

INFORMATION TECHNOLOGY: THE DRIVING FORCE OF MODERN SOCIETY

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Annotation: Today, information technologies (IT) have become an inseparable part of our lives. They are not only transforming our daily routines but also bringing significant changes to various fields such as education, healthcare, economy, transportation, and government. This article analyzes the development of information technologies, their impact on society, and their future prospects.

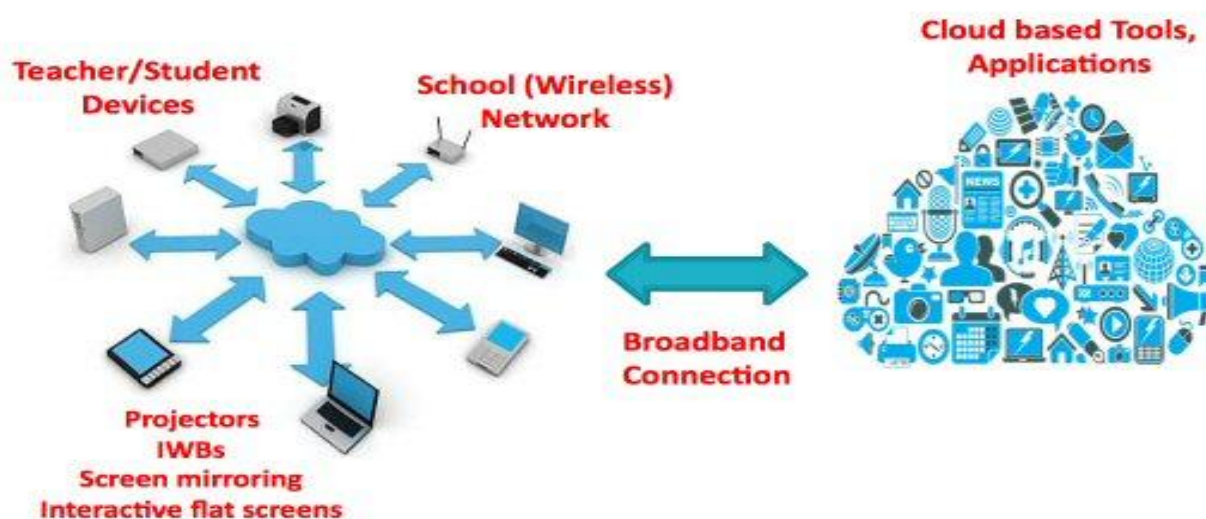
Key words: Information Technologies (IT) Programming Languages Digital Literacy Primary Education, Teaching Methodology, Graphic Design, 3D Modeling, Labor Market, Web Design.

Stages of development of information technology

If we look at the history of information technology, we can trace the process from the emergence of the first computers to today's artificial intelligence, cloud computing and working with large amounts of data (Big Data). In the middle of the 20th century, with the creation of electronic computers, the IT sector began to develop. Later, new directions such as personal computers, the Internet, mobile technologies and, at the current stage, IoT (Internet of Things) were formed.

Information technology and Primary education

Modern information technologies are widely used not only in higher and secondary specialized education, but also in primary education. With the help of digital tools, students' interest in learning is increasing, and the learning process is becoming interactive and effective. Children are learning to work with computers, tablets and other devices from an early age. This forms digital literacy in them from the earliest stages.

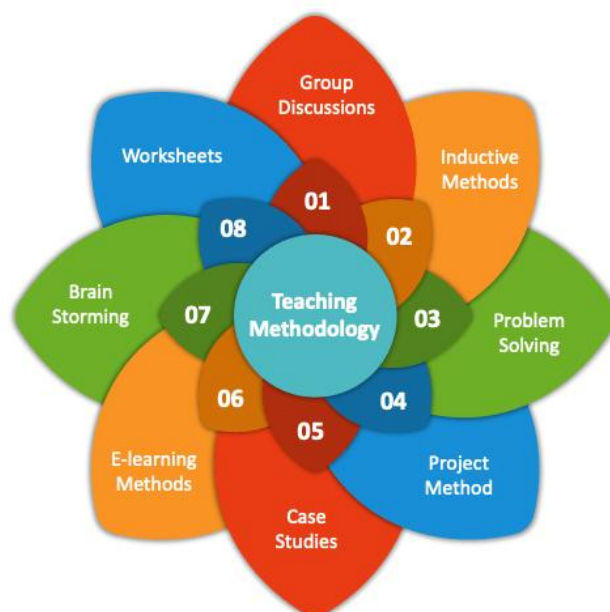


Teaching methodology

With the introduction of information technologies into primary education, teaching methodology is also taking on a new look. Along with traditional teaching methods, interactive, visual and technological approaches are widely used. The teaching methodology is based on the following basic principles:

