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: 2013**

Instructions

1. This paper consists of section A and B.

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

1. Identify four factors to consider during the selection of a film as a teaching resource

Relevance: One factor is relevance, ensuring the film aligns with curriculum goals. In Tanzania, history teachers choose documentaries on Nyerere, enhancing lesson effectiveness and student engagement in secondary schools.

Engagement: Engagement potential, captivating students visually, is key. In Tanzania, science films on ecosystems interest students, boosting participation and retention, making films effective teaching tools.

Clarity: Clarity, with clear audio and visuals, ensures understanding. In Tanzania, geography films with distinct narration clarify landforms, reducing confusion and supporting effective learning in classrooms.

Accessibility: Accessibility, considering cost and availability, is crucial. In Tanzania, rural schools select affordable DVDs over streaming, ensuring all students access films, supporting inclusive education.

2. Explain four challenges which a teacher is likely to face when using the Internet as a source of information

Connectivity Issues: One challenge is poor internet connectivity, limiting access. In Tanzania, rural teachers struggle with slow networks for science research, disrupting lessons and reducing teaching efficiency.

Cost: High internet costs pose a challenge, straining budgets. In Tanzania, schools in Dodoma find data subscriptions expensive, preferring books, hindering online resource use for teaching and learning.

Technical Skills: Lack of technical skills among teachers restricts use. In Tanzania, educators untrained in browsing may misuse websites, slowing history lessons and impacting educational outcomes.

Distraction: Internet distractions, like unrelated sites, affect focus. In Tanzania, students browsing social media during geography research lose focus, challenging teachers in maintaining effective learning environments.

3. By giving four reasons, briefly explain why audio-visual teaching resources/aids facilitate retention of learned materials

Multisensory Learning: One reason is multisensory learning, combining sight and sound, aiding memory. In Tanzania, science videos with narration help students retain biology concepts, enhancing recall in secondary classrooms.

Engagement: Audio-visuals engage students, making content memorable. In Tanzania, history documentaries captivate learners, boosting retention of Nyerere's era, improving long-term learning outcomes effectively.

Repetition: They allow repetition, reinforcing memory through replays. In Tanzania, geography maps with audio descriptions are replayed, helping students remember regions, supporting retention in lessons.

Visual Impact: Strong visuals leave lasting impressions, aiding retention. In Tanzania, math animations with sound clarify formulas, ensuring students recall concepts, enhancing teaching and learning efficiency.

4. Give four reasons to justify the importance of editing recorded materials before they are used in classroom for teaching and learning purposes

Clarity: One reason is improving clarity, removing errors for understanding. In Tanzania, edited Swahili audio scripts eliminate noise, ensuring clear history lessons, enhancing student comprehension and teaching effectiveness.

Engagement: Editing boosts engagement, refining content for interest. In Tanzania, trimming irrelevant science video parts keeps students focused, improving participation and retention in secondary classrooms.

Accuracy: It ensures accuracy, correcting factual mistakes. In Tanzania, editing geography recordings fixes wrong data, maintaining reliable resources, supporting effective teaching and learning outcomes.

Professionalism: Edited materials appear professional, building trust. In Tanzania, polished math recordings with clear narration enhance credibility, motivating students and improving educational impact in lessons.

5. (a) What does the term “concept map” mean?

Concept map refers to a visual tool, like diagrams, linking ideas to show relationships, aiding understanding in Tanzania’s educational settings.

5. (b) State any two ways in which the “concept map” strategy can be used

Organizing Knowledge: One way is organizing knowledge, structuring ideas visually. In Tanzania, history teachers use concept maps for Nyerere’s timeline, clarifying events, enhancing student comprehension in classrooms.

Brainstorming: Concept maps aid brainstorming, generating ideas. In Tanzania, science teachers create maps for biology topics, encouraging student input, improving engagement and learning outcomes effectively.

6. Briefly explain four advantages of a tape recorder as an audio resource for teaching and learning

Portability: One advantage is portability, allowing easy transport. In Tanzania, teachers carry tape recorders with Swahili lessons to rural schools, enabling flexible teaching without heavy books, enhancing accessibility.

