



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 972-60200 – Meru-Kenya.
Tel: +254 (0)799529958, +254 (0)799529959, +254 (0)712524293
Website: www.must.ac.ke Email: info@must.ac.ke

UNIVERSITY EXAMINATIONS 2024/2025

THIRDYEAR, FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
EDUCATION ARTS/ BACHELOR OF EDUCATION SCIENCE/ BACHELOR OF SCIENCE IN
AGRICULTURAL EDUCATION AND EXTENSION/ BACHELOR OF EDUCATION
TECHNOLOGY IN CIVIL ENGINEERING/ BACHELOR OF EDUCATION TECHNOLOGY IN
ELECTRICAL ENGINEERING/ BACHELOR OF EDUCATION TECHNOLOGY IN
MECAHNICAL ENGINEERING

ECT 3300: EDUCATIONAL COMMUNICATION AND TECHNOLOGY

DATE: JANUARY 2025

TIME: 2 HOURS

INSTRUCTIONS: Answer Question *One* (Compulsory) and any other *Two* Questions

QUESTION ONE - (30 MARKS)

Read and answer the questions that follow.

In the profession of teaching, technology has the potential to transform teaching and learning for students; however, many schools do not take full advantage of or are unaware of the many opportunities to improve teaching and learning through effective technology integration. The majority of elementary teachers are uninformed of effective ways to integrate technology and how to incorporate 21st century skills into lessons with technology, resulting in many elementary teachers utilizing technology haphazardly without any direction on how to successfully incorporate technology into daily lessons (Ally, 2008). In the 2007-2008 school year, the average school district in Massachusetts spent \$212 per student on materials related to technology (Massachusetts Department of Elementary and Secondary Education, 2009).

Without sufficient proficiency with technology, teachers are unable to integrate technology utilizing proven effective methods, therefore, not significantly impacting the academic achievement of students and not adequately

A deeper understanding of instructional practices to utilize with technology integration and methods on how to address 21st century skills in lessons with technology is necessary to improve the quality and use of technology in the classroom. The underutilization of technology is evident throughout the country.

In addition to the presence of technology, effective instructional practices with technology that focus on higher-level skills are also essential. Twenty-first century skills encompass higher-level thinking, as critical thinking, problem solving, creativity and innovation, and collaboration all require that students be engaged in higher order thinking. Therefore, to utilize technology in a way that significantly impacts students' achievement and preparation for later schooling, it is necessary for educators to be aware of best practices in technology integration, including how to incorporate 21st century skills into lessons. The same issue that is evident in numerous schools throughout the country is also apparent in the three elementary schools in a school. Rebekah C. Louiso, (2012). Retrieved from

<https://www.google.com/search?q=integrating+technology+in+the+classroom+case+studies+pdf>

Read the excerpt and answer the following questions

1. In your view, what is the state of technology integration in the Kenyan classrooms. (2 Marks)
2. What four reasons explain why many teachers have not integrated technology in teaching and learning. (4 Marks)
3. Discuss any three ways in which using technology in the teaching profession can transform teaching and learning? (6 Marks)
4. You are asked to make a technology integration plan for the school you have been posted to. Discuss four important aspects you would include in the plan? (8 Marks)
5. They say effective instructional strategies can help focus learning on higher level skills. Describe any four instructional strategies which, when accompanied with technology, focus learning on higher level skills. (8 Marks)
6. What two technologies stand out as the hallmark of the 21st century classroom. (2 Marks)

QUESTION TWO – (20 MARKS)

- a) Discuss five advantages and five limitations of using educational radio in schools in Kenya. (10 marks)
- b) Explain to a group of young teachers the various possibilities of harnessing radio to offer learning in Kenyan schools. (10 marks)

QUESTION THREE - (20 MARKS)

- a) Discuss five main benefits of digital literacy to 21st century students. (10 Marks)
- b) Explain the following terminologies. (10 Marks)
 - i. Digital divide
 - ii. Digital native
 - iii. Digital immigrant
 - iv. Digital resident
 - v. Digital native

QUESTION FOUR – (20 MARKS)

- a) Elaborate 5 ways in which the internet has contributed in changing the face of education in the world today. (10 Marks)
- b) A charity organization wants to support education in a school in your neighborhood. Discuss five reasons why they should consider giving computers to the school. (10 Marks).

QUESTION FIVE – (20 MARKS)

- a) Explain **five** benefits of using interactive games in teaching and learning process. (10 Marks)
- b) There is a strong debate among the teachers about use of digital video for learning. Contribute to the debate by explaining how your colleagues at all levels can use digital videos to enrich the lessons they teach. (10 Marks)