

# **The Geography of Uzbekistan**

**By Zaripova Zarina**

## **Content**

<b>Introduction</b>	3-9
<b>Chapter I.</b> Review of the literature on the problems of Distance Education and Programmed Teaching.	
1.1 Distance education and technologies used in delivery.	10-22
1.2 E-book in Education Process.	22-29
1.3 Principles of compiling an E-book on the topic “The Geography of Uzbekistan”	30- 37
<b>Conclusion</b>	38-40
<b>Chapter II.</b> Materials for compiling E-book on the topic “Geography of Uzbekistan”	41-69
<b>Bibliography</b>	69-73

## **Introduction**

“Today there is no need to prove that the 21st century is commonly acknowledged to be the century of globalization and vanishing borders, the century of information and communication technologies and the Internet, the century of ever growing competition worldwide and in the global market.

In these conditions a state can consider itself viable if it always has among its main priorities the growth of investments and inputs into human capital, upbringing of an educated and intellectually advanced generation which in the modern world is the most important value and decisive power in achieving the goals of democratic development, modernization and renewal.”

I.A.Karimov

With the development of computers and advanced technology, the human social activities are changing basically. Education, especially the education reforms in different countries, has been experiencing the great help from the computers and advanced technology. Generally speaking, education is a field which needs more information, while the computers, advanced technology and internet are a good information provider. Also, with the aid of the computer and advanced technology, persons can make the education an effective combination. Therefore, computers and advanced technology should be regarded as an important media in the modern education.

It is necessary to emphasize that the Education reforms program adopted in Uzbekistan 15 years ago and named as the National Program for Training of Specialists stands as an inseparable and integral part of our own “Uzbek model” of

economic and political reforms based on step-by-step and evolutionary principle of building a new society in the country.

The Program, being the product of an in-depth research and studies, and summarized experience of developed countries, is aimed consolidation of democratic values in the minds of people, and firstly, among young generation. The Program has a purpose to establish a comprehensively advanced and independently thinking individual with his opinion, his own choice and firm civic positions in the life.

It was simply impossible to achieve this goal without radical reconstruction and reforming the educational system that had been developing for many years.

If to take into account that about 35 percent of the population in Uzbekistan are the children under 16, more than 62 percent are the youth at the age under 30, the role and significance of these reforms becomes clear and obvious.

According to the adopted Program, in Uzbekistan we have introduced the 12-year universal compulsory and free education on the scheme 9+3. The principle feature of the model being implemented in the country is as follows: after 9 years of study in a secondary school the next 3 years the pupils attend the specialized professional colleges and academic lyceums where each of them, along with the general disciplines, obtains vocational training on 2-3 specialities demanded in the labor market.

After 12-year compulsory education everyone by his or her choice can continue study at higher educational institutions to obtain bachelor's and master's degrees.

During the past years we have accomplished an enormous work both on its scale and depth to radically renew and reform the sphere of education. We have built new, overhauled and supplied with the latest teaching and laboratory equipment about 9,5 thousand or practically all functioning secondary schools in the country, implemented fundamental measures to qualitatively and methodologically renew the educational process.

In the system of education our government attach a great importance to giving pupils not only a broad-scale knowledge and vocational skills, but also to compulsory learning foreign languages, as this is the most important condition for an active communication of our young people with their vis-à-vis from foreign countries and allows them to get an extensive knowledge of everything what is going on in the modern world and enjoy a huge world of intellectual treasure.

At present, all educational, scientific and cultural institutions of the country are connected to the Educational portal and the Internet. This permits to introduce the methods of distance learning into educational process and a broad set of information and communication services for students.

The higher educational institutions play an important role in reforming the educational process and training the highly qualified personnel required in the labor market. During the last years their number has increased twice and now there are more than 230 thousand students studying at 59 universities and other higher educational institutions.

In 2012 the National University and the Academy of Sciences of Uzbekistan together with the leading British higher educational institution – the Cambridge University are establishing the educational and experimental High technologies center. Its main goal is to teach talented students, post-graduates and young scientists the modern methods of conducting the applied innovative scientific researches in the sphere of chemistry, physics, biology, biochemistry, biophysics, geology and geodesy. It is envisaged to equip the Center with high-tech facilities where the scientists and specialists of the Cambridge University will carry out training of our young scientists in the process of holding the particular research works.

It is necessary to note that it is the following direction that currently acquires a great importance, i.e. strengthening the scientific potential of higher educational institutions and integrating the educational process with innovative activity by transferring a number of academic scientific institutions to universities and

creating new modern inter-institutional joint-use scientific and laboratory complexes.<sup>1</sup>

*The aim* of my qualification paper is to demonstrate new method of teaching using advanced technology , show the benefits of multimedia approach in learning process by the way of E-book compiling on the Theme “The Geography of Uzbekistan”; to prove that implementation of advanced technologies in Educational system has sufficient impact on development of young generation.

In order to achieve above mentioned aim the following *tasks* have been assigned:

1. To collect the necessary information related to the theme “The Geography of Uzbekistan”;
2. To developed learning-teaching resource platform using multimedia, providing interactive and integrated features in an easy-to- use E-book on the topic of “The Geography of Uzbekistan”;
3. To combine traditional approach to teaching methods and modern advanced methods of teaching paying attention to various pedagogical approaches for eLearning.

Students respond to information differently. Thus, it is often to teacher’s advantage to use many different formats and modes to teach the subject matter of a lesson. This is why teachers normally use some combination of lecture, text and hands-on laboratory for conveying information. With the advent of the Internet and the multiple formats that can be communicated over the World Wide Web, we now have several new and exciting ways to present information. The Web allows the incorporation of animation, moving pictures, and sound into lessons, which

---

<sup>1</sup> Address by The President of The Republic of Uzbekistan Islam Karimov at the Opening Ceremony of International Conference. 17.02.2012

extends our abilities to present materials that encourage student interaction with the subject matter. Pictures and animations help bring to life scientific principles, and multimedia allows students to take a more active role in learning. One of the advantages of using multimedia is to convey information quickly and effectively to all students – and keep them interested in learning.

My educational research has generated many methodologies, tools and practices exploiting the potential of technology. Beyond some experimental contexts, however, uptake of advanced techniques remains low. Despite technical and methodological advances, the majority of e-learning still consists of videolessons and page-turning web sites.

The *value* of my qualification paper implements the use of multimedia technologies in education enabling teachers to simulate final outcomes and assist students in applying knowledge learned from textbooks, thereby compensating for the deficiency of traditional teaching methods. The *significance* of this work is to examine how effective these technologies are in practical use. It is necessary to integrate advanced teaching methods and application tools utilized in Education sector in order to improve the traditional methods, respect students' wishes and differences, challenges of each individual, increase interactions between teachers and students, and enhance students' interest in learning.

Information Technologies (IT) can help the Education sector to achieve important goal- to combine traditional teaching methods with modern technologies-, enabling teachers to apply novel information technologies while preserving the quality of instruction in order to fulfill the idea of teaching and learning through the application of computer artificial intelligence, multimedia technologies, and networks, thereby creating a personalized, diversified, and comprehensive teaching environment.

Multimedia presentations keep students alert and focused. It would benefit your students immensely if they could hear a researcher's opinions, and read their original work.

Presentations such as these that incorporate sound and graphics allow all students, especially those with learning difficulties, to better understand concepts even before reading the text of a lesson. My multimedia project helps teachers to incorporate sounds, graphics and videos into an existing presentation without a large time investment. Students can repeatedly view the modules at home, which reinforce the information presented in class.

*Theoretical novelty* of my qualification paper assumes that computer-based multimedia helps students to develop not only theoretical material on appropriate subject in interactive forms but also technical and research skills that they cannot get from reading a textbook. Since the links and images in my E-book are on a computer, students learn how to work with a keyboard, mouse, and to access e-book information.

I hope to provide an assessment of e-book technology that does justice to its true potential as well as its current limitations while also calling attention to future developments that hold genuine promise for educators.

## **Chapter I. Review of the literature on the problems of Distance Education and Programmed Teaching.**

### **1.1 Distance education and technologies used in delivery.**

**Distance education** or **distance learning** is a field of education that focuses on teaching methods and technology with the aim of delivering teaching, often on an individual basis, to students who are not physically present in a traditional educational setting such as a classroom. It has been described as "a process to create and provide access to learning when the source of information and the learners are separated by time and distance, or both."<sup>2</sup>

---

2. Honeyman, M; Miller, G (December 1993). "Agriculture distance education: A valid alternative for higher education?". *Proceedings of the 20th Annual National Agricultural Education Research Meeting*: 67–73.

Distance education courses that require a physical on-site presence for any reason (including taking examinations) have been referred to as hybrid or blended courses of study.

**History and development.** Distance education dates to at least as early as 1728, when "an advertisement in the Boston Gazette... [named] 'Caleb Phillips, Teacher of the new method of Short Hand'" was seeking students for lessons to be sent weekly.

Modern distance education initially relied on the development of postal services in the 19th century and has been practised at least since Isaac Pitman taught shorthand in Great Britain via correspondence in the 1840s. The University of London claims to be the first university to offer distance learning degrees, establishing its External Programme in 1858. This program is now known as the University of London International Programmes and includes Postgraduate, Undergraduate and Diploma degrees created by colleges such as the London School of Economics, Royal Holloway and Goldsmiths. In the United States William Rainey Harper, first president of the University of Chicago developed the concept of extended education, whereby the research university had satellite colleges of education in the wider community, and in 1892 he also encouraged the concept of correspondence school courses to further promote education, an idea that was put into practice by Columbia University. In Australia, the University of Queensland established its Department of Correspondence Studies in 1911.

The development of computers and the internet have made distance learning distribution easier and faster and have given rise to the 'virtual university, the entire educational offerings of which are conducted online.'<sup>3</sup> In 1996 Jones International

---

3. Gold, Larry; Maitland, Christine (1999). Phipps, Ronald A.; Merisotis, Jamie P.. eds. *What's the difference? A review of contemporary research on the effectiveness of distance learning in higher education*. Washington, DC: Institute for Higher Education Policy. Retrieved 23 January 2011.

University was launched and claims to be the first fully online university accredited by a regional accrediting association in the US.<sup>4</sup>

In 2006, the Sloan Consortium, a body which arguably has a conflict of interest in the matter, reported that:

More than 96 percent of the very largest institutions (more than 15,000 total enrollments) have some online offerings, which is more than double the rate observed for the smallest institutions.

A study published in 2011 by the U.S. Department of Education found that "From 2000 to 2008, the percentage of undergraduates enrolled in at least one distance education class expanded from 8 percent to 20 percent, and the percentage enrolled in a distance education degree program increased from 2 percent to 4 percent."

**Technologies used in delivery.** The types of available technologies used in distance education are divided into two groups: synchronous learning and asynchronous learning.