Cost-Effectiveness: Tape recorders are cost-effective, using inexpensive devices. In Tanzania, schools use basic recorders for history, saving on textbook costs and ensuring affordable education for all students.

Durability: They are durable, resisting physical damage better than paper. In Tanzania, recordings withstand handling, ensuring long-term use for science lessons, supporting consistent teaching in resource-limited areas.

Replay Ability: Tape recorders offer replay ability, reinforcing learning. In Tanzania, students replay math tapes, improving retention and understanding, enhancing teaching effectiveness and educational outcomes.

7. Identify four roles of multimedia in the teaching and learning process

Instruction: One role is instruction, delivering content effectively. In Tanzania, science videos on ecosystems teach concepts, aiding student understanding and improving teaching efficiency in secondary classrooms.

Engagement: Multimedia increases engagement, captivating students. In Tanzania, history documentaries engage learners, boosting participation and retention, enhancing learning outcomes through interactive media.

Assessment: It supports assessment, evaluating progress. In Tanzania, online quizzes on tablets assess math skills, providing feedback, enhancing teaching strategies and student improvement in lessons.

Motivation: Multimedia motivates students, making learning enjoyable. In Tanzania, geography animations inspire interest, encouraging effort and participation, driving academic success and engagement in classrooms.

8. Briefly describe the following concepts as used in Educational Media and Technology:

(a) Audio-visual media: Audio-visual media combines sound and visuals, like videos, enhancing teaching in Tanzania's schools through dynamic content delivery.

(b) Interactive media: Interactive media engages users, like quizzes, boosting learning in Tanzania through active participation and feedback in classrooms.

(c) Non-printed Media: Non-printed media includes audio-visual tools, like recordings, used in Tanzania without paper, expanding access in low-tech areas.

(d) Compact Disks: Compact disks store digital media, like lessons, used in Tanzania for reliable, portable teaching resources in secondary schools.

9. Outline any four roles that Educational Media and Technology play in teaching and learning in Tanzanian schools

Instruction: One role is instruction, delivering content effectively. In Tanzania, projectors in science lessons display diagrams, aiding student understanding, improving teaching efficiency in secondary classrooms.

Engagement: It increases engagement, captivating students. In Tanzania, history videos engage learners, boosting participation and retention, enhancing learning outcomes through interactive media in schools.

Assessment: Educational media supports assessment, evaluating progress. In Tanzania, online quizzes on tablets assess math skills, providing feedback, enhancing teaching strategies and student improvement in lessons.

Motivation: It motivates students, making learning enjoyable. In Tanzania, geography animations inspire interest, encouraging effort and participation, driving academic success and engagement in classrooms.

10. Give a brief description of any two of the following concepts as used in Educational Media and Technology:

(a) Texture: Texture refers to the surface feel or appearance of media, like rough paper, enhancing visual appeal in Tanzania's educational charts for teaching.

(b) Primary colours: Primary colors are red, blue, and yellow, used in Tanzania's media design for vibrant, attention-grabbing science posters in classrooms.

11. Analyse three benefits and two challenges of using an overhead projector in the teaching and learning process

Overhead Projector refers to a device projecting transparencies for teaching, used in Tanzania's secondary schools to enhance instruction.

Clarity: One benefit is clarity, projecting sharp images for understanding. In Tanzania, science teachers use overheads for biology diagrams, improving student comprehension and teaching effectiveness in classrooms.

Engagement: It boosts engagement, making lessons visual and interactive. In Tanzania, history teachers project timelines, captivating students, enhancing participation and retention, improving learning outcomes.

Cost-Effectiveness: Overhead projectors are cost-effective, using inexpensive transparencies. In Tanzania, rural schools use them for math, saving on digital tools, ensuring affordable education and teaching efficiency.

Bulb Replacement: One challenge is frequent bulb replacement, increasing costs. In Tanzania, schools in Dodoma face expenses and downtime, disrupting lessons and straining budgets, reducing projector usability.

