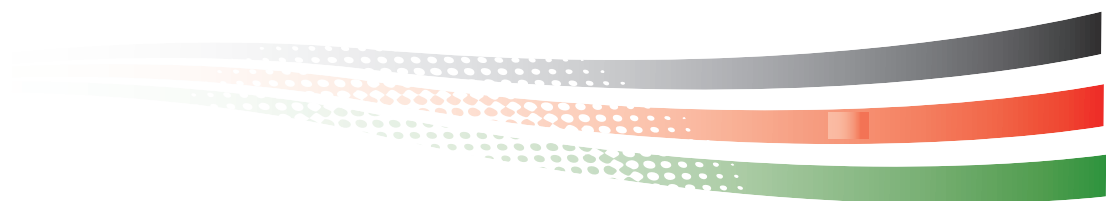
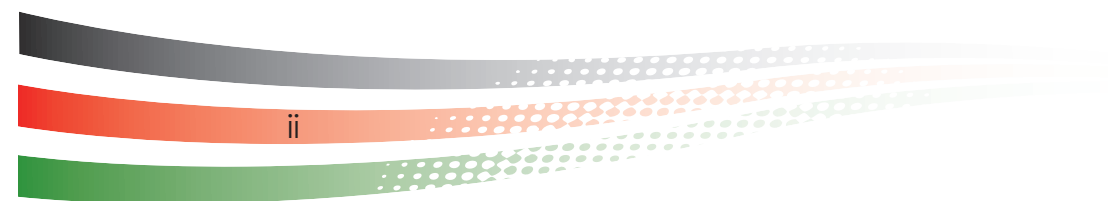




CURRICULUM GUIDE FOR ICT INTEGRATION IN EDUCATION

**A harmonized curriculum for Integration of ICT
in Teaching and Learning for the purpose of the
rollout of the National Laptops Project**





FOREWORD

The Teachers Service Commission is committed to providing professional development to all teachers in the teaching service. As a result a technical team was constituted to develop a harmonized ICT curriculum in preparedness for the Jubilee Laptop project launch. This curriculum was developed out of a felt need to equip learners with modern ICT skills which is in line with one of the flagship projects in Kenya vision 2030.

Integration of Information Communications Technology in the learning and teaching situations is also well covered in various policy frameworks and specifically in Sessional Paper number 14 of 2012 that states in part: "The Government recognizes that an ICT literate workforce is the foundation on which Kenya can acquire the status of a knowledge economy by 2030." Against this background, the Government shall make education the natural platform for equipping the nation with ICT skills in order to create dynamic and sustainable economic growth. To this end, the Ministry has continued to supply ICT equipment, content and training of teachers on ICT. Additionally, an interactive e-learning aims at mainstreaming ICT as a tool for teaching and learning"


ICT is a major vehicle for teaching and learning from the earliest years. It is at a very young age that learners begin to acquire digital skills which they increasingly use to explore and exploit the world of information and to craft that into knowledge. ICT facilitates the opportunity for more student-centred teaching, more self-learning and more peer teaching. It also provides greater opportunity for teacher-to-teacher, and student-to-student communication and collaboration and access to the worldwide web and the suggested teaching/learning resources contained therein.

The Jubilee Government's decision to avail laptops to primary school children conforms to this policy and therefore it is laudable.

The way teachers and pupils interact with the curriculum in schools has been forced to change because of the dramatic developments ushered in by technology. Internet and social media have in one way or other affected the dynamics of learning and teaching and it is important that teachers master the situations created by these developments. Added to this challenge is the anticipated introduction of laptops in the public primary schools through the Government Programme.

Primary Schools Teacher capacity building is key to successful implementation of this program. It is for this reason that in accordance with TSC Act 2012, the Teachers Service Commission has embarked on capacity building of teachers and education managers to effectively lead in the utilization of ICT tools in education.

To guide the training, will be this harmonized curriculum structure, whose compilation was headed by the Commission as we drew on the resourcefulness of the technical expertise from Ministry of Education, British Council, Microsoft, Kenya Institute of Curriculum Development, Intel, Kenya Literature Bureau, Technology Partners, Jomo Kenyatta University of Agriculture and Technology and UNESCO.



The training will be aligned to the three phases in which the Government will be rolling out the laptop project. The first phase starts in this August 2013 and will target 18,825 teachers from 6,275 public primary schools. Phase two will be effected in 2014 to train 21,138 teachers from 7,046 schools, with a similar number of teachers being trained in the final phase in 2015.

It is expected that the training will cascade down to the rest of the teachers in all schools for ease of adaptation and innovation in the classroom, for all teachers that handle children in schools.


