THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL OF TANZANIA

DIPLOMA IN SECONDARY EDUCATION EXAMINATION

750   **EDUCATIONAL MEDIA AND TECHNOLOGY**

Time: 3 Hours   **ANSWERS**   **Year: 2020**

Instructions

1. This paper consists of section A and B.

2. Answer all questions in section A and four questions from section B.

1. Briefly explain four distinguishing features of traditional and modern educational media

Traditional Educational Media: One feature is its reliance on physical, non-digital materials, like textbooks and chalkboards, used manually. In Tanzania, rural schools often use printed books and oral teaching, limiting interactivity but accessible with minimal technology.

Modern Educational Media: Modern media features digital and interactive tools, such as computers and projectors, enhancing engagement. In Tanzania, urban schools use tablets and e-learning platforms, offering multimedia content but requiring internet and technical skills.

Accessibility: Traditional media is widely accessible, requiring no power or internet, but less dynamic. In Tanzania, rural teachers use storyboards, reaching all students easily, while modern media, like online videos, is limited by connectivity, restricting access in remote areas.

Cost: Traditional media is cost-effective, using inexpensive materials like paper, but lacks versatility. In Tanzania, chalkboards are cheap and durable, while modern media, like smartboards, is expensive, posing barriers in underfunded schools despite advanced features.

2. Outline four challenges of using printed media in the teaching and learning process

Limited Interactivity: One challenge is limited interactivity, as printed media, like textbooks, offers static content. In Tanzania, students in rural schools struggle with passive learning from books, reducing engagement compared to digital tools, hindering understanding.

Accessibility Issues: Printed media faces accessibility challenges, especially in remote areas. In Tanzania, rural schools often lack updated textbooks due to distribution issues, leaving students without resources and slowing educational progress.

High Cost: The cost of producing and distributing printed media is a challenge, straining budgets. In Tanzania, schools must buy textbooks annually, and inflation increases costs, limiting availability and forcing reliance on outdated materials.

Environmental Impact: Printed media contributes to environmental degradation, using paper and ink. In Tanzania, deforestation for paper production and waste from discarded books harm ecosystems, requiring sustainable practices but posing logistical challenges for schools.

3. In four points, explain how educational institutions can save money for buying instructional media

Using Open-Source Materials: One way is leveraging open-source materials, like free online textbooks and resources. In Tanzania, schools can access digital content on platforms like Tanzania Education Network, reducing costs for printed books and software, saving funds for other needs.

Reusing Existing Resources: Reusing existing resources, such as old textbooks or chalkboards, saves money. In Tanzania, schools can refurbish library books or share materials among classes, minimizing purchase expenses and maintaining educational quality affordably.

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Partnering with NGOs: Collaborating with non-governmental organizations (NGOs) provides free or discounted media. In Tanzania, NGOs like UNESCO supply computers or educational kits, lowering costs for schools and ensuring access to modern instructional tools.

Implementing Digital Solutions: Adopting digital solutions, like e-books on tablets, reduces printing costs. In Tanzania, schools with internet access can use e-readers, cutting paper expenses and enabling cost-effective, scalable media distribution for teaching.

4. Identify four strategies for effective use of a chalkboard

Clear Writing and Organization: One strategy is writing clearly and organizing content logically, using headings and bullet points. In Tanzania, teachers in rural schools use colored chalk to highlight key concepts, improving student comprehension and engagement during lessons.

Regular Maintenance: Maintaining the chalkboard by cleaning and repairing it ensures visibility. In Tanzania, schools periodically erase and polish boards, replacing damaged ones, enhancing legibility and supporting effective teaching without disruptions.

Interactive Use: Encouraging interactive use, like student annotations, boosts engagement. In Tanzania, teachers invite students to solve problems on the board, fostering participation and understanding, making lessons more dynamic and effective.

Strategic Placement: Positioning the chalkboard for optimal visibility, ensuring all students see, is key. In Tanzania, schools place boards at the front, adjusting height for younger learners, maximizing focus and learning outcomes in crowded classrooms.