**Synchronous learning technology** is a mode of delivery where all participants are "present" at the same time. It resembles traditional classroom teaching methods despite the participants being located remotely. It requires a timetable to be organized. Web conferencing, videoconferencing, educational television, Instructional television are examples of synchronous technology, as are direct-

---

<sup>4</sup> Walton Radford, MPR Associates, Alexandria. "Learning at a Distance: Undergraduate Enrollment in Distance Education Courses and Degree Programs" (PDF). National Center for Education Statistics. Retrieved 30 November 2011.

broadcast satellite (DBS), internet radio, live streaming, telephone, and web-based VoIP.<sup>5</sup>

The **asynchronous learning** mode of delivery is where participants access course materials on their own schedule and so is more flexible. Students are not required to be together at the same time. Mail correspondence, which is the oldest form of distance education, is an asynchronous delivery technology and others include message board forums, e-mail, video and audio recordings, print materials, voicemail and fax.

The two methods can be combined in the delivery of one course. For example, some courses offered by The Open University use periodic sessions of residential or day teaching to supplement the remote teaching.<sup>6</sup>

Other technology methods used in the delivery of distance education include online three-dimensional (3D) virtual worlds. A popular 3D virtual world, active worlds, is used for synchronous and asynchronous learning. Active Worlds provides opportunities for students to work collaboratively.<sup>7</sup>

Major reasons why educational institutions might embrace distance learning:

- **Expanding access:** distance education can assist in meeting the demand for education and training demand from the general populace and businesses,

---

<sup>5</sup> Lever-Duffy, Judy; McDonald, Jean B (March 2007). *Teaching and Learning with Technology*. Ana A. Ciereszko, Al P. Mizell (3rd ed.). Allyn & Bacon. p. 377.

<sup>7</sup> Oblinger, Diana G. (2000). "The Nature and Purpose of Distance Education". *The Technology Source* (Michigan: Michigan Virtual University) (March/April). Retrieved 23 January 2011.

especially because it offers the possibility of a flexibility to accommodate the many time-constraints imposed by personal responsibilities and commitments.

- **Alleviate capacity constraints:** being mostly or entirely conducted off-site, the system reduces the demand on institutional infrastructure such as buildings.
- **Making money from emerging markets:** an increasing acceptance from the population of the value of lifelong learning, beyond the normal schooling age, and institutions can benefit financially from this by adopting distance education.
- **Catalyst for institutional transformation:** the competitive modern marketplace demands rapid change and innovation, for which I believe distance education programs can act as a catalyst.

In addition, other benefits include:

- **Disabilities, Handicaps, or sicknesses:** There are many students that are unable to go to a traditional school setting because they cannot get around easily or a low immune system and get sick from other students. Distance education can help in these cases because the students will not have to leave their home or be around other people. It makes it possible for these students to still learn and to be able to get a good education.
- **Equal Opportunity to Education Regardless of Socioeconomic Status:** Students have the opportunity to receive equal education regardless of income status, area of residence, gender, race, age, or cost per student.

If ever a promising technology existed for education—and distance learning in particular—it would be e-books.

**E-learning** comprises all forms of electronically supported learning and teaching. The information and communication systems, whether networked learning or not, serve as specific media to implement the learning process. The term will still most likely be utilized to reference out-of-classroom and in-

classroom educational experiences via technology, even as advances continue in regard to devices and curriculum.

E-learning is essentially the computer and network-enabled transfer of skills and knowledge. E-learning applications and processes include Web-based learning, computer-based learning, virtual education opportunities and digital collaboration. Content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM. It can be self-paced or instructor-led and includes media in the form of text, image, animation, streaming video and audio.

Abbreviations like CBT (*Computer-Based Training*), IBT (*Internet-Based Training*) or WBT (*Web-Based Training*) have been used as synonyms to e-learning. Today one can still find these terms being used, along with variations of e-learning such as elearning, Elearning, and eLearning. The terms will be utilized throughout this article to indicate their validity under the broader terminology of E-learning.

**Computer-based learning.** Computer-based learning, sometimes abbreviated to CBL, refers to the use of computers as a key component of the educational environment. While this can refer to the use of computers in a classroom, the term more broadly refers to a structured environment in which computers are used for teaching purposes.

Cassandra B. Whyte researched about the ever increasing role that computers would play in higher education.<sup>8</sup> This evolution, to include computer-supported collaborative learning, in addition to data management, has been realized. The type of computers has changed over the years from cumbersome, slow devices taking up much space in the classroom, home, and office to laptops and handheld devices

---

<sup>8</sup> Whyte, Cassandra Bolyard. (1980). "An Integrated Counseling and Learning Assistance Center." *New Directions Sourcebook*. Jossey-Bass, Inc. San Francisco, California.

that are more portable in form and size and this minimalization of technology devices will continue.<sup>9</sup>

**Computer-based training.** Computer-based trainings (CBTs) are self-paced learning activities accessible via a computer or handheld device. CBTs typically present content in a linear fashion, much like reading an online book or manual. For this reason they are often used to teach static processes, such as using software or completing mathematical equations. The term Computer-Based Training is often used interchangeably with Web-based training (WBT) with the primary difference being the delivery method. Where CBTs are typically delivered via CD-ROM, WBTs are delivered via the Internet using a web browser. Assessing learning in a CBT usually comes in form of multiple choice questions, or other assessments that can be easily scored by a computer such as drag-and-drop, radio button, simulation or other interactive means. Assessments are easily scored and recorded via online software, providing immediate end-user feedback and completion status. Users are often able to print completion records in the form of certificates.

CBTs provide learning stimulus beyond traditional learning methodology from textbook, manual, or classroom-based instruction. For example, CBTs offer user-friendly solutions for satisfying continuing education requirements. Instead of limiting students to attending courses or reading printed manuals, students are able to acquire knowledge and skills through methods that are much more conducive to individual learning preferences. For example, CBTs offer visual learning benefits through animation or video, not typically offered by any other means.

CBTs can be a good alternative to printed learning materials since rich media, including videos or animations, can easily be embedded to enhance the learning.

---

<sup>9</sup> Vaughan, Dr Norman D. (2010). "Blended Learning". In Cleveland-Innes, MF; Garrison, DR. *An Introduction to Distance Education: Understanding Teaching and Learning in a New Era*. Taylor & Francis. p. 165. ISBN 0-415-99598-1. Retrieved 23 January 2011.

Another advantage to CBTs is that they can be easily distributed to a wide audience at a relatively low cost once the initial development is completed.

However, CBTs pose some learning challenges as well. Typically the creation of effective CBTs requires enormous resources. The software for developing CBTs (such as Flash or Adobe Director) is often more complex than a subject matter expert or teacher is able to use. In addition, the lack of human interaction can limit both the type of content that can be presented as well as the type of assessment that can be performed. Many learning organizations are beginning to use smaller CBT/WBT activities as part of a broader online learning program which may include online discussion or other interactive elements.

**Computer-supported collaborative learning (CSCL).** Computer-supported collaborative learning (CSCL) is one of the most promising innovations to improve teaching and learning with the help of modern information and communication technology. Most recent developments in CSCL have been called E-Learning 2.0, but the concept of collaborative or group learning whereby instructional methods are designed to encourage or require students to work together on learning tasks has existed much longer. It is widely agreed to distinguish collaborative learning from the traditional 'direct transfer' model in which the instructor is assumed to be the distributor of knowledge and skills, which is often given the neologism E-Learning 1.0, even though this direct transfer method most accurately reflects Computer-Based Learning systems (CBL).

Blogs, wikis, and Google Docs are commonly used CSCL mediums within the teaching community. The ability to share information in an environment that is becoming easier for the lay person, has caused a major increase of use in the average classroom. One of the main reasons for its usage states that it is "a breeding ground for creative and engaging educational endeavors."

Using Web 2.0 social tools in the classroom allows for students and teachers to work collaboratively, discuss ideas, and promote information. According to

Sendall (2008), blogs, wikis, and social networking skills are found to be significantly useful in the classroom. After initial instruction on using the tools, students also reported an increase in knowledge and comfort level for using Web 2.0 tools. The collaborative tools additionally prepare students with technology skills necessary in today's workforce.

Locus of Control remains an important consideration in successful engagement of E-learners. According to the work of Cassandra B. Whyte, the continuing attention to aspects of motivation and success in regard to E-learning should be kept in context and concert with other educational efforts. Information about motivational tendencies can help educators, psychologists, and technologists develop insights to help students perform better academically.

**Technology-enhanced learning (TEL).** Technology enhanced learning (TEL) has the goal to provide socio-technical innovations (also improving efficiency and cost effectiveness) for e-learning practices, regarding individuals and organizations, independent of time, place and pace. The field of TEL therefore applies to the support of any learning activity through technology.

**Technology issues.** Along with the terms learning technology, instructional technology, the term Educational Technology is generally used to refer to the use of technology in learning in a much broader sense than the computer-based training or Computer Aided Instruction of the 1980s. It is also broader than the terms Online Learning or Online Education which generally refer to purely web-based learning. In cases where mobile technologies are used, the term M-learning has become more common. E-learning, however, also has implications beyond just the technology and refers to the actual learning that takes place using these systems.

Educational technology is intended to improve education over what it would be without technology. There are some benefits of implementation of advanced technology in education process:

**Easy-to-access course materials.** Instructors can post the course material or important information on a course website, which means students can study at a time and location they prefer and can obtain the study material very quickly.

**Student motivation.** Computer-based instruction can give instant feedback to students and explain correct answers. Moreover, a computer is patient and non-judgmental, which can give the student motivation to continue learning. According to James Kulik, who studies the effectiveness of computers used for instruction, students usually learn more in less time when receiving computer-based instruction and they like classes more and develop more positive attitudes toward computers in computer-based classes. The American educator, Cassandra B. Whyte, researched and reported about the importance of locus of control and successful academic performance and by the late 1980s, she wrote of how important computer usage and information technology would become in the higher education experience of the future.

**Wide participation.** Learning material can be used for long distance learning and are accessible to a wider audience.

**Improved student writing.** It is convenient for students to edit their written work on word processors, which can, in turn, improve the quality of their writing. According to some studies, the students are better at critiquing and editing written work that is exchanged over a computer network with students they know.

**Subjects made easier to learn.** Many different types of educational software are designed and developed to help children or teenagers to learn specific subjects. Examples include pre-school software, computer simulators, and graphics software.

A structure that is more amenable to measurement and improvement of outcomes. With proper structuring it can become easier to monitor and maintain

student work while also quickly gauging modifications to the instruction necessary to enhance student learning.

**Differentiated Instruction.** Educational technology provides the means to focus on active student participation and to present differentiated questioning strategies. It broadens individualized instruction and promotes the development of personalized learning plans. Students are encouraged to use multimedia components and to incorporate the knowledge they gained in creative ways.

**E-learning** is naturally suited to distance learning and flexible learning, but can also be used in conjunction with face-to-face teaching, in which case the term Blended learning is commonly used. E-Learning pioneer Bernard Luskin argues that the "E" must be understood to have broad meaning if e-Learning is to be effective. Luskin says that the "e" should be interpreted to mean exciting, energetic, enthusiastic, emotional, extended, excellent, and educational in addition to "electronic" that is a traditional national interpretation. This broader interpretation allows for 21st century applications and brings learning and media psychology into the equation.