Technical Skills: Teachers lack technical skills, complicating use. In Tanzania, educators untrained in projector operation struggle, slowing science lessons and impacting teaching effectiveness, necessitating training for optimal use.

12. Elaborate giving five reasons the extent to which educational media and technology is crucial in achieving meaningful learning

Educational Media and Technology refers to tools like videos or computers, used to enhance understanding and engagement, critical for Tanzania's secondary education.

Engagement: One reason is enhanced engagement, making learning interactive. In Tanzania, science videos captivate students, boosting participation and retention, ensuring meaningful learning through dynamic media in classrooms.

Clarity: It provides clarity, simplifying complex concepts. In Tanzania, geography maps on projectors clarify landforms, reducing confusion and enhancing student comprehension, supporting effective, meaningful teaching and learning.

Retention: Educational media improves retention, reinforcing memory. In Tanzania, history timelines on tablets help students recall events, ensuring long-term understanding and meaningful learning outcomes in lessons.

Accessibility: It ensures accessibility, reaching diverse learners. In Tanzania, audio recordings for Swahili assist rural students, making education inclusive and meaningful, enhancing teaching impact across schools.

Motivation: Media motivates students, making learning enjoyable. In Tanzania, math animations inspire effort, encouraging deeper understanding and participation, driving meaningful learning and academic success effectively.

13. "Most teachers prefer to use printed media during teaching and learning process". Support this statement by giving five reasons

Printed Media refers to physical materials like textbooks, used for teaching in Tanzania's secondary schools, often preferred for practicality and accessibility.

Cost-Effectiveness: One reason is cost-effectiveness, as printed media like textbooks is affordable. In Tanzania, schools use cheap books for Swahili, saving funds for other needs, ensuring accessible, effective teaching for all students.

Accessibility: Printed media is accessible in low-tech settings, requiring no power. In Tanzania, rural schools rely on textbooks for history, reaching students without electricity, supporting inclusive education and learning continuity.

Durability: It is durable, withstanding frequent use when cared for. In Tanzania, laminated charts for math endure classroom wear, maintaining quality for long-term teaching, ensuring reliable resources for secondary education.

Familiarity: Teachers and students are familiar with printed media, ensuring ease of use. In Tanzania, secondary educators use textbooks intuitively, enhancing lesson delivery and student comprehension, making it a preferred choice.

Reliability: Printed media is reliable, unaffected by technical failures. In Tanzania, books for science remain usable during power outages, providing stable resources, reinforcing its preference for consistent, effective teaching in secondary schools.

14. Elaborate by giving at least five stages of using an audio-visual media in teaching and learning process

Audio-Visual Media refers to tools combining sound and visuals, like videos, used for instruction in Tanzania's secondary schools.

Planning: One stage is planning, selecting relevant content. In Tanzania, science teachers choose biology documentaries, aligning with curriculum, ensuring effective lesson preparation for teaching and learning.

Preparation: Preparing equipment, setting up devices, follows planning. In Tanzania, teachers test projectors in history classes, ensuring audio-visual quality, enhancing classroom instruction and student engagement.

Presentation: Presenting the media, showing videos, is key. In Tanzania, geography teachers display maps with narration, captivating students, improving comprehension and retention during lessons effectively.

Interaction: Facilitating interaction, engaging students, enhances use. In Tanzania, math teachers pause videos for discussions, boosting participation and understanding, supporting active learning and teaching outcomes.

Evaluation: Evaluating impact, assessing learning, concludes use. In Tanzania, science teachers review quiz results post-video, refining strategies, ensuring audio-visual media improves teaching and learning processes in classrooms.

15. Explain in details five factors to consider when using a model as a resource in the teaching and learning process

Model refers to a physical or virtual representation, like a science specimen, used to enhance learning in Tanzania's secondary schools.

Relevance: One factor is relevance, ensuring the model aligns with curriculum goals. In Tanzania, biology teachers use human anatomy models for lessons, enhancing understanding and teaching effectiveness in classrooms.

Safety: Safety, preventing hazards during use, is crucial. In Tanzania, science teachers secure plant models, avoiding injuries, maintaining a safe learning environment and supporting effective teaching.