1. Visual and interactive teaching: Easy and understandable presentation of the topic through digital whiteboards, presentations and animations.
2. Individual approach: Selection of tasks and teaching resources according to the knowledge level of each student.
3. Student activation: Encouraging students to actively participate in the lesson through digital games, quizzes and questions and answers.
4. Distance learning elements: Opportunities to complete homework, watch video lessons and take tests through online platforms.
5. Formation of information culture: From the primary stage, develop in children the skills to work with information, recognize reliable sources on the Internet, and follow information security rules.

TEACHING METHODOLOGY

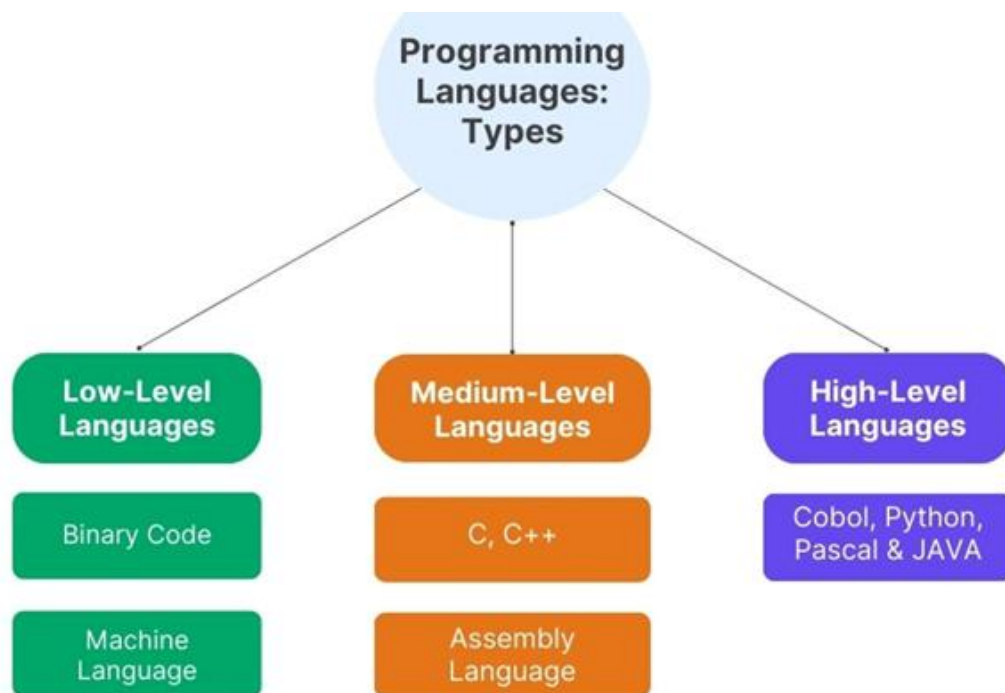


Programming languages

The foundation of information technology is programming languages. Programming languages are tools used to communicate with computers, control them, and create various programs. Each programming language has its own syntax and functions and serves specific purposes. The following popular programming languages are widely used:

1. Python: Has a simple syntax and is widely used in the fields of artificial intelligence, web development, automation, and scientific computing.