In higher education especially, the increasing tendency is to create a Virtual Learning Environment (VLE) (which is sometimes combined with a Management Information System (MIS) to create a Managed Learning Environment) in which all aspects of a course are handled through a consistent user interface standard throughout the institution. A growing number of physical universities, as well as newer online-only colleges, have begun to offer a select set of academic degree and certificate programs via the Internet at a wide range of levels and in a wide range of disciplines. While some programs require students to attend some campus classes or orientations, many are delivered completely online. In addition, several universities offer online student support services, such as online advising and registration, e-counseling, online textbook purchase, student governments and student newspapers.

E-Learning can also refer to educational web sites such as those offering learning scenarios, worksheets and interactive exercises for children. The term is also used extensively in the business sector where it generally refers to cost-effective online training.

The recent trend in the E-Learning sector is screencasting. There are many screencasting tools available but the latest buzz is all about the web based screencasting tools which allow the users to create screencasts directly from their browser and make the video available online so that the viewers can stream the video directly. The advantage of such tools is that it gives the presenter the ability to show his ideas and flow of thoughts rather than simply explain them, which may be more confusing when delivered via simple text instructions. With the combination of video and audio, the expert can mimic the one on one experience of the classroom and deliver clear, complete instructions. From the learner's point of view this provides the ability to pause and rewind and gives the learner the advantage of moving at their own pace, something a classroom cannot always offer.

Research on the use of video in lessons is preliminary, but early results show an increased retention and better results when video is used in a lesson. Creating a systematic video development method holds promise for creating video models that positively impact student learning.

## **1.2 E-book in Education Process.**

There is a growing interest in converting paper books to bytes (Carvajal 1999) as well as writing new titles in digital form. This in turn has resulted in a collection of hybrid definitions of e-books. Initially, paper books that had been converted to a digital format, usually through digitising processes which allow them to be displayed on computers, were defined as e-books. Then, the term also began to encompass multimedia, hypertext or hypermedia systems that are based on a book

metaphor. Recently, the definition of an e-book has been extended to include book titles that are available online, that can be read as email, can be retrieved by a portable electronic reading device, or as a file that can be downloaded on to a computer (Carvajal 1999, Allen 2000, Clister 1999). Another recent interpretation of an e-book is the "print-on-demand" book where the contents are stored in a system connected to a high-speed, high-quality printer, from which printed and bound copies are produced on demand with the possibility of buying chapter-by-chapter, customised books (Hawkins 2000a).<sup>10</sup>

**Educational technology** is the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources." The term educational technology is often associated with, and encompasses, instructional theory and learning theory. While **instructional technology** is "the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning," according to the Association for Educational Communications and Technology (AECT) Definitions and Terminology Committee,<sup>[2]</sup> educational technology includes other systems used in the process of developing human capability. Educational technology includes, but is not limited to, software, hardware, as well as Internet applications, such as wiki's and blogs, and activities. But there is still debate on what these terms mean.<sup>11</sup>

Technology of education is most simply and comfortably defined as an array of tools that might prove helpful in advancing student learning and may be measured

---

<sup>10</sup> D. Randy Garrison and Terry Anderson (2003). *E-Learning in the 21st Century: A Framework for Research and Practice*. Routledge. ISBN 0-415-26346-8.

<sup>11</sup> Flaubert, G. 1857. *Madame Bovary*. Charlottesville, VA: Electronic Text Center, University of Virginia Library. <http://etext.virginia.edu/toc/modeng/public/FlaBova.html> (accessed July 30, 2006).

in how and why individuals behave. Educational Technology relies on a broad definition of the word "technology." Technology can refer to material objects of use to humanity, such as machines or hardware, but it can also encompass broader themes, including systems, methods of organization, and techniques. Some modern tools include but are not limited to overhead projectors, laptop computers, and calculators. Newer tools such as "smartphones" and games (both online and offline) are beginning to draw serious attention for their learning potential. Media psychology is the field of study that applies theories in human behavior to educational technology.

E-books are also defined diversely by researchers to fit their own expectations.

For example:

- any kind of digitized information ranging from a CD-ROM title to an online interactive database or a collection of Web pages;
- a collection of reactive pages of electronic information that exhibit many of the characteristic features and properties of a conventional book;
- learning environments which have an application containing a multimedia database of instructional resources that store pre-captured multimedia presentations about topics in a book.

The Open eBook (OEB) Forum avoids using the term *e-book* because different people use the term differently. OEB defines a more precise terminology:

- the digital content which users read (i.e. a paperless version of a book, article, magazine, etc.) is called *publication*;
- the physical device used to read a publication is called a *reading device* (e.g. dedicated readers (see section 2), personal computers or personal digital assistants);
- the combination of software and hardware that processes content and presents it to users is called a *reading system*.

E-Books then are textual documents that have been converted and “published” in an electronic format that display on eBook readers, devices or computers using eBook software programs. A modern definition is that an eBook is a digital text file, but not limited to just text, which is displayed on some form of computer or electronic device.<sup>12</sup>

The inventor and the title of the first e-book is not widely agreed upon. Some notable candidates are listed here.

The first e-book may be the Index Thomisticus, a heavily-annotated electronic index to the works of Thomas Aquinas, prepared by Roberto Busa beginning in the late 1940s. However, this is sometimes omitted, perhaps because the digitized text was (at least initially) a means to developing an index and concordance, rather than as a published edition in its own rights.

Alternatively, electronic books are considered by some to have started in the early 1960s, with the NLS project headed by Doug Engelbart at Stanford Research Institute (SRI), and the Hypertext Editing System and FRESS projects headed by Andries van Dam at Brown University. The former ran on specialized hardware, while the latter ran on IBM mainframes. FRESS documents were structure-oriented rather than line-oriented, and were formatted dynamically for different users, display hardware, window sizes, and so on, as well as having automated tables of contents, indexes, and so on. All these systems also provided extensive hyperlinking, graphics, and other capabilities. Van Dam is generally thought to have coined the term "electronic book", and it was established enough to use in an article title by 1985.

---

<sup>12</sup> Borchers, J.O. (1999) "Electronic Books: Definition, Genres, Interaction Design Patterns". *Conference on Human Factors in Computing Systems, CHI99 Workshop: Designing Electronic Books*, Pittsburgh,

FRESS was used for reading extensive primary texts online, as well as for annotation and online discussions in several courses, including English Poetry and Biochemistry. Brown faculty made extensive use of FRESS; for example the philosopher Roderick Chisholm used it to produce several of his books. For example, in the Preface to *Person and Object* (1979) he writes "The book would not have been completed without the epoch-making File Retrieval and Editing System..."<sup>13</sup>

Brown's leadership in electronic book systems continued for many years, including navy-funded projects for electronic repair manuals; a large-scale distributed hypermedia system known as InterMedia; a spinoff company Electronic Book Technologies that built DynaText, the first SGML-based book-reader system; and the Scholarly Technology Group's extensive work on the still-prevalent Open eBook standard.

Despite the extensive earlier history, it is commonly reported that the inventor of the e-book is Michael S. Hart. In 1971, Hart was given extensive computer time by the operators of the Xerox Sigma V mainframe at the University of Illinois. Seeking a worthy use of this resource, he created his first electronic document by typing the United States Declaration of Independence into a computer (this of course would not fulfill the "book length" criterion some require). *Project Gutenberg* was launched afterwards to create electronic copies of more books.

One early e-book implementation was the desktop prototype for a proposed notebook computer, the *Dynabook*, in the 1970s at PARC: a general-purpose portable personal computer capable of displaying books for reading.

---

<sup>13</sup> Lever-Duffy, Judy; McDonald, Jean B (March 2007). *Teaching and Learning with Technology*. Ana A. Ciereszko, Al P. Mizell (3rd ed.). Allyn & Bacon. p. 377.

In 1992, Sony launched the Data Discman, an electronic book reader that could read e-books that were stored on CDs. One of the electronic publications that could be played on the Data Discman was called *The Library of the Future*.

Early e-books were generally written for specialty areas and a limited audience, meant to be read only by small and devoted interest groups. The scope of the subject matter of these e-books included technical manuals for hardware, manufacturing techniques and other subjects. In the 1990s, the general availability of the Internet made transferring electronic files much easier, including e-books.

**Libraries.** U.S. Libraries began providing free e-books to the public in 1998 through their web sites and associated services, although the e-books were primarily scholarly, technical or professional in nature, and could not be downloaded. In 2003, libraries began offering free downloadable popular fiction and non-fiction e-books to the public, launching an e-book lending model that worked much more successfully for public libraries. The number of library e-book distributors and lending models continued to increase over the next few years. In 2010, a Public Library Funding and Technology Access Study found that 66% of public libraries in the U.S. were offering e-books, and a large movement in the library industry began seriously examining the issues related to lending e-books, acknowledging a tipping point of broad e-book usage. However, some publishers and authors have not endorsed the concept of electronic publishing, citing issues with demand, piracy and proprietary devices. Demand-driven acquisition (DDA) has been around for a few years in public libraries, which allows vendors to streamline the acquisition process by offering to match a library's selection profile to the vendor's e-book titles. The library's catalog is then populated with records for all the e-books that match the profile. The decision to purchase the title is left to the patrons, although the library can set purchasing conditions such as a maximum price and purchasing caps so that the dedicated funds are spent according to the library's budget.

**Dedicated hardware readers.** There have been several generations of dedicated hardware e-book readers. The Rocket eBook and several others were introduced around 1998, but did not gain widespread acceptance.

As of 2009, new marketing models for e-books were being developed and a new generation of reading hardware was produced. E-books (as opposed to ebook readers) have yet to achieve global distribution. In the United States, as of September 2009, the Amazon Kindle model and Sony's PRS-500 were the dominant e-reading devices. By March 2010, some reported that the Barnes & Noble Nook may be selling more units than the Kindle in the US.

On January 27, 2010 Apple Inc. launched a multi-function device called the iPad and announced agreements with five of the six largest publishers that would allow Apple to distribute e-books. The iPad includes a built-in app for e-books called iBooks and the iBooks Store.

In July 2010, online bookseller Amazon.com reported sales of ebooks for its proprietary Kindle outnumbered sales of hardcover books for the first time ever during the second quarter of 2010, saying it sold 140 e-books for every 100 hardcover books, including hardcovers for which there was no digital edition. By January 2011, ebook sales at Amazon had surpassed its paperback sales. In the overall U.S. market, paperback book sales are still much larger than either hardcover or e-book; the American Publishing Association estimated e-books represented 8.5% of sales as of mid-2010, up from 3% a year before. In Canada, *The Sentimentalists* won the prestigious national Giller Prize. Owing to the small scale of the novel's independent publisher, the book was initially not widely available in printed form, but the ebook edition became the top-selling title for Kobo devices in 2010.

**How do eBooks work?** E-Books have three basic components: hardware, software, and the book file. The hardware of an eBook, known as a reader, is a

computer style device or a computer running specific software that displays the “book” onto a screen. The software is the program which displays the book data on the device. The eBook file contains all of the “book” material: text, pictures, and what ever else the author can include.

The hardware, software, and file must all be compatible for the book you wish to use. For example MS Reader software can't be used on a Mac computer, while Palm Reader software can be used on a Palm, Mac or Windows device.<sup>14</sup>

What are advantages and disadvantages?

