

**THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATION COUNCIL OF TANZANIA
DIPLOMA IN SECONDARY EDUCATION EXAMINATION**

750

EDUCATIONAL MEDIA AND TECHNOLOGY

Time: 3 Hour.

ANSWERS

Year: 2002

Instructions

1. This paper consists of sections **A** and **B**.
2. Answer all questions in sections **A** and **four (4)** questions from section **B**.
3. Read each question carefully before you start answering it.
4. Cellular phones and other unauthorized materials are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).

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1. Identify four major considerations that teachers should make when selecting media for learners with diverse learning needs.

The first consideration is accessibility. Teachers must ensure that the selected media can be used by all students, including those with visual, auditory, or physical impairments. For instance, using subtitles in videos benefits hearing-impaired learners.

The second consideration is language simplicity. Media should use clear and age-appropriate language that caters to learners with different literacy levels, including those who may struggle with reading.

The third consideration is flexibility. The media should allow for adaptation or modification to suit the needs of slow learners, advanced students, or those with special education needs.

The fourth consideration is cultural relevance. Media should reflect the learners' backgrounds and context to foster inclusion and understanding, particularly for students from minority groups or rural areas.

2. Mention four instructional challenges a teacher may face when teaching a large class without educational media.

One challenge is limited attention span. Without media to capture interest, it becomes harder for the teacher to maintain student focus in a crowded classroom.

Another challenge is difficulty in addressing different learning styles. Without varied media, lessons may rely heavily on verbal instruction, which may not suit visual or kinesthetic learners.

A third challenge is poor visibility. In a large class, students at the back may struggle to see what is written on the board or hear the teacher clearly, reducing learning effectiveness.

Lastly, controlling discipline becomes harder. Without engaging media, students may become restless or distracted, increasing the teacher's burden in maintaining classroom order.

3. Explain four ways in which the blackboard can be transformed into an effective interactive teaching tool.

One way is through sequential writing. By revealing content step-by-step, the teacher builds anticipation and keeps learners focused on each stage of the lesson.

Another method is involving students directly. Teachers can invite learners to write answers or draw diagrams on the board, which increases participation and confidence.

Teachers can also use color chalk strategically. Differentiating headings, key terms, and examples using color enhances visibility and retention.

Lastly, integrating diagrams and charts on the board alongside text can help illustrate complex ideas, especially in science and geography, turning the board into a visual learning tool.

4. Provide four reasons why constant evaluation of teaching media is necessary in the learning process.

Evaluation ensures that the media remains relevant. Content must reflect current curriculum goals and teaching objectives to be useful.

It helps identify and correct errors. Regular checks reveal inaccuracies or outdated information, preventing misinformation.

Evaluation also improves effectiveness. Feedback from students and observations during lessons can guide media improvement for better impact.

Finally, it supports resource management. Ineffective or unused media can be replaced or repurposed, avoiding waste of time and materials.

5. Differentiate between ephemeral and permanent media materials, giving two examples for each.

Ephemeral media are short-lived and cannot be reused once presented. Examples include live radio broadcasts and chalkboard writings, which disappear after use.

Permanent media are durable and can be reused multiple times. Examples include printed textbooks and recorded videos, which remain accessible for reference and future lessons.

6. Identify four characteristics of an effective educational poster.

An effective poster has a clear and focused message. It should communicate a single idea or concept to avoid overwhelming the viewer.

It uses appropriate visuals. Diagrams, images, or symbols that relate to the topic help to attract attention and support understanding.

Good posters are legible from a distance. Font size, style, and color must be carefully chosen to ensure readability across the classroom.

They are also well-organized. Information should be arranged logically with clear headings and spacing to guide the viewer's eye from one section to the next.

7. Describe the role of each of the following in the production of instructional media: (i) layout, (ii) spacing, (iii) labeling, (iv) contrast.

Layout determines how content is arranged. A balanced layout directs attention to important areas and prevents clutter, making media easier to follow.

Spacing ensures clarity and separation of elements. Adequate spacing between text and visuals reduces confusion and helps learners process information more efficiently.

Labeling provides identification. Clear labels on diagrams, charts, or maps help learners understand what each part represents and how it relates to the topic.

Contrast enhances visibility. High contrast between text and background improves readability and helps highlight key points in the media.

8. Explain four ways in which poor design of media can negatively affect students' attention and understanding.

Poor design may cause distraction. Overuse of colors, animations, or irrelevant graphics can divert attention away from the lesson objective.

It can also lead to confusion. If the layout is disorganized or elements are poorly labeled, learners may struggle to make sense of the content.

Another issue is eye strain. Small fonts, low contrast, or overcrowded visuals can cause fatigue, especially during longer lessons.

Lastly, poor design may result in misinformation. If visuals inaccurately represent concepts, such as incorrect labeling on a diagram, learners may develop misunderstandings.

9. Mention four advantages of using a learning resource centre (LRC) in a secondary school.

An LRC provides access to a variety of teaching materials, including books, charts, videos, and models, which enhance lesson quality and variety.

It supports independent learning. Students can explore topics beyond the classroom at their own pace, encouraging curiosity and self-study.

LRCs promote collaboration. Group activities and research projects conducted in the resource centre foster teamwork and knowledge sharing.

They also serve as training hubs. Teachers can use the centre for preparing media, accessing reference materials, or learning new instructional methods.

10. Briefly describe how the following media can support participatory learning: (i) audio recording, (ii) real objects, (iii) bulletin board, (iv) computer simulation.

Audio recordings can be used in language classes where students listen and respond to questions, improving listening and speaking skills through practice.