Durability: Durability ensures long-term usability, withstanding handling. In Tanzania, geography terrain models are robust, lasting through repeated use, supporting consistent education and resource availability in schools.

Engagement: Engagement, through hands-on interaction, boosts learning. In Tanzania, math teachers allow students to manipulate geometric models, increasing interest and participation, enhancing teaching and learning outcomes.

Accessibility: Accessibility, considering cost and availability, is key. In Tanzania, rural schools use affordable local materials for models, ensuring all students access resources, supporting inclusive and effective education.

16. Analyse five ways in which modern media such as television and computers can be used to make teaching and learning more efficient

Modern Media refers to digital tools like television and computers, used to enhance instruction in Tanzania's secondary schools.

Interactive Learning: One way is interactive learning, using quizzes on computers. In Tanzania, math teachers employ apps, engaging students, improving efficiency and retention, enhancing teaching and learning outcomes.

Real-Time Updates: Modern media provides real-time updates, ensuring current content. In Tanzania, geography teachers use TVs for climate news, keeping lessons relevant, boosting efficiency and student comprehension effectively.

Remote Access: It enables remote access, expanding reach. In Tanzania, students use computers for e-learning in Swahili, accessing lessons from home, saving time and enhancing teaching efficiency in schools.

Multimedia Content: Combining text, audio, and visuals improves efficiency. In Tanzania, science teachers use TV documentaries, simplifying biology, reducing teaching time and increasing learning effectiveness in classrooms.

Automation: Automation, like grading software, streamlines tasks. In Tanzania, history teachers use computers for quizzes, saving time on assessments, allowing focus on instruction and improving teaching and learning efficiency.

17. Examine the role of projected and non projected resources in the teaching and learning process

Projected Resources refers to tools like overhead projectors, displaying visuals, while non-projected resources include physical items like charts, both used in Tanzania's secondary schools for instruction.

Engagement: One role is enhancing engagement, making lessons interactive. In Tanzania, science teachers use overheads for diagrams and charts for biology, captivating students, boosting participation and learning outcomes effectively.

Clarity: Projected and non-projected resources provide clarity, simplifying concepts. In Tanzania, geography teachers project maps and use models, reducing confusion, enhancing student comprehension and teaching efficiency in classrooms.

Accessibility: They ensure accessibility, reaching diverse learners. In Tanzania, rural schools use charts for history and projectors where available, ensuring inclusive education, supporting effective teaching and learning processes.

Retention: Resources improve retention through visual and tangible aids. In Tanzania, history timelines on overheads and physical models help students recall events, reinforcing memory and educational impact over time.

Cost-Effectiveness: They offer cost-effectiveness, using affordable materials. In Tanzania, non-projected charts and basic projectors save costs, ensuring sustainable resources, enhancing teaching and learning efficiency across schools.

18. With examples, describe five ways in which the computer can be used to facilitate teaching and learning in Tanzanian Schools

Computer refers to an electronic device, used for digital instruction in Tanzania's secondary schools, enhancing education effectively.

E-Learning Platforms: One way is using e-learning platforms, delivering content online. In Tanzania, history teachers use Moodle for quizzes, improving student access and engagement, facilitating effective teaching and learning in Dar es Salaam schools.

Research Tool: Computers serve as research tools, accessing information. In Tanzania, geography students in Arusha use browsers for climate data, enriching lessons, supporting critical thinking and educational progress in classrooms.

Presentation Software: They enable presentation software, clarifying lessons. In Tanzania, science teachers use PowerPoint for biology slides, enhancing visual learning, boosting comprehension and teaching efficiency in secondary schools.

Interactive Simulations: Computers offer simulations, promoting hands-on learning. In Tanzania, math teachers use software for geometry, engaging students interactively, improving retention and teaching effectiveness in lessons.

Administrative Efficiency: They streamline administrative tasks, saving time. In Tanzania, teachers in Dodoma use computers for grading and attendance, allowing focus on instruction, facilitating efficient teaching and learning processes in schools.