Advantages	Disadvantages
<p>Many E-Books are free or inexpensive.</p> <p>E-Book files are relatively small and easily stored and shared.</p> <p>E-Book files don't actually weigh anything - just data.</p> <p>E-Books are more interactive than most printed material.</p> <p>E-Books have built in features such as highlighting, note taking, dictionaries, bookmarks and other annotations.</p>	<p>E-Books require a reading device such as a computer or handheld.</p> <p>E-Book devices require a power source.</p> <p>Not all books are currently available as E-Books.</p> <p>Users new to E-Books will have a period of adjustment to screen reading.</p>

---

<sup>14</sup> Williams, G. (2000a) "Where Reading Devices Make Sense".

E-Books accommodate many learning needs and styles. Most eBooks can read aloud using a text-to-speech engine, and most can also change the text display size making large print available.

E-Book files can be created using free software, web converters, or MS Word add-ins.

### **Ideas for using eBooks in teaching:**

- place eBooks or links to eBooks in Blackboard
- ask students to locate eBooks and contribute links to class
- assign students the option to purchase eBooks for class text
- display passages from eBooks during class discussions (digital big book)
- have students create an original eBook or library from student work
- create a digital portfolio as an eBook
- teach students active reading strategies

E-books can be more searchable—via keyword and otherwise—than the best-indexed paper books, especially for multi-book searches. E-books take up no space in the stacks and can be easily transmitted via the Internet. Publishers and libraries need not pay for printing or physical distribution, and updates are cheaper—savings that ideally can be passed on to users and help reduce the book budgets of libraries and schools. Electronic distribution allows for the ultimate in

accessibility, especially for distance learners and others who are time-strapped.<sup>15</sup>

Furthermore, the technology of e-books also has the potential to allow additional functions, features, and capabilities. For example, one major advantage of digital book technology is that chapters from different e-books can be chosen and combined in single books for courses or even for individual students with the appropriate technical and business arrangements in place. Rather than relying on multiple reserved readings or expensive course-packs, instructors could edit their own e-books and distribute them online to their students. Additionally, e-books can (and should) offer such features as speech-synthesizer enablement, large type, and user-chosen colors on screen to accommodate the needs of people with disabilities. Digital book technology also allows for the possibility that future readers can go directly to the cited paragraphs in referenced books rather than seeing mere footnotes, and e-books will soon be able to accommodate interactive features such as reader annotations, discussion forums, blogs, and electronic tests to support sustained analysis and measure reader understanding at designated points throughout the text. For distance educators as well as traditional classroom educators, such components would not only enhance student access to information but would also help revolutionize the processes of reading, analyzing, and researching in their courses.<sup>16</sup>

### **1.3. Principles of compiling an E-book on the topic “The Geography of Uzbekistan”**

---

<sup>15</sup> Bloom B. S. (2006). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*. New York: David McKay Co Inc.

<sup>16</sup> Hawkins, D. "Electronic Books: A Major Publishing Revolution, Part 1". p. 15-28

As there is still no single standard format, or indeed a universal definition, for an e-book, the process of producing one can still be interpreted in many different ways depending on the type of e-book and its purpose. For example, for textual e-books, the process can involve simply digitising a printed book, or applying markup languages. For multimedia or hypermedia books, a different approach is often required, involving additional steps such as creating graphics, audio, animation and video.

In Education, multimedia is used to produce computer-based training courses (popularly called CBTs) and reference books like encyclopaedia and almanacs. A CBT lets the user go through a series of presentations, text about a particular topic, and associated illustrations in various information formats. Edutainment is an informal term used to describe combining education with entertainment, especially multimedia entertainment.<sup>17</sup>

Learning theory in the past decade has expanded dramatically because of the introduction of multimedia. Several lines of research have evolved (e.g. Cognitive load, Multimedia learning, and the list goes on). The possibilities for learning and instruction are nearly endless.

The idea of media convergence is also becoming a major factor in education, particularly higher education. Defined as separate technologies such as voice (and telephony features), data (and productivity applications) and video that now share resources and interact with each other, synergistically creating new efficiencies, media convergence is rapidly changing the curriculum in universities all over the world. Likewise, it is changing the availability, or lack thereof, of jobs requiring this savvy technological skill.

---

<sup>17</sup> Using Technology to Enhance the Classroom Environment. THE Journal, 01 January 2002

The English education in middle school in China, for instance, is well invested and assisted with various equipments. In contrast, the original objective has not been achieved at the desired effect. The government, schools, families, and students spend a lot of time working on improving scores, but hardly gain practical skills. English education today has gone into the vicious circle. Educators need to consider how to perfect the education system to improve students' practical ability of English. Therefore an efficient way should be used to make the class vivid. Multimedia teaching will bring students into a class where they can interact with the teacher and the subject. Multimedia teaching is more intuitive than old ways; teachers can simulate situations in real life. In many circumstances teachers don't have to be there, students will learn by themselves in the class. More importantly, teachers will have more approaches to stimulating students' passion of learning.<sup>18</sup>

Creating textual e-books is becoming easier with the introduction of e-book compilers. Books are created by merging the existing text files, and the compilers automatically generate the structure and the interface of the books. Designing multimedia or hypermedia books normally requires more steps as it involves more media. In textual e-books (or any other single medium), designers need only follow guidelines such as using appropriate fonts, making text readable and considering type styles and colours. For multimedia or hypermedia books, on the other hand, design considerations are focused on graphics, audio, animation, video, text, as well as on their combination. A core component of E-learning includes issue such as pedagogy. Pedagogical elements. Pedagogical elements are an attempt to define structures or units of educational material. For example, this could be a lesson, an assignment, a multiple choice question, a quiz, a discussion group or a case study. These units should be format independent, so although it may be in any

---

<sup>18</sup> Daniel, Sir John S (1998). *Mega-Universities and Knowledge Media: Technology Strategies for Higher Education*. Routledge. ISBN 0-7494-2634-9.

of the following methods, pedagogical structures would not include a textbook, a web page, a video conference or Podcast.<sup>19</sup>

When beginning to create E-Learning content, the pedagogical approaches need to be evaluated. Simple pedagogical approaches make it easy to create content, but lack flexibility, richness and downstream functionality. On the other hand, complex pedagogical approaches can be difficult to set up and slow to develop, though they have the potential to provide more engaging learning experiences for students. Somewhere between these extremes is an ideal pedagogy that allows a particular educator to effectively create educational materials while simultaneously providing the most engaging educational experiences for students.

**Pedagogical approaches or perspectives.** It is possible to use various pedagogical approaches for eLearning which include:

- **social-constructivist** – this pedagogy is particularly well afforded by the use of discussion forums, blogs, wiki and on-line collaborative activities. It is a collaborative approach that opens educational content creation to a wider group including the students themselves. The One Laptop Per Child Foundation attempted to use a constructivist approach in its project.<sup>20</sup>
- **Laurillard's Conversational Model** is also particularly relevant to eLearning, and Gilly Salmon's Five-Stage Model is a pedagogical approach to the use of discussion boards.

---

<sup>19</sup> Skinner, B.F. The science of learning and the art of teaching. Harvard Educational Review, 1954, 24, 86-97., Teaching machines. Science, 1958, 128, 969-77.

<sup>20</sup> Reeves, Thomas C. (February 12, 1998). *The Impact of Media and Technology in Schools*.

- **Cognitive perspective** focuses on the cognitive processes involved in learning as well as how the brain works.
- **Emotional perspective** focuses on the emotional aspects of learning, like motivation, engagement, fun, etc.
- **Behavioural perspective** focuses on the skills and behavioural outcomes of the learning process. Role-playing and application to on-the-job settings.
- **Contextual perspective** focuses on the environmental and social aspects which can stimulate learning. Interaction with other people, collaborative discovery and the importance of peer support as well as pressure.
- **Mode Neutral** Convergence or promotion of 'transmodal' learning where online and classroom learners can coexist within one learning environment thus encouraging interconnectivity and the harnessing of collective intelligence.

**Reusability, standards and learning objects.** Much effort has been put into the technical reuse of electronically-based teaching materials and in particular creating or re-using *Learning Objects*. These are self contained units that are properly tagged with keywords, or other metadata, and often stored in an XML file format. Creating a course requires putting together a sequence of learning objects. There are both proprietary and open, non-commercial and commercial, peer-reviewed repositories of learning objects such as the Merlot repository.

A common standard format for e-learning content is SCORM whilst other specifications allow for the transporting of "learning objects" (Schools Framework) or categorizing metadata (LOM).

These standards themselves are early in the maturity process with the oldest being 8 years old. They are also relatively vertical specific: SIF is primarily pK-12, LOM is primarily Corp, Military and Higher Ed, and SCORM is primarily Military

and Corp with some Higher Ed. PESC- the Post-Secondary Education Standards Council- is also making headway in developing standards and learning objects for the Higher Ed space, while SIF is beginning to seriously turn towards Instructional and Curriculum learning objects.<sup>21</sup>

In the US pK12 space there are a host of content standards that are critical as well- the NCES data standards are a prime example. Each state government's content standards and achievement benchmarks are critical metadata for linking e-learning objects in that space.

An excellent example of e-learning that relates to knowledge management and reusability is Navy E-Learning, which is available to Active Duty, Retired, or Disable Military members. This on-line tool provides certificate courses to enrich the user in various subjects related to military training and civilian skill sets. The e-learning system not only provides learning objectives, but also evaluates the progress of the student and credit can be earned toward higher learning institutions. This reuse is an excellent example of knowledge retention and the cyclical process of knowledge transfer and use of data and records.<sup>22</sup>

The E-book **“The Geography of Uzbekistan”** is an interactive multimedia presentation made with the help of “My auto play 9.0” Program which is best suited for creating interactive presentations, multimedia applications, software CDs, CD catalogs, CD presentations, CD photo albums, slide-shows, E-Books, CD business cards and promotional CDs.

---

<sup>21</sup> Smith, Grace and Stephanie Throne. Differentiating Instruction with Technology in the K-5 Classrooms. Technology Uses in Education . International Society for Technology in Education. 2004

<sup>22</sup> Wilson, R. (2001) "Evolution of Portable Electronic Books". *Ariadne*, issue 29

Key features and structure of the E-book “**The Geography of Uzbekistan**” include:

- **Main page (Home Page)** including the following Links: **Discover the E-book, Practice Exercises, Glossary, and Reference.**
- “**Discover the E-book**” sector contains the **Map of The Republic of Uzbekistan** providing visual illustration of geographical position of Uzbekistan; its borders with neighboring countries, 12 regions, The Republic of Karakalpakistan and Aral Sea. Every region is hyperlined , this gives the opportunity to see the information by clicking on proper region bottom.
- Theoretical material divided into units on related topics (*Geographical zones of Uzbekistan, The Wild life, Nature, Water resources, Minerals, Climate, Ecology, Industries, National Symbols*). Every unit contains RTF document, photos in JPG format and MP4 video.
- Practical exercises for above mentioned units.
- “Glossary” sector adduces the database of MultiLex dictionary installed in the E-book “The Geography of Uzbekistan”.
- Reference list.

**E-book formats.** Numerous e-book formats emerged and proliferated, some supported by major software companies such as Adobe with its PDF format, and others supported by independent and open-source programmers. Multiple readers followed multiple formats, most of them specializing in only one format, and thereby fragmenting the e-book market even more. Due to exclusiveness and limited readerships of e-books, the fractured market of independent publishers and specialty authors lacked consensus regarding a standard for packaging and selling e-books.