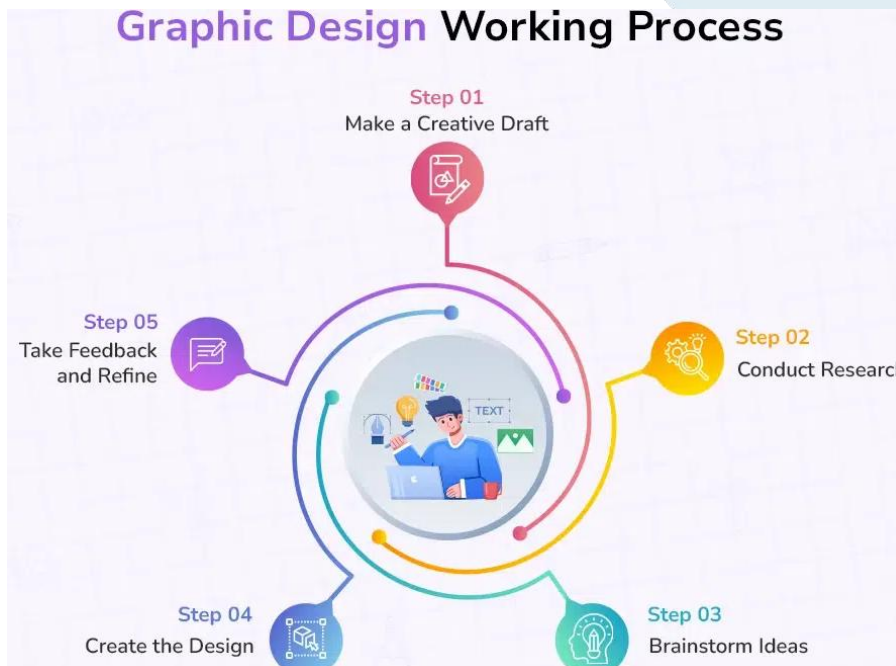
2. Java: Designed for cross-platform applications. Used to create mobile applications (especially Android) and large corporate systems.
3. JavaScript: The main language for adding interactivity to web pages. Used in front-end and back-end (Node.js) programming.
4. C/C++: Used to create operating systems, games, and system applications. Known for its fast performance and powerful control capabilities.
5. Scratch and Blockly: Visual programming languages designed for elementary school students, through which children can easily master the basics of programming.



Graphics and Design technologies

Another important area in the field of information technology is graphics and design technologies. Graphics and design include activities related to the creation, modeling and editing of visual content using computers. The creation of digital images, animations, interactive interfaces and 3D models is used today in many industries, including the gaming industry, film, advertising, and scientific research. The following technologies are widely used in the field of graphics and design:

1. Adobe Photoshop and Illustrator: Basic programs for creating digital images and vector graphics. They are widely used in advertising, web design and digital art.
2. Autodesk AutoCAD and Blender: Programs for creating 3D modeling and animation. Used in the fields of architecture, engineering and game production.
3. Unity and Unreal Engine: The most popular engines for creating games and interactive 3D applications. Using these platforms, programmers and designers create games and virtual environments.
4. Web design and UX/UI design: Designing user interfaces for web pages and mobile applications. Modern tools and platforms such as Figma, Sketch, and Adobe XD are widely used to create interactive and intuitive designs.



Conclusion

Information technologies have become an integral and driving force of today's modern society. The rational and safe use of their capabilities is an important factor for the further development of our society. Timely mastery of innovations in the field of IT, increasing digital literacy and paying attention to security will lead to successful and sustainable development in the future. Therefore, it is the task of each of us to use the capabilities of information technologies to adapt to the digital world and turn it into a tool for social, economic and cultural development.

Bibliography:

1. Khan, S. (2013). *The One World Schoolhouse: Education Reimagined*. Twelve.
2. Brynjolfsson, E., & McAfee, A. (2014). *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. W. W. Norton & Company.
3. Laudon, K. C., & Laudon, J. P. (2020). *Management Information Systems: Managing the Digital Firm*. Pearson.
4. Harris, R. (2019). *Digital Literacy for Technical Communication: 21st Century Theory and Practice*. Routledge.
5. West, D. M. (2018). *The Future of Work: Robots, AI, and Automation*. Brookings Institution Press.
6. Gartner (2023). *Top Strategic Technology Trends for 2023*. Gartner.
7. Castells, M. (2010). *The Rise of the Network Society*. Wiley-Blackwell.
8. Tuffley, D. (2014). *Information Technology for Management: Digital Strategies for Insight, Action, and Sustainable Performance*. Wiley.