5. Briefly describe the following terms as they are used in educational media and technology:

(a) Printed Media: Printed media refers to physical materials like textbooks, worksheets, and posters used for teaching, offering tangible, non-digital content. In Tanzania, rural schools rely on printed books for literacy, though they lack interactivity compared to digital tools.

(b) Non-printed Media: Non-printed media includes audio-visual materials like videos and recordings, used without physical print, enhancing engagement. In Tanzania, urban schools use CDs or DVDs for science lessons, but rural areas face access barriers due to technology gaps.

(c) Projected Media: Projected media involves visuals displayed via projectors or screens, like PowerPoint slides, for dynamic teaching. In Tanzania, secondary schools use projectors for geography maps, improving visual learning, though requiring electricity and technical skills.

(d) Real Objects: Real objects are tangible items, like models or specimens, used in teaching for hands-on learning. In Tanzania, biology teachers use plant samples or animal skulls, aiding understanding, but storage and availability limit their use in some schools.

6. Mention four qualities of an attractive constructed media

Clarity: One quality is clarity, ensuring content is easy to understand with simple language and visuals. In Tanzania, educational posters with clear diagrams on health topics engage students, enhancing learning and retention effectively.

Relevance: Relevance to the curriculum makes media attractive, addressing specific learning goals. In Tanzania, history charts on Swahili culture, aligned with national standards, captivate students, making lessons meaningful and engaging.

Visual Appeal: Visual appeal, through colors and graphics, attracts attention. In Tanzania, colorful flashcards for math problems in primary schools draw students' interest, improving focus and participation in classroom activities.

Durability: Durability ensures media lasts through repeated use, reducing replacement costs. In Tanzania, laminated charts or sturdy models withstand classroom wear, maintaining effectiveness and accessibility for long-term teaching.

7. Sound recording involves script writing before recording. Describe four qualities of an audio script written for students' learning

Clarity: One quality is clarity, using simple, concise language students understand. In Tanzania, an audio script for Swahili lessons avoids jargon, ensuring rural students grasp concepts, enhancing listening and comprehension skills.

Engagement: Engagement, through storytelling or questions, keeps students interested. In Tanzania, scripts for history lessons include narratives about Nyerere, prompting curiosity and participation, making learning interactive and effective.

Structure: A logical structure, with an introduction, body, and conclusion, aids understanding. In Tanzania, science scripts on ecosystems begin with definitions, explain processes, and summarize key points, helping students follow and retain information.

Relevance: Relevance to the curriculum ensures educational value. In Tanzania, scripts on math problems align with national syllabi, addressing specific learning objectives, making audio recordings impactful and aligned with classroom goals.

8. List four benefits of conserving school environment during preparation of educational media

Cost Savings: One benefit is cost savings by reusing materials, reducing waste. In Tanzania, schools conserve paper and ink for posters, lowering expenses and allowing funds for other resources, enhancing educational quality sustainably.

Health Improvement: Conserving the environment reduces pollution, improving health. In Tanzania, clean classrooms with minimal waste from media production, like avoiding plastic, create healthier learning spaces, boosting student attendance and focus.

Environmental Awareness: It fosters environmental awareness among students and staff. In Tanzania, schools teaching recycling during media prep instill eco-friendly habits, preparing students for sustainable practices and supporting national conservation goals.

Resource Sustainability: Conserving resources ensures long-term availability for media production. In Tanzania, reusing chalkboards or natural materials for models sustains supplies, supporting ongoing teaching without depleting school budgets or natural assets.

9. Briefly explain four ways of doing cleanliness in education media and technology

Regular Cleaning: One way is regular cleaning of equipment, like projectors and computers, to maintain functionality. In Tanzania, schools wipe screens and keyboards weekly, preventing dust damage and ensuring effective use in lessons.

Proper Storage: Storing media materials, like books and DVDs, in clean, organized spaces prevents contamination. In Tanzania, schools use cabinets for textbooks, reducing dirt and wear, preserving resources for teaching and learning.