However, in the late 1990s a consortium was formed to develop the Open eBook format as a way for authors and publishers to provide a single source

document that could be handled by many book-reading software and hardware platforms. Open eBook defined required subsets of XHTML and CSS; a set of multimedia formats (others could be used, but there must also be a fallback in one of the required formats); and an XML schema for a "manifest", to list the components of a given ebook, identify a table of contents, cover art, and so on. Google Books has converted many public-domain works to this open format.

In 2010 e-books continued to gain in their own underground markets. E-book publishers began distributing books that were in the public domain. At the same time, authors with books that were not accepted by publishers offered their works online so they could be seen by others. Unofficial (and occasionally unauthorized) catalogs of books became available over the web, and sites devoted to e-books began disseminating information about e-books to the public.

### **My multimedia learning platform has the following strengths:**

**Personalized education.** Learning and teaching with the assistance of technologies benefit both students who are able to process information easily and students who need more time to learn and digest study content. In addition, students can complete the instructional goal through self-learning in instances where teachers are not able to provide individual consultation.

**Flexibility of time and space.** The multimedia e-book “The Geography of Uzbekistan” allows students to suspend and revisit study material at their convenience and within a flexible time frame.

Human learning experience is based on three aspects: practice, observation, and thought. Multimedia learning platforms combine concrete ideas and abstractions, with teaching conducted through image presentation texts, video and audio presentations in sequence. This is a representative model and is a theoretical

method in addition to practical instruction methods.<sup>23</sup>

**Diversified teaching materials.** This multimedia e-book provides diversified teaching materials through text, music, pictures, and animation, which can provide assistance to students' cognitive development.

**Effective motivation.** The attractive live designs and audio and flash effects included in my multimedia platform can attract interest and encourage student edification.

**A hyperlinked learning method.** The multimedia platform provides dynamic learning patterns through hyperlinks instead of non-linear learning methods, which aides in acquisition of additional and related information.

## **Conclusion**

The advantages of this technology for distance learning and other educational settings are substantial. The first step towards realizing the educational potential of e-books is to dispel the myths that currently surround them and to recognize the rapid advances that have already been made in e-book hardware and software. The second and more challenging step is to overcome the genuine obstacles that continue to prevent e-book technology from being widely used by institutions of higher education—obstacles that include copyright constraints and DRM copy

---

<sup>23</sup> *Handbook of Human Performance Technology* (Eds. Harold Stolovich, Erica Keeps, James Pershing) (3rd ed, 2006)

protection as well as the corresponding lack of universal standards that would help e-books flourish regardless of changes in hardware or software formats.

New to learning is the use of multimedia e-books; interest in exploiting the educational potential of e-books is surging as instructional interactive books involve a direct focus on active participation of the learner. I would like to stress the importance of e-book-based learning, clarifying that advanced multimedia learning is a balance between *conceptual* (teaching about) and *procedural* (teaching how to do) knowledge.<sup>24</sup> Multimedia e-books address many of the limitations of traditional instructional methods; e-books have the ability to motivate learning, increase knowledge and skill acquisition and support traditional teaching methods.

It's important to underline that before multimedia e-books can take on a meaningful role in formal or informal education, the education sector and the wider public need to better understand the potential and diversity of such 'tools'.

Both psychological and educational literature stressed that the real context, which takes place in the educational relationship, plays a key role in the choice of methods and processes that involve the teaching-learning process.<sup>25</sup>

The closed and open system definition aims at representing a training strategy based on instructions, closed systems, or on a more constructivist strategy (open systems). In a technological point of view, the new learning

---

<sup>24</sup> Skinner BF (1965). "The technology of teaching". *Proc R Soc Lond B Biol Sci* (989): 427–43. doi:10.1098/rspb.1965.0048. PMID 4378497.

<sup>25</sup> Skinner BF (1965). "The technology of teaching". *Proc R Soc Lond B Biol Sci* (989): 427–43. doi:10.1098/rspb.1965.0048. PMID 4378497.

technologies can be distinguished in : closed systems (tools and platforms developed by professionals which deal with a particular subject area and can be used for educational / training purpose), and open systems (tools and platforms that enable teachers to realize learning environments).

Presentations using multimedia applications can encourage student learning and effectively integrate a variety of media elements. The multimedia learning platform can also simulate situational applications, allowing students to understand the subject more easily and observe its relevance.

The multimedia platforms eradicate the human factors present in traditional teaching activities, so the teaching scenario and process provides a more stable environment. In addition, a multimedia platform allows students to learn during convenient time and under optimal conditions.

The new generation, the educated youth who are free of any vestiges of the past are today turning into a vital driving force of democratization, liberalization, renewal and confident growth of the country.

Uzbekistan has all grounds to state that for over the historically short period of time – 15-20 years Uzbekistan has made a giant step along the path of achieving our main goal – to join the ranks of the developed democratic states in the world and create the decent living conditions and standards for the population of the country. And we can rightfully be proud of this.

Everything that was done and is still being done in Uzbekistan to implement the Education reforms program primarily meets the long-term interests, realities and peculiarities of a rather complex stage of our country's current development.

In conclusion, I wish to share opinion that further step-by-step reformation of Educational system of our country through implementation of advanced teaching technologies and innovations Uzbekistan will bring up trully harmonically

developed, independent thinking young generation!

## **Chapter II. Materials for compiling E-book on the topic “Geography of Uzbekistan”**

# The Geography of Uzbekistan

**“Comprehensively advanced generation - a backbone of our country”  
- I. A. Karimov**



Discover the e-book

Glossary

Practice exercises

Reference

Explore root

Drivers

Video codec

# Discover the e-book

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols



- 1 Andijan region
- 2 Bukhara region
- 3 Fergana region
- 4 Jizzakh region
- 5 Ilamangan region
- 6 Ilavoi region
- 7 Kashkadarya region
- 8 Samarkand region
- 9 Sirdarya region
- 10 Surkhandarya region
- 11 Tashkent region
- 12 Khorezm region
- 13 Aral Sea \*
- 14 The Republic of Karakalpakstan \*



# Aral Sea

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

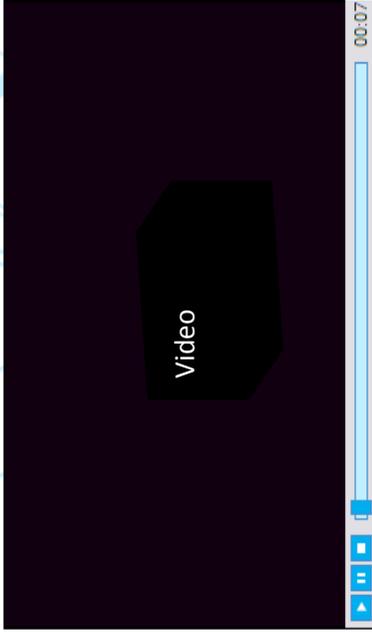
Industries

State symbols

## Aral Sea

The Aral was a lake that lay between Kazakhstan (Aktobe and Kyzylord a provinces) in the north and Karakalpakstan, an autonomous region of Uzbekistan, in the south. The name roughly translates as "Sea of Islands", referring to more than 1,534 islands that once dotted its waters. Formerly one of the four largest lakes in the world with an area of 68,000 square kilometres (26,300 sq mi), the Aral Sea has been steadily shrinking rivers that fed it were diverted by Soviet irrigation project.

By 2007, it had declined to 10% of its original size, splitting into four lakes - the North Aral Sea, the eastern and western basins of the once far larger South Aral Sea and one smaller lake between North and South Aral Seas. By 2009, the southeastern lake had disappeared and the southwestern lake retreated to a thin strip at the extreme west of the former southern sea. The maximum depth of the North Aral Sea is 42 m (138 ft) (as of 2008).



# The Republic of Karakalpakstan

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols

## The Republic of Karakalpakstan

*Territory: 166.6 thousand sq. km. □ Population: 1.5 million □ Capital: city of Nukus □ Districts: Amudaryya, Beruniy, Kegeyli, Mynnaq, Nukus, Takhtakupir, Turtkul, Khodjayli, Chimboy, Shumanay, Ellikqala, Qonlikul, Qoraozaq, Kungurat.*

**Geographical location:** Karakalpakstan borders with the Republic of Kazakhstan in the north and west, the Navoi region in the east, Khorezm and the Bukhara regions in the southeast and with Turkmenistan in the south.

**Karakalpakstan** is a sovereign republic with a parliamentary form of government and is part of the Republic of Uzbekistan. The sovereignty of Karakalpakstan is under protection of the Republic of Uzbekistan.

Karakalpakstan has a **Constitution, flag, national emblems and an anthem**. The constitution and laws of Karakalpakstan should



# Khorezm region

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

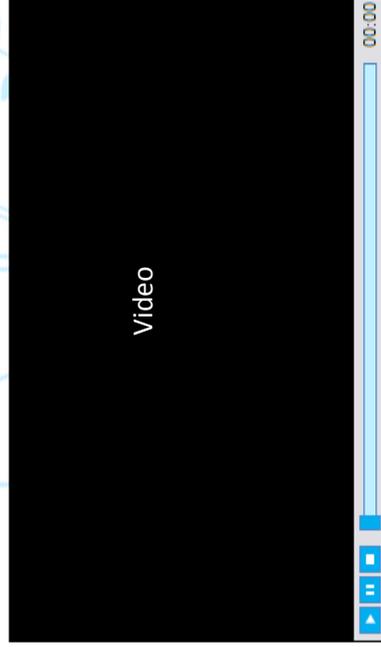
State symbols

## Khorezm Region

*Territory: 6.1 thousand sq. km. □ Population: 1.5 million □ Administrative centre: city of Urgench □ Districts Bogot, Gurlan, Urgench, Khzorasap, Khiva, Khonqa, Shovot, Yangiariq, Yangibozir, Kushkupir.*

**Geographical location:** The Khorezm region is one of the northern regions of Uzbekistan. The region borders with Karakalpakstan in the north and northeast with the Bukhara region in the southeast and with Turkmenistan in the south and west.

**Major cities** of the region are Urgench, Khiva, Pitnaq, Gurlan, Bogot, Khonqaq, and Khazorasp. The region has “**an open-air museum**”- **city of Khiva**, which enchants several thousand of tourists and visitors with its originality and charm. One hears a lot about the culture and arts, rich cuisine, the character, spirit, and diligence of the people of this oasis, but one really has to see it for



# Navoi region

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols

## Navoi Region

**Territory:** 110.9 thousand sq. km. □ **Population:** 850 thousand □ **Administrative centre:** city of Navoi □ **Districts:** Karmana, Konimekh, Navbakhor, Nurota, Tomdi, Uchquduq, Khatirchi, Qiziltepa.

**Geographical location:** The Navoi region is located in the central part of Uzbekistan, predominantly on the large territory of the Qizilqum desert. The region borders with Kazakhstan in the north, the Djizzak region in the east and the Samarqand region in the southeast, the Bukhara region and, partly, the Kashkadarya region in the south and Karakalpakstan in the west.