Real objects, such as seeds in agriculture or tools in vocational subjects, allow hands-on learning, which actively engages students in exploring and manipulating content.

A bulletin board displays students' work, announcements, or visual aids. It encourages participation by making students feel involved and recognized in the learning process.

Computer simulations allow learners to interact with virtual environments, such as ecosystems or machines, where they can experiment, predict outcomes, and learn through trial and error.

11. Discuss five essential roles of educational media and technology in supporting inquiry-based learning in secondary education.

Educational media enhances student curiosity by presenting problems, visuals, or scenarios that stimulate questions. For example, a documentary on environmental pollution may prompt students to investigate causes and solutions.

It facilitates access to information. Through technology such as digital libraries or internet resources, students can explore multiple sources, supporting research-based learning.

Media supports experimentation. Simulations and virtual labs allow learners to test hypotheses and observe outcomes, even when real-life resources are unavailable or unsafe.

It encourages collaborative inquiry. Platforms like discussion forums and shared documents enable students to work together, share findings, and refine their investigations.

Lastly, media supports reflection and presentation. Students can record observations, analyze results, and present findings using slideshows, videos, or posters, making their learning visible and sharable.

12. Explain five principles a teacher should follow when improvising teaching aids from local or recycled materials.

The principle of safety is essential. All improvised materials must be free from sharp edges, toxins, or hazards that could harm learners during use.

Functionality must be considered. The aid must serve its intended instructional purpose effectively, representing the concept clearly and accurately.

Simplicity is important. The design should be easy to construct and understand, ensuring that both teacher and students can interact with it confidently.

Cultural relevance must be observed. Materials should reflect local realities or familiar objects so that learners relate easily to what is being taught.

Durability is another key principle. Since improvised materials may be reused, they should be constructed in a way that withstands handling and time.

13. Evaluate five impacts of integrating mobile learning tools (such as smartphones and tablets) in classroom teaching.

Mobile tools improve access to learning resources. Students can download notes, videos, and quizzes, even outside school, which supports continuous learning.

They support personalized learning. Apps can adapt to student performance, offering practice tailored to each learner's level and pace.

Communication is enhanced. Teachers and students can share feedback, reminders, and updates instantly through mobile platforms like WhatsApp or Google Classroom.

However, there is a risk of distraction. Students may use devices for social media or games during class unless properly supervised and guided.

Equity remains a challenge. Not all students can afford smartphones or data bundles, potentially widening the gap between learners unless alternative provisions are made.

14. Describe five professional responsibilities of a teacher when using ICT tools for lesson delivery.

Teachers must ensure proper lesson planning. ICT tools should not replace planning but be integrated purposefully into structured lessons.

They are responsible for verifying content. All digital materials used should be accurate, appropriate, and relevant to the curriculum and learning goals.

Teachers must guide students in ethical use. This includes respecting copyright, avoiding plagiarism, and using devices responsibly.

They should monitor usage during class. To prevent misuse or distractions, teachers must supervise how learners interact with digital tools.

Professional development is vital. Teachers must continually update their ICT skills to remain effective in a technology-rich learning environment.

15. Discuss five reasons why teachers need to continually update their skills in media and technology use.

Technology evolves rapidly. Without regular training, teachers may be left behind, unable to use newer tools that can improve instruction.

Student needs change. Updating skills allows teachers to adopt methods that match how current learners best absorb and process information.

Curriculum reforms often introduce new media components. Teachers must adapt to meet revised instructional strategies and standards.

Updated skills improve lesson quality. Teachers who are confident in using media can design more engaging, interactive, and effective lessons.

Continuous improvement fosters professionalism. It keeps teachers motivated, informed, and aligned with global trends in education.

16. Analyse five reasons why community participation is essential in supporting the availability and sustainability of educational media.

The community can contribute resources. Parents or local artisans may donate materials or help in constructing teaching aids using local materials.

It fosters ownership. When communities are involved, they feel responsible for protecting and maintaining media resources in schools.

Communities offer local expertise. Professionals like radio technicians or computer repairers can support maintenance of ICT tools in schools.

Financial contributions may be mobilized. School committees and local businesses may fund the purchase or repair of media equipment.

Community participation promotes relevance. Members can help ensure that media materials reflect the local culture and values, improving learner connection.

17. Examine five key features that should be included when developing an educational video for secondary school learners.

Clear learning objectives must guide the video. The content should support specific curriculum goals and outcomes.

Content should be age-appropriate. Language, visuals, and examples must be suitable for the learners' cognitive and emotional level.

Pacing is crucial. The video should not move too fast or too slow but allow students to absorb the information being presented.

Audio and visual quality must be high. Clear narration, subtitles, and high-resolution visuals ensure that learners can follow without strain.

The video should include prompts for reflection or activities. These could be questions, short pauses, or suggested tasks to involve the viewer actively.

18. Explain five limitations of relying solely on textbook-based instruction and how media can address each limitation.

Textbooks are static. They provide fixed content that may become outdated. Media like online articles or videos can offer up-to-date information.

They may not cater to all learning styles. Text-heavy materials may exclude visual or auditory learners. Using diagrams, videos, and recordings addresses this gap.

Textbooks limit interactivity. Learners mostly read passively. Media allows students to interact with simulations or respond to quizzes, encouraging active engagement.

They provide limited real-life context. Videos, virtual tours, or interviews with experts can make learning more practical and relatable.

Accessibility is an issue. In large classes, not all students may have textbooks. Projected content or shared devices can bridge this gap and ensure wider participation.