Instruction

🔹 Extended Definitions of the Characteristics of Educational Technology

Below you will find expanded, deeper explanations of *each* characteristic.

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1. Educational Technology is Systematic

Definition:
Educational technology follows a planned, logical, and organized approach to teaching and learning. It uses step-by-step procedures such as needs assessment, content selection, media choice, implementation, and evaluation.

Meaning:
Nothing is done randomly — everything is designed for a purpose.

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2. Educational Technology is Scientific

Definition:
ET is rooted in scientific principles and theories from psychology, communication, and instructional design. It uses research-based methods to understand how people learn and how teaching can be improved.

Meaning:
It uses evidence, experiments, and research — not guesswork.

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3. ET Uses Technology (Media, Tools, Systems)

Definition:
Educational technology includes the use of all forms of media and tools — from chalkboards to advanced digital platforms — to support teaching and learning.

Meaning:
Any tool that makes learning easier is part of ET.

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4. Educational Technology is Learner-Centered

Definition:
ET puts the learner's needs, interests, pace, and abilities at the center of instruction. Lessons are designed to help students learn in the way that suits them best.

Meaning:
Students' learning style is more important than the teacher's teaching style.

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5. Educational Technology is Based on Communication

Definition:
ET sees teaching as a communication process that involves a sender (teacher), a message (content), a channel (media), a receiver (student), and feedback (response). ET works to improve each part of this process.

Meaning:
Clear communication = better learning.

6. ET Improves Teaching and Learning

Definition:
ET enhances the quality, attractiveness, and effectiveness of instruction by making lessons clearer, more engaging, and easier to understand. It increases student motivation and performance.

Meaning:
Technology makes learning better and more enjoyable.

7. Educational Technology Supports Individualized Learning

Definition:
ET allows each learner to study at their own speed, level, and style through tools like videos, e-learning modules, and computer-assisted instruction.

Meaning:
Students can learn slow or fast — whatever fits them best.

8. ET Uses Hardware and Software

Definition:
Educational technology includes physical devices (hardware) such as projectors, computers, and radios, and digital programs (software) such as apps, e-books, and learning platforms.

Meaning:
Both machines and programs work together.

9. ET Is Dynamic and Ever-Changing

Definition:
Educational technology constantly evolves with new innovations such as AI, VR, mobile learning, cloud platforms, and digital classrooms.

Meaning:
It never stays the same; it always updates.

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10. ET Uses a Problem-Solving Approach

Definition:
ET helps solve educational challenges like complex subjects, limited resources, low motivation, and large class sizes by providing alternative, technology-assisted solutions.

Meaning:
It fixes problems that make learning difficult.

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11. ET Focuses on Efficiency and Effectiveness

Definition:
ET aims to make learning faster (efficient) and more successful (effective) by simplifying difficult concepts, increasing engagement, and improving comprehension.

Meaning:
It saves time and improves results.

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12. ET Is Based on Learning Theories

Definition:
ET applies principles from behaviorism, cognitivism, constructivism, and other theories to create teaching strategies that match how humans learn.

Meaning:
It follows proven psychological principles.

13. ET Includes Planning, Design, Management, and Evaluation

Definition:
ET is not just using media; it also includes designing instructional content, managing learning activities, and evaluating learner performance to improve future instruction.

Meaning:
It covers the full teaching process from start to finish.

14. ET Encourages Interaction and Participation

Definition:
ET promotes active involvement through discussions, simulations, interactive videos, online quizzes, games, and practice exercises that require learner participation.

Meaning:
Students learn better by doing — not just listening.

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15. ET Connects Learning with Real Life

Definition:
Using real-life videos, scenarios, virtual field trips, and simulations, ET helps students relate classroom lessons to real-world situations.

Meaning:
Students understand how lessons apply outside school.