The Navoi region is **the largest region in Uzbekistan. Major cities** in the region are Navoi, Zarafshon, Nurota, Uchkuduk, Khatirchi and Navbakhor.

The Navoi region is **one of the industrially advanced regions of**



# Bukhara region

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols

## Bukhara Region

**Territory:** 40.32 thousand sq. km. □ **Population:** 1.5 million □ **Administrative centre:** city of Bukhara □ **Districts:** Bukhara, V obkent, Djondor, Kogon, Olot, Peshku, Romitan, Shofirkon, Karakul, Karaulbazar and Gijdivon.

**Geographical location:** The Bukhara region is located in the west of the central part of Uzbekistan. It borders with Navoi region in the north and the east, the Kashkadarya region in the southeast, Turkmenistan in the south and Khorezm region and Karakalpakistan in the west.

Dozens of large **oil and gas fields** have been discovered; today some of them are already in operation. The “Gazli” gas field is well-known. Large deposits of gold, silver, tungsten, iron, molybdenum, granite, and color sand, marble are concentrated in the region.

Video



# Kashkadarya region

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols

## Kashkadarya Region

**Territory:** 28.6 thousand sq. km. □ **Population:** 2.4

million □ **Administrative centre:** city of Karshi □ **Districts:**

*Dehkanabad, Kasby, Kitob, Koson, Myrishkor, Muborak, Nishon, Chiroqchi, Shakhrisabz, Yakkabog, Kamashi, Karshi, Guzar,*

**Geographical location:** The Kashkadarya region is one of the southern regions of Uzbekistan and borders in the north with the Samarkand region, in the northeast with Tajikistan, in the east and southeast with Surxandarya region, in the south with Turkmenistan, in the northwest with the Bukhara region and, partly with the Navoi region. Major cities of the region are Karshi, Shakhrisabz, Koson, Kitob, Kamashi, Muborak, Guzor and Yakkabog.

**The administrative centre** of the region is the city of Karshi, which is one of the most ancient settlements in the territory of



# Surkhandarya region

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols

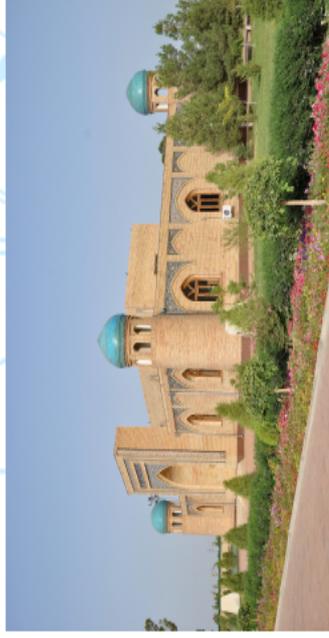
## Surkhandarya Region

**Territory:** 20.1 thousand sq. km. □ **Population:** 1.9 million □ **Administrative centre:** city of Termiz □ **Districts:** Angor, Bandikhon, Boysun, Denou, Djarkurgan, Muzraobod, Oltinsoy, Saryasia, Termiz, Uzun, Sherobod, Shurchi, Qiziriq, Qumkurgan.

**Geographical location:** The Surkhandarya region is the most southern region of Uzbekistan, which borders with Tajikistan in the north and east, Afghanistan in the south, Turkmenistan in the west and the Kashkadarya region in the northwest.

**Major cities** in the region are Termez, Denou, Sherobod, Boysun, Djarkurgan, Mirzaobod, Qiziriq and Qumkurgan.

**The mountain areas** of the region are rich in curative grasses and fruits that provide various opportunities for economic development in this region



# Samarkand region

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

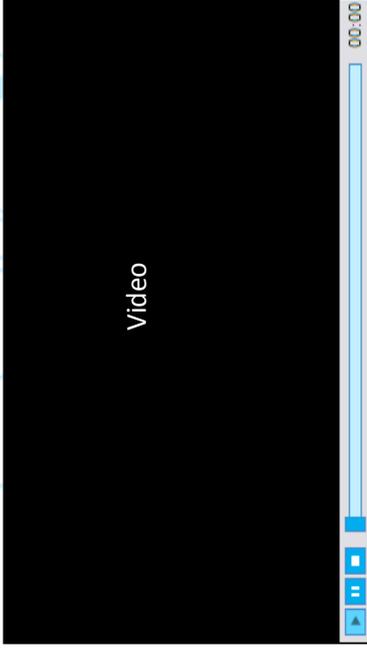
State symbols

## Samarkand Region

*Territory: 16.8 thousand sq. km. □ Population: 2.9 million □ Administrative centre: city of Samarkand □ Districts: Bulungur, Jomboy, Ishtikhon, Kattakurgan, Narpay, Nurobod, Oqdarya, Payariq, Pasdagrom, Pakhtachi, Samarkand, Toyloq, Urgut, Koshrabot.*

**Geographical location:** The Samarkand region is located in the central part of Uzbekistan, in the Zarafshan valley. It borders with the Djizzak region in northeast, Tajikistan in the east, the Kashkadarya region in the south and the Navoi region in the west and northwest.

**Major cities** in the region: Samarkand, Kattakurgan, Urgut, Oqtosh, Bulungur, Juma Jomboy, Chelak and Ishtikhon. **The administrative centre** of the region, the city of Samarkand, is the second largest city in Uzbekistan and is the most advanced and



# Jizzakh region

Geographic Zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols

## Jizzakh Region

**Territory:** 21.2 thousand sq. km. □ **Population:** 1.1 million □ **Administrative centre:** city of Djizzak □ **Districts:** Annasoy, Bakhmal, Dustlik, Djizzak, Zar-bador, Zafarobod, Zomin, Mirzachul, Pakhtakor, Forish, Yangiobod, Gallaorol.

**Geographical location:** The Djizzak region is located in the central part of Uzbekistan. It borders with Kazakhstan in the north, Syrdarya region in the east, Tajikistan in the southwest and south, the Samarkand region in the southwest and Navoi region in the west.

**The major cities** in the region are Djizzak, Gallaorol, Dashtobod, Gagarin, Dustlik, and Pakhtakor. The Djizzak region has been extended due to newly developed land in the Mirzachul desert. Therefore, the climate and environment in Djizzak differ from that of other regions of the country. Djizzak region has a dry hot



# Sirdarya region

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols

## Sirdarya Region

**Territory:** 4.28 thousand sq. km. **Population:** 700 thousand **Administrative centre:** city of Gulistan **Districts:** Bouavut, Gulistan, Mirzaabad, Oqoltin, Saykhumbad, Sardoba, Sirdarya, Khovos.

**Geographical location:** The Sirdarya region is located in the eastern part of central Uzbekistan, to the south of the river Syrdaryo, which gave its name to the region. The region borders with the Republic of Kazakhstan in the north, the Tashkent region in the south, the Republic of Tajikistan in the southeast and the Djizzak region in the West.

The Sirdarya region is **one of the agro-industrial regions** of Uzbekistan. There currently **23 large industrial companies operating** there, in 2006 they manufactured industrial products exceeding UZS 156.8 billion in total. The industrial sector of



# Tashkent region

Geographic Zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols

## Tashkent Region

**Territory:** 15.2 thousand sq. km. **Population:** 2.5 million. **Administrative centre:** city of Tashkent **Districts:**

*Bekabad, Buka, Bustonliq, Zangiata, Oqqurgan, Okhangaron, Parkent, Piskent, Tashkent, Chinaz, Yuqori Chirchiq, Yangiyol, Orta Chirchik, Qibray, Quyi Chirchik.*

**Geographical location:** The Tashkent region is in the eastern part of Uzbekistan, in the valley of the Chirchiq and Okhangaron rivers. The region borders with the Republic of Kazakhstan in the north, the Republic of Kyrgyzstan in the northeast, the Namangan region in the east, the Republic of Tajikistan in the south and the Syrdarya region in the southwest.

**Major cities:** Chirchiq, Almaliq, Angren Bekabad, Yangiyol, Parkent, Piskent, Okhangaron, Keles, Chinaz. **The administrative centre of the Tashkent region is the city of Tashkent, which in turn**

Video



# Namangan region

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols

## Namangan Region

*Territory: 7.4 thousand sq. km. □ Population: 2.3 million □ Administrative centre: city of Namangan □ Districts: Kosonsoy, Mingbuloq, Namangan, Norin, Pop, Turakurgan, Uychi, Uchkurgan, Chartaq, Chust and Yangikurgan.*

**Geographical location:** The Namangan region is located north of the Fergana valley. The region borders with Kyrgyzstan in the north and northeast, the Andijan region in the east and southeast, the Fergana region in the south, Tajikistan in the southwest and the Tashkent region in the west.

**Major cities** of the Namangan region are Chust, Chortoq, Kosonsoy, Uchkurgon, Khakkulobod, Turakurgan and Pop. The Namangan region is widely known for its gardens and it is also famous for a national dress made of “Beqasam” material, a type of silk called atlas and Chust knives, embroidered skull-caps, as well



# Fergana region

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols

## Fergana Region

*Territory: 6.8 thousand sq. km. □ Population: 2.9 million □ Administrative centre: city of Fergana □ Districts: Baghdad, Beshariq, Buvayda, Dangara, Yazyavan, Altyariq, Ohkunboboev, Rishton, Sokh, Tashlaq, Uchkuprik, Fergana, Furqat, Uzbekistan, Quva.*

**Geographical location:** The Fergana region is located in the south of the splendid valley- Fargona vodiysi. It borders with Namangan region in the north, the Andijon region in the southeast and the Republic of Kyrgyzstan in the south, The Republic of Tajikistan in the west.

**Major cities** of region are Koqon, Fergana, Margelan, Quva, Rishton, Quvasoy, Beshariq, Yaypan, and Oltiariq. The administrative centre of region is the city of Fergana which is the most “shady” city in Uzbekistan. Almost all streets, parks and



# Andijan region

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols

## Andijan Region

*Territory: 4.3 thousand sq. km.*

*Population: 2.4 million*

*Administrative centre: city of Andijan*

*Districts: Andijon, Asaka, Baliqchi, Buloqboshi, Boz,*

*Jalalkuduk, Izboskan, Marhamat,*

*Oltinkol, Pakhtaabad, Ulygnor, Khodjaobod, Shakhrithon,*

*Kurgontepa.*

**Geographical location:** Andijon region is located in the easternmost part of the country. In the north and northwest it borders with Namangan region, in the east with Kyrgyzstan, in the south and in the southwest with the Fergana Region.

**The population density** in Andijan region is the highest in

Uzbekistan: more than 560 people per square km. The major cities



# Geographic zones

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

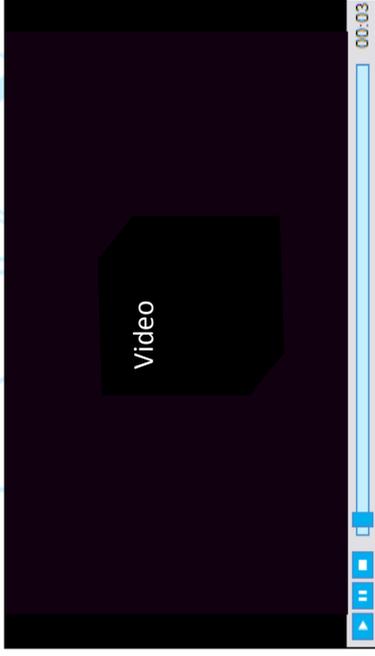
State symbols

## Geographic zones of Uzbekistan

### Uzbekistan Mountains

The mountains of Uzbekistan enter in structure of Tyan-Shan and Alay mountain systems. On territory turn the western spurs of Tyan-Shan and Gissar-Alay mountain system. To south and west they gradually lower and turn to plains. Internal (tectonic) power of Earth formed folds grown the powerful ranges of mountains.