Waste Management: Implementing waste management, like recycling paper, maintains cleanliness. In Tanzania, schools segregate waste from media production, keeping classrooms tidy and promoting environmental responsibility among students.

Hygiene Practices: Encouraging hygiene, such as handwashing before handling media, ensures cleanliness. In Tanzania, teachers and students wash hands before using shared devices, reducing germ spread and maintaining a hygienic learning environment.

10. Outline four advantages of storing information in a flash disk

Portability: One advantage is portability, allowing easy transport of data. In Tanzania, teachers carry flash disks with lesson plans to rural schools, enabling flexible teaching without heavy books, enhancing accessibility and efficiency.

Large Storage Capacity: Flash disks offer large storage for multiple files, saving space. In Tanzania, schools store thousands of e-books and videos on a single device, reducing clutter and supporting diverse educational content access.

Durability: They are durable, resisting physical damage better than paper. In Tanzania, flash disks withstand drops, unlike fragile CDs, ensuring long-term data retention for teaching resources in challenging environments.

Quick Access: Flash disks provide quick data access, improving efficiency. In Tanzania, teachers retrieve lesson materials instantly during classes, saving time and enhancing teaching effectiveness compared to searching through physical files.

11. Account for five reasons of improvising teaching aids in the teaching and learning process

Cost-Effectiveness: One reason is cost-effectiveness, as improvised aids use local materials, reducing expenses. In Tanzania, teachers use sticks and leaves for math models, saving money for schools and ensuring resource availability for all students.

Accessibility: Improvising makes aids accessible in resource-scarce areas. In Tanzania, rural schools use sand drawings for geography, replacing expensive maps, ensuring all learners benefit from visual teaching, enhancing understanding.

Engagement: Improvised aids increase student engagement through hands-on learning. In Tanzania, using local objects like shells for counting engages primary students, making lessons interactive and memorable, improving retention and participation.

Creativity Development: It fosters creativity among teachers and students, encouraging innovation. In Tanzania, crafting models from recycled materials for science lessons develops problem-solving skills, enriching the learning process and educational outcomes.

Adaptability: Improvised aids are adaptable to specific needs, addressing local contexts. In Tanzania, teachers design aids reflecting Swahili culture for history, making lessons relevant and effective, supporting culturally sensitive education and development.

12. With relevant examples, elaborate how technological change in Tanzania has transformed teaching and learning process in Secondary Schools

Technological Change refers to the introduction and adoption of new tools and systems, like computers and internet, altering educational practices in Tanzania's secondary schools.

Digital Learning Platforms: One transformation is the use of digital platforms, like e-learning systems, enhancing access. In Tanzania, schools in Dar es Salaam use Moodle for online quizzes, improving student engagement and offering flexible learning beyond traditional classrooms.

Interactive Whiteboards: Technological change introduces interactive whiteboards, replacing chalkboards. In Tanzania, urban secondary schools use smartboards for science simulations, making lessons dynamic, as students interact with 3D models, boosting comprehension and retention.

Mobile Learning: Mobile technology, like smartphones, transforms learning through apps. In Tanzania, students in Arusha use educational apps for math, accessing tutorials offline, expanding learning opportunities and supporting self-paced study in resource-limited areas.

Internet Research: Access to the internet enables research, enriching education. In Tanzania, secondary students in Dodoma use school computers for history projects, accessing global resources, enhancing critical thinking and preparing for global competition in learning.

Teacher Training: Technological change includes training teachers in ICT, improving instruction. In Tanzania, programs like the Teachers' Service Commission train educators in Arusha to use tablets, enhancing teaching quality and aligning with modern curricula for effective learning.

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13. Give four elements which a teacher has to consider when evaluating a reference book appropriate for teaching and learning

Relevance: One element is relevance to the curriculum, ensuring the book aligns with learning goals. In Tanzania, a history teacher checks if a book covers Swahili culture, ensuring it supports national standards and student needs effectively.

