in Teaching

In pre-university education, the barriers to the integration of new technologies in teaching are; Lack of infrastructure (laboratories, classrooms with Information Technology equipment) (Ferri, F., Grifoni, P., & Guzzo, T. (2020).

- Lack of assistance in case of technical problems.
- Lack of interest in using new learning technologies.
- Lack of integration of new learning technologies in learning activities.

The lack of funds leads to the lack of technology infrastructure.

This cause-and-effect relationship complicates the situation of technology integration in learning and makes it difficult to eliminate obstacles.

An electronic platform for the pre-university education system, which includes the most advanced technologies for learning, is important. At the national level, unifying standards of all curricula must be built and advanced.

Greater support should be provided to educational institutions for creating conditions that enable innovation in the field of technology and information in education.

6. Conclusion

Technology in teaching has become an important challenge nowadays. It creates a new approach to knowledge, reading, books, and develops to a higher degree its teaching and its relationship with the teacher. The use of software in the teaching process in humanities subjects facilitates learning and studying in these subjects, improves the environment and the learning process, creates a new communication relationship between students and teachers, promotes cooperation between them, increases effectiveness through new techniques , creates opportunities to build the curriculum in such a way, which is useful for students, develops their creative abilities, critical thinking, provides sustainable development of education in general and higher education in particular. This new approach to information, text, foreign language, literature, history, geography, etc. requires a new approach in the treatment of the curriculum of human subjects in school, in order that the knowledge about them does not become obsolete, to adapt to the mindset of the new generation, the way of learning and their functionalization, and serve the man of modern times.

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