The mountains and foothills with brook relief, located in east and south-east part of Uzbekistan, where they unite with powerful mountain deep brook massive on territory of Kirgizya and Tadjikistan. Mainly this Ugam, Pskem, Chatkal, Kuramin ranges and their western and south-western spurs, concerning to Western Tyan-Shan system and Turkestan, Zerafshan and Gissar ranges with their continuous on south-western - Babatag and Kugintangtau ranges, concerning to Gissar-Alay system.



# Nature

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols

## Nature

Uzbekistan possesses some of the most favourable natural and geographic conditions in the Central Asian region. The territory of Uzbekistan is a mixture of a plain and mountainous lands. The greatest part of the territory is covered by plains. One of the main plains is the Turan plain. In the east and north-east are situated the spurs of Tyan-Shan and Pamir with the highest point of the country at 4643 meters above the sea level. To the north and central part of the territory of Uzbekistan, one of the largest deserts in the world Kyzylkum is situated.

Mountains and foothills comprise 1/5 of the territory of the Republic. To the east, prevalent are medium- and high-altitude forms of landscapes. Within the boundaries of the republic, there are flanks of hills and verges of mountains ridges of western Tyan-Shan and Pamir-Alay. To the south and west, they gradually decline and transform into plains. Rather massive trough lay between the



# The wildlife

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

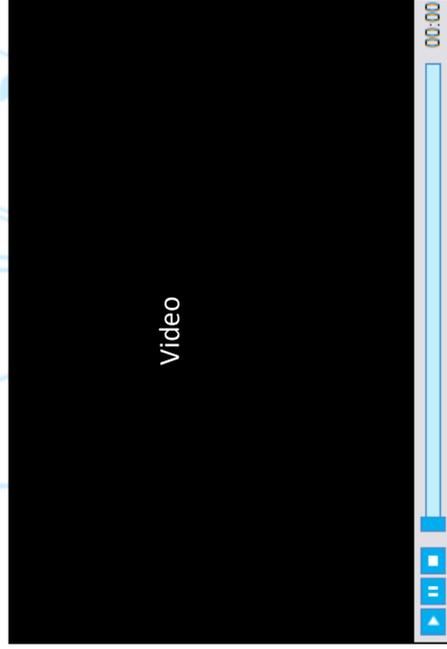
Industries

State symbols

## Wildlife

Uzbekistan's mixed topography provides divergent wildlife habitats. In the steppes the endangered saiga antelope can be found, as well as roe deer, wolves, foxes, and badgers. The desert monitor, a large lizard that can reach lengths of 1.6 m (5 ft), thrives in the Qyzylqum desert, along with a type of gazelle and a number of rodent species. The river deltas are home to wild boars, jackals, and deer, with a variety of pink deer living in the Amu Darya delta. The Turan (or Caspian) tiger is now extinct: The last one was killed in the Amu Darya delta in 1972. The endangered snow leopard, which has long been hunted illegally for its prized fur, lives in the eastern mountains. The mountains also are home to several types of

mountain goat, including the Alai ibex (*Capra sibirica*).



# Minerals

Geographic Zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols

## Minerals

Numerous deposits of oil and gas have been discovered on the plains such as Gazli, Shakhpakhti, and others, of naturally formed salt in Borsakelmas, and materials used in construction elsewhere.

Deposits of coal (Angren, Shargun, and Boysun), precious, non-ferrous and rare metals, fluorite, and construction materials go back to the early stage of orogenesis.

A distinctive feature of Uzbekistan's natural conditions is that the country is located in a seismologic zone. In the last two centuries the country has experienced numerous of disastrous earthquakes, including in Ferghana (1823), in Andijan (1889 and 1902), and Tashkent (1866, 1868, and 1966). Seismologic movement is more active in mountain areas than in plains. Special construction models are used in buildings in active seismological zones.



# Water resources

- Geographic zones
- Nature
- The wildlife
- Minerals
- Water resources
- Climate
- Ecology
- Industries
- State symbols

## Water resources

The Sea is a saline endorheic basin in Central Asia; it lies between Kazakhstan (Aktobe and Kyzylorda provinces) in the north and Karakalpakstan, an autonomous region of Uzbekistan, in the south. The name roughly translates as "Sea of Islands", referring to more than 1,534 islands that once dotted its waters. Formerly one of the four largest lakes in the world with an area of 68,000 square kilometres (26,300 sq mi), the Aral Sea has been steadily shrinking since the 1960s after the rivers that fed it were

diverted by Soviet Union irrigation projects. By 2007 it had declined to 10% of its original size, splitting into four lakes - the North Aral Sea and the eastern and western basins of the once far larger South Aral Sea and one smaller lake between North and South Aral Sea. By 2009, the south-eastern lake had disappeared and the south-western lake retreated to a thin strip at the extreme west of the former southern sea. The maximum depth of the North



# Climate

- Geographic zones
- Nature
- The wildlife
- Minerals
- Water resources
- Climate
- Ecology
- Industries
- State symbols

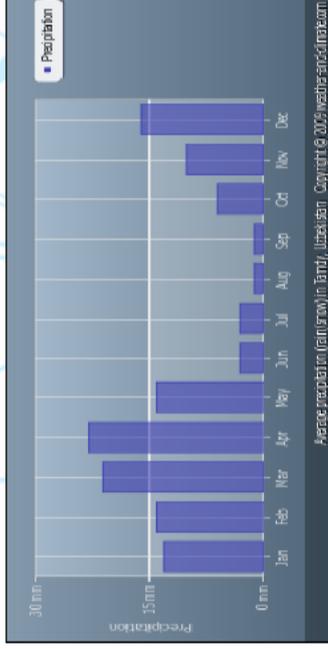
## Climate

Uzbekistan's climate is classified as continental, with hot summers and cool winters. Summer temperatures often surpass 40°C; winter temperatures average about -23°C, but may fall as low as -40°C.

Most of the country also is quite arid, with average annual rainfall amounting to between 100 and 200 millimeters and occurring mostly in winter and spring. Between July and September, little precipitation falls, essentially stopping the growth of vegetation during that period.

Uzbekistan is a sun republic with continental climate. It is expressed in sharp amplitudes of day and night, summer and winter temperatures. The nature of arid, rainfall is not enough, low relative humidity. Length of the day in summer is about 15 hours in the winter - at least nine.

The coldest month is January. The temperature drops in the north to



# Ecology

Geographic Zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols

## Ecology

In the last 40-45 years the Aral Sea level has fallen by 22 meters, its water surface shrunk over 74 percent, its volume reduced from 1064 km<sup>3</sup> to 115 km<sup>3</sup>, while water salinity has reached 72g/l. As a consequence, the Aral Sea has virtually turned into a 'dead' sea. The area of exposed dry seabed has reached 4.2 million hectares and rendered a source of sand and salt aerosols swept up by blowing winds to adjacent territories. Dust trains can be 400 km long and 40 km wide, while the range of dust storms can reach 300 km. Each year 15 million to 75 million tons of dust are swept away from this area into the atmosphere. These storms have been observed here 90 days a year since 1980s. Concurrently, land degradation and desertification is in progress in the Amudarya and Syrdarya river deltas.

A complicated mix of socioeconomic problems emerged from the drying-up of the Aral Sea that are of international significance. As



# Industries

Geographic zones

Nature

The wildlife

Minerals

Water resources

Climate

Ecology

Industries

State symbols

## Industries

Growth of Uzbekistan's industrial production averaged 3.2% in the 1980s, although on a per capita basis, the republic's industrial output remained less than half that of the USSR average by the end of the decade. Most industry is based on the processing of local agricultural products. Soft goods (mainly cotton, wool, and silk fiber) and processed foods (including cottonseed oil, meat, dried fruit, wines, and tobacco) accounted for about 39% and 13% of industrial production respectively in 1990; their manufacture was concentrated in Tashkent and the Fergana Valley.

**Uzbeklegprom**, the state association for the production of light industry goods, produces about 90% of Uzbekistan's textiles. Production figures fell from 700 million sq m in 1993 to 650 million sq m in 1995, when total textile production was valued at \$510 million. In the late 1990s, Uzbeklegprom sought to boost capacity with the assistance of several joint venture partners.



Geography of Uzbekistan

# State symbols

Geographic zones | Nature | The wildlife | Minerals | Water resources | Climate | Ecology | Industries | State symbols

## State Symbols

### The National Flag

The national flag was approved by the Extraordinary 8th Session of the Supreme Council of the Republic of Uzbekistan on November 18, 1991. The flag of the Republic of Uzbekistan consists of blue, white and green stripes, separated by two narrow red stripes. A crescent and three rows of twelve stars are situated on the left side of the upper blue stripe. The blue color symbolizes the sky and water as the principle sources of life. The National flag of Amir Timur was also blue in color. The white stripe is the traditional symbol of peace and of moral and spiritual purity. The green stripe symbolizes nature, the new epoch and abundance in the countries where the majority of the population is Islamic. Besides that, this is in harmony with the modern movement of Greenpeace, which protects nature. The red separating stripes symbolize the current of vital energy in any living body and also connect our mira and noble





The anthem (instrumental) | The anthem (vocal)

Video

00:00

Navigation icons: back, home, play/pause, forward

I. Choose the correct answer to the following questions:

1. ***How many regions are there in Uzbekistan?***
  - a) 12 regions
  - b) 13 regions
  - c) 12 regions and Republic of Karakalpakistan
  
2. ***What are the main rivers of Uzbekistan?***
  - a) Syr Darya and Amu Darya
  - b) Amu Darya and Irtish
  - c) Volga and Syr Darya
  
3. ***Uzbekistan shares borders with the following countries:***
  - a) Kazakhstan, Afghanistan, Russia, Tajikistan, Turkmenistan
  - b) Kazakhstan, Afghanistan, Tajikistan, Kyrgystan, Turkmenistan
  - c) Kazakhstan, Afghanistan, Tajikistan, Turkmenistan, China
  
4. ***What is the area of Uzbekistan?***
  - a) 447,400 square kilometers
  - b) 747,300 square kilometers
  - c) 247, 200 square kilometers
  
5. ***Ugam, Pskem, Chatkal, Kuramin are.....***
  - a) mountains
  - b) deserts
  - c) forests
  
6. ***What the highest point of Uzbekistan?***
  - a) Zarkasa
  - b) Khazret Sultan
  - c) Chimgan
  
7. ***Which desert of Uzbekistan is called "black" and "dangerous"?***
  - a) Karakum
  - b) Kyzylkum
  - c) Aralkum
  
8. ***When Kara Kum Canal was open?***
  - a) In 1937
  - b) In 1956
  - c) In 1975
  
9. ***Which river of Uzbekistan had Persian name "sprayer of gold"?***
  - a) Syr Darya
  - b) Amu Darya

c) Zarafshan

10. *Uzbekistan's climate is classified as .....*

a) Subtropical

b) Continental

c) Tropical

## II. Complete the gaps with appropriate words.

1) (*Ocean, sea, river, increased, live, hectares, meters, storms, sugar, salt, dust shrunk, dead, days*)

In the last 40-45 years the Aral 1.\_\_\_\_\_ level has fallen by 22 2.\_\_\_\_\_, its water surface 3.\_\_\_\_\_ over 74 percent, its volume reduced from 1064 km<sup>3</sup> to 115 km<sup>3</sup>, while water salinity has reached 72g/l. As a consequence, the Aral Sea has virtually turned into a 4.‘\_\_\_\_’ sea. The area of exposed dry seabed has reached 4.2 million 5.\_\_\_\_\_ and rendered a source of sand and 6.\_\_\_\_\_ aerosols swept up by blowing winds to adjacent territories. Dust trains can be 400 km long and 40 km wide, while the range of dust 7.\_\_\_\_\_ can reach 300 km. Each year 15 million to 75 million tons of 8.\_\_\_\_\_ are swept away from this area into the atmosphere. These storms have been observed here 90 9.\_\_\_\_ a year since 1980s. Concurrently, land degradation and desertification is in progress in the Amudarya and Syrdarya 10.\_\_\_\_\_ deltas.