It is the Commission's plan to have all or most of the teachers trained in the integration of ICT in education by 2016. Thereafter, all teachers entering the teaching profession will be expected to have taken as a unit of study at college, the integration of ICT in education. In this regard this manual will be available for use by teacher training colleges.



GABRIEL LENGOBONI, CBS
SECRETARY /CHIEF EXECUTIVE,
TEACHERS SERVICE COMMISSION

ACKNOWLEDGMENT

This guide was developed through a collective undertaking by TSC and other stakeholders. Special thanks go to the KICD officers who validated the guide. TSC wishes to thank the drafting team for their unparalleled input and the following partners for their invaluable contribution towards the successful development of this guide. In a special way, TSC wishes to recognise Ministry of Education (ICT4E, KEMI, NI3C), British Council, Microsoft, Kenya Institute of Curriculum Development (KICD), Kenya Literature Bureau (KLB), Jomo Kenyatta University of Agriculture and Technology (JKUAT), Technology Partners, Centre for Mathematics, Science and Technology Education in Africa (CEMASTE) and World Vision for their invaluable support and contribution towards the development of this guide.



GABRIEL LENGOIBONI, CBS
SECRETARY /CHIEF EXECUTIVE,
TEACHERS SERVICE COMMISSION



Microsoft Teach with Technology

Microsoft Partners in Learning offers a range of professional development programs to bridge the gap between technology skills and innovative teaching. It reaches beyond traditional software training to provide a scaffold that helps educators of all skill levels on their learning journey. Partners in Learning gives educators the knowledge they need to impart 21st century skills to their students and deliver exceptional student outcomes.

The Microsoft Teaching with Technology Curriculum helps educators move beyond learning technology tools to develop a deeper understanding of how technology integration can enhance the teaching and learning experience, give their students 21st-century skills, and save them time. Teaching with Technology includes a self-assessment to identify learning gaps, eLearning content to help fill those gaps, summative assessments, and a range of learning activities and tutorials to help extend the learning and to encourage educators to apply their new knowledge in the classroom with their students.

It maps to a number of globally recognized teaching standards, including the UNESCO ICT Competency Framework for Teachers (UNESCO ICT-CFT), Technology Literacy Approach, and ISTE NETS for Teachers.

Teaching with Technology helps build both the skills and the ability to apply those skills to perform a particular job or task. Along with the global community of educators found on the Partners in Learning Network, Teaching with Technology provides six key components for effective competency-based professional development:

- A common set of competency standards defined by role or educational goal
- Methods for identifying learning gaps
- Help filling competency gaps with a rich and varied set of aligned resources, such as job shadowing, classes, workshops, and online learning
- Assessments, observation, or portfolio work that help verify improved educator competencies
- Peer support or mentoring to help educators carry forward ICT use to the classroom
- Ongoing refinement of educator competency materials

Microsoft would work with Teachers Service Commission on an arrangement of how teachers who take this course of Teach with Technology can eventually obtain a universal certificate that is globally accepted known as Microsoft Certified Educator (MCE). For the teachers that already have basic ICT knowledge or skills are encouraged to go online at begin taking the course. In the framework being worked on, TSC will recognize this certificate as part of the Teacher Professional Development.

www.pil-network.com/pd/curriculum/twt



Mark East | Education General Manager
Microsoft EMEA & ASIA

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Preamble

This curriculum guide has been developed to assist the education implementers to integrate ICTs in primary education. The guide outlines the competencies, skills and attitudes to be developed in preparation for integrating ICTs in schools.

The curriculum guide is organized in three parts namely; Education leaders' training, ICTs in Education and ICT integration in teaching and learning.

Education leaders' training targets Education managers who include, County Directors of Education, District Education Officers, Quality Assurance Officers, Head Teachers and TAC Tutors. ICTs in Education and ICT integration in teaching and learning targets teachers. It is envisaged that at the end of the training, all the trainees will adapt contemporary technology and apply it in their day to day suggested teaching/learning activities.

NATIONAL GOALS OF EDUCATION

1. Foster nationalism, patriotism and promote national unity.
2. Promote social, economic, technological and industrial needs for national development.
 - **Social needs:** Prepare children for the changes in attitudes and relationships which are necessary for the smooth process of a rapidly developing modern economy.
 - **Economic needs:** Produce citizens with skills, knowledge, expertise and personal qualities that are required to support a growing economy.
 - **Technological and industrial needs:** Provide the learners with the necessary skills and attitudes for industrial development.
3. Promote individual development and self-fulfillment.
4. Promote sound moral and religious values.
5. Promote social equality and Responsibility.
6. Promote respect for and development of Kenya's rich and varied cultures.
7. Promote international consciousness and foster positive attitude towards other nations.
8. Promote positive attitudes towards good health and environmental protection.