Accuracy: Accuracy of content, free from errors, is crucial for credibility. In Tanzania, a science teacher verifies a biology textbook's facts on ecosystems, ensuring reliable information for accurate teaching and student understanding.

Readability: Readability, considering language and complexity, ensures student comprehension. In Tanzania, a math teacher evaluates a textbook's clarity for secondary students, using simple Swahili or English to match learners' levels, enhancing engagement.

Visual Aids: The presence of visual aids, like diagrams, supports learning. In Tanzania, a geography teacher assesses maps and charts in a reference book, ensuring they illustrate concepts like climate zones, making lessons more visual and effective.

14. In five points, assess how educational media maintain retention of the learners in the learned content

Visual Stimulation: One way is through visual stimulation, using images and videos to reinforce memory. In Tanzania, secondary schools use posters and animations for science, helping students retain concepts like photosynthesis through vivid imagery, improving recall.

Interactive Engagement: Interactive media, like quizzes on tablets, enhance retention by engaging learners. In Tanzania, students in Dar es Salaam use educational apps, answering questions on history, reinforcing knowledge through active participation and repetition.

Repetition and Reinforcement: Media repetition, such as audio recordings, maintains retention. In Tanzania, teachers play Swahili literature audio in class, repeating key themes, helping students internalize content and recall it during exams effectively.

Multisensory Learning: Combining senses, like sight and sound, boosts retention. In Tanzania, schools use projected videos with narration for geography, engaging multiple senses, making lessons memorable and aiding long-term memory for learners.

Contextual Relevance: Media relevant to students' lives maintains retention by connecting to experiences. In Tanzania, history charts on Nyerere's leadership, tied to local culture, resonate with students, enhancing memory and understanding of learned content over time.

15. Describe five factors to be considered when selecting and preparing teaching and learning media

Relevance: One factor is relevance to the curriculum and learner needs, ensuring media aligns with goals. In Tanzania, a teacher selects maps for geography, ensuring they cover East African regions, enhancing lesson effectiveness and student engagement.

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Accessibility: Accessibility, considering availability and cost, is critical for selection. In Tanzania, rural schools choose printed charts over digital media due to limited internet, ensuring all students access resources, supporting inclusive education.

Clarity: Clarity of content, with simple language and visuals, ensures comprehension. In Tanzania, teachers prepare audio scripts in Swahili for science, avoiding jargon, making media clear and effective for diverse learners in secondary schools.

Durability: Durability of media, ensuring long-term use, is a factor in preparation. In Tanzania, schools laminate posters or use sturdy models for biology, maintaining quality over time, reducing replacement costs and supporting consistent teaching.

Engagement: Engagement potential, through interactivity or visuals, enhances learning. In Tanzania, teachers select videos or interactive whiteboards for history, captivating students and improving retention, making media preparation impactful for education.

16. Explain five impact of poor organization in using radio broadcast for teaching and learning

Reduced Clarity: One impact is reduced clarity, as disorganized broadcasts confuse listeners. In Tanzania, poorly structured radio lessons on math, with jumbled explanations, hinder student understanding, lowering educational outcomes in rural schools.

Time Wastage: Poor organization wastes time, disrupting schedules. In Tanzania, radio programs with unplanned segments delay science lessons, frustrating teachers and students, reducing effective learning time and engagement in remote areas.

Low Engagement: Disorganization lowers student engagement, as content lacks flow. In Tanzania, disjointed history broadcasts fail to captivate listeners, decreasing participation and retention, impacting educational quality in rural communities.

Misinformation: It risks misinformation, delivering inaccurate or contradictory content. In Tanzania, poorly organized radio lessons on health may mix facts, confusing students and undermining trust, affecting learning and public health outcomes.

Resource Inefficiency: Poor organization wastes resources, like airtime or production costs. In Tanzania, inefficient radio schedules for Swahili lessons duplicate efforts or miss key topics, draining budgets and reducing the effectiveness of educational broadcasts.