2) (*species, fish, carnivorous, years, home, plants, scientists, history, animals, habitats, centuries, herbivorous, students*)

Uzbekistan is 1.\_\_\_\_\_ to several beautiful as well as rare, 2.\_\_\_\_\_ of mammals, reptiles, birds and insects. With amazing raw terrain that includes mountains, desserts and forests, Uzbekistan is rich in biodiversity, its natural reserves, oasis, woods and meadows make for

great and comfortable 3.\_\_\_\_\_for the animals that live there. Along with this, the country's sunny weather all year round makes it a nature lover's favorite spot. With over 27000 species of 4.\_\_\_\_\_and animals, Uzbekistan has for many decades attracted 5.\_\_\_\_\_ and ecological experts. Uzbekistan's 6.\_\_\_\_\_ shows that early settlers chose this area as home because they found plenty of hunting opportunities here. Cave paintings reveal that Uzbekistan has for many 7.\_\_\_\_\_ been a home to many 8.\_\_\_\_\_, which include 9.\_\_\_\_\_and 10.\_\_\_\_\_animals.

**III. Match the word with its proper definition.**

- |                  |   |
|------------------|---|
| 1. Independence  | a) a fertile spot in a desert where water is found.   |
| 2. Desiccation   | b) a country's collective means of supporting itself or becoming wealthier, as represented by its reserves of minerals, land, and other assets. |
| 3. Oasis         | c) the fact or state of being self-governed   |
| 4. Joint venture | d) process of drying  |
| 5. Observe       |   |
| 6. Atmosphere    |   |
| 7. Environment   | e) commercial enterprise undertaken jointly by two or more parties that otherwise retain their distinct identities                              |
| 8. Resources     |   |
| 9. Scale         | f) the prevailing state of the weather, ground, sea, or atmosphere at a particular time   |
| 10. Conditions   | g) watch (smn or smth) carefully and attentively  |
|                  | h) each of the small, thin horny or bony \ plates protecting the skin of fish and reptiles, typically overlapping one another.                  |

- i) the surroundings or conditions in which a person, animal, or plant lives or operates
- j) the envelope of gases surrounding the earth or another planet

Keys I:1-c;2-a;3-b;4-a;5-a;6-b;7-a;8-b;9-c;10-b.

Keys II (1): 1.sea;2.meters;3.shrunk;4.dead;5.hectars;6.salt;7.storms;  
8.dust; 9.days;10.river.

Keys II (2): 1.home, 2. species, 3. habitats, 4. plants, 5. scientists, 6.  
history, 7. centuries, 8. animals, 9. carnivorous, 10. herbivorous.

Keys III: 1-c; 2-d; 3-a; 4-e;5-g;6-j;7-i;8-b;9-h;10-f.

# Reference

## Reference list:

1. Cornell, Svante E. (2000). "Uzbekistan: A Regional Player in Eurasian Geopolitics?" *European Security* 9 (2): 115. [oi:10.1080/09662830008407454](https://doi.org/10.1080/09662830008407454)
2. Richard Foltz, "The Tajiks of Uzbekistan", *Central Asian Survey*, 15(2), 213-216 (1996)
3. Karl Cordell, "Ethnicity and Democratisation in the New Europe", Routledge, 1998. p. 201
4. Lena Jonson, "Tajikistan in the New Central Asia", Published by I.B. Tauris, 1976. p. 108
5. "CIA - The World Factbook". [Cia.gov](https://www.cia.gov)
6. Official population estimation 2012-01-01. [Stat.uz](https://stat.uz) (2012-01-23)



1. I.A. Karimov. Address by The President of The Republic of Uzbekistan Islam Karimov at the Opening Ceremony of International Conference in Uzbekistan. dd. 17.02.2012. Tashkent.
2. Honeyman, M; Miller, G (December 1993). "Agriculture distance education: A valid alternative for higher education?". *Proceedings of the 20th Annual National Agricultural Education Research Meeting*: 67–73.
3. Tabor, Sharon W (Spring 2007). "Narrowing the Distance: Implementing a Hybrid Learning Model". *Quarterly Review of Distance Education (IAP)* **8** (1): 48–49. ISSN 1528-3518. Retrieved 23 January 2011.
4. Vaughan, Dr Norman D. (2010). "Blended Learning". In Cleveland-Innes, MF; Garrison, DR. *An Introduction to Distance Education: Understanding Teaching and Learning in a New Era*. Taylor & Francis. p. 165. ISBN 0-415-99598-1. Retrieved 23 January 2011.
5. Holmberg, Börje (2005) (in German). *The evolution, principles and practices of distance education*. p. 13. ISBN 3-8142-0933-8. Retrieved 23 January 2011.
6. Moore, Michael G.; Greg Kearsley (2005). *Distance Education: A Systems View* (2nd ed.). Belmont, CA: Wadsworth. ISBN 0-534-50688-7.
7. Moore, Michael G; Greg Kearsley (2005). *Distance Education: A Systems View* (2nd ed.). Belmont, CA: Wadsworth. pp. 33–36.
8. "Three Decades". UK: FernUniversität in Hage. Retrieved 23 January 2011.
9. Daniel, Sir John S (1998). *Mega-Universities and Knowledge Media: Technology Strategies for Higher Education*. Routledge. ISBN 0-7494-2634-9. Retrieved 23 January 2011.
10. Gold, Larry; Maitland, Christine (1999). Phipps, Ronald A.; Merisotis, Jamie P.. eds. *What's the difference? A review of contemporary research on the effectiveness of distance learning in higher education*. Washington, DC: Institute for Higher Education Policy. Retrieved 23 January 2011.
11. Allen, I Elaine; Seaman, Jeff (November 2006) (PDF). *Making the Grade: Online Education in the United States, 2006*. Needham, MA: The Sloan Consortium. pp. 1–2. ISBN 0-9876543-2-1. Retrieved 23 January 2011.
12. Walton Radford, MPR Associates, Alexandria. "Learning at a Distance: Undergraduate Enrollment in Distance Education Courses and Degree Programs" (PDF). National Center for Education Statistics. Retrieved 30 November 2011.
13. "Degree awarding powers and university title". UK: Quality Assurance Agency. Retrieved 23 January 2011.
14. Lever-Duffy, Judy; McDonald, Jean B (March 2007). *Teaching and Learning with Technology*. Ana A. Ciereszko, Al P. Mizell (3rd ed.). Allyn & Bacon. p. 377. ISBN 0-205-51191-0. Retrieved 23 January 2011.
15. Dickey, Michele, D (2005). "Three-dimensional virtual worlds and distance learning" (PDF). *British Journal of Educational Technology* **36** (3): 439–51. Retrieved 20 April 2011.
16. Oblinger, Diana G. (2000). "The Nature and Purpose of Distance Education". *The Technology Source* (Michigan: Michigan Virtual University) (March/April). Retrieved 23 January 2011.
17. Casey, Anne Marie; Lorenzen, Michael (2010). "Untapped Potential: Seeking Library Donors Among Alumni of Distance Learning Programs". *Journal of Library Administration* (Routledge) **50** (5): 515–529. doi:10.1080/01930826.2010.48859. Retrieved 23 January 2011.
18. Östlund, Berit. "Stress, disruption and community — Adult learners' experiences of obstacles and opportunities in distance education". Department of Child and

- Youth Education, Special Education and Counselling, Umeå University. Retrieved 3 December 2011.
19. Galusha, Jill M. "Barriers to Learning in Distance Education". Retrieved 2012-04-10.
  20. Stephens, D. (July 2007). "Quality issues in distance learning"
  21. Richey, R.C. (2008). Reflections on the 2008 AECT Definitions of the Field. *TechTrends*. 52(1) 24-25
  22. D. Randy Garrison and Terry Anderson (2003). *E-Learning in the 21st Century: A Framework for Research and Practice*. Routledge. ISBN 0-415-26346-8.
  23. Lowenthal, P. R., & Wilson, B. G. (2010). Labels do matter! A critique of AECT's redefinition of the field. *TechTrends*, 54(1), 38-46. DOI: 10.1007/s11528-009-0362-y
  24. *Handbook of Human Performance Technology* (Eds. Harold Stolovich, Erica Keeps, James Pershing) (3rd ed, 2006)
  25. Bloom B. S. (2006). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*. New York: David McKay Co Inc.
  26. Skinner, B.F. The science of learning and the art of teaching. *Harvard Educational Review*, 1954, 24, 86-97., Teaching machines. *Science*, 1958, 128, 969-77.
  27. Skinner BF (1965). "The technology of teaching". *Proc R Soc Lond B Biol Sci* (1989): 427–43. doi:10.1098/rspb.1965.0048. PMID 4378497.
  28. Whyte, Cassandra Bolyard. (1980). "An Integrated Counseling and Learning Assistance Center." *New Directions Sourcebook*. Jossey-Bass, Inc. San Francisco, California.
  29. Whyte, Cassandra B. (1989). Student Affairs – "The Future", *Journal of College Student Development*, 10, (1), 86-89.
  30. Technology Uses in Education .Smith, Grace and Stephanie Throne. *Differentiating Instruction with Technology in the K-5 Classrooms*. International Society for Technology in Education. 2004
  31. Using Technology to Enhance the Classroom Environment. *THE Journal*, 01 January 2002
  32. Tremblay, Eric. "Educating the Mobile Generation – using personal cell phones as audience response systems in post-secondary science teaching. *Journal of Computers in Mathematics and Science Teaching*, 2010, 29(2), 217-227. Chesapeake, VA: ACEE.". Retrieved 2010-11-05.
  33. Biocchi, Michael. "Games in the Classroom". *Gaming in the Classroom*. Retrieved 24 March 2011.
  34. Reeves, Thomas C. (February 12, 1998). *The Impact of Media and Technology in Schools*.