OBJECTIVES OF ICT IMPLEMENTERS CURRICULUM

By the end of the training, the participant should be able to:

1. Apply change management strategies in embracing ICTs in their work.
2. Facilitate and inspire innovative learning and creativity.
3. Create and manage an effective ICT integrated learning environment.
4. Engage in monitoring and evaluation of ongoing ICT integration programmes.
5. Appreciate the role ICTs play in day to day lives.
6. Sustain virtual collaborations with peers on educational environments.
7. Engage in professional development and model ethical responsibilities.

COURSE STRUCTURE

MODULE

SUB MODULE

COMPETENCIES

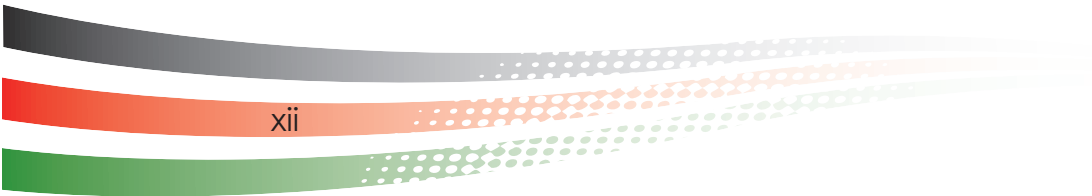
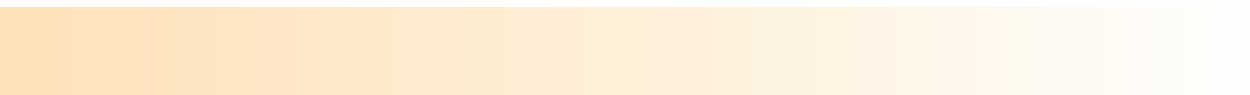
SPECIFIC OBJECTIVES

CONTENT

ACTIVITIES

RESOURCES

ASSESSMENT



1.1 EDUCATION LEADERS TRAINING

1.1.0 MODULE UNIT SUMMARY AND TIME ALLOCATION

Code	Sub Module Unit	Content	Total (Hours)
1.1.0	Overview of ICTs in Education	<ul style="list-style-type: none"> Overview of ICTs in Education <ul style="list-style-type: none"> - Global - Continental - Regional - Kenya Policy of ICT in education: <ul style="list-style-type: none"> - National ICT Policy - MoE ICT Strategy - Sessional paper no. 14-2012 cap 7 - NESSP 2013-2018 - Vision 2030 - Pillars - School level policy Importance of ICT in education Security and E-safety <ul style="list-style-type: none"> - Physical security - Data security(passwords) - Social, moral and ethical safety issues Roles of the different stakeholders: <ul style="list-style-type: none"> - TSC/ MoE County Directors - District Education Officers - District Staffing Officers - Quality Assurance & Standards Officers - TAC Tutors, - Master Trainers - Training Of Trainers - School Management Boards - Head Teachers - Education Assessment Resource Centre Implementation plan 	6hrs

Code	Sub Module Unit	Content	Total (Hours)
1.2.0	Managing and leading change	<ul style="list-style-type: none"> • Technological changes • The changing role of the teacher • The head teacher as a change agent • Factors for resistance to use of ICTs • Overcoming the resistance • Role of effective communication in the change process • Phases of the change process 	2hrs
1.3.0	Leading effective teaching and learning through ICT	<ul style="list-style-type: none"> • The concept of ICT integration • Benefits of ICT's in teaching and learning • The role of ICTs in the acquisition of the 21st century skills • Role of the school head in ICT integration in teaching and learning • Assessment of ICT integrated lessons 	2hrs
1.4.0	The ICT Vision, Policy and Implementation Plan	<ul style="list-style-type: none"> • Create an ICT Vision • Create an ICT policy to include <ul style="list-style-type: none"> - Access, - Security (physical, Data) - Software - Maintenance - Capacity building - Ethics • Communicate ICT Vision • Communicate ICT policy • Develop implementation plan • Security and E-safety • Physical security • Data security (passwords) • Social, moral and ethical safety issues 	2hrs

Code	Sub Module Unit	Content	Total (Hours)
1.5.0	Team Building	<ul style="list-style-type: none"> • Team Development Process • Stages in forming Teams • Conflict Management in teams • Team Effectiveness • Sharing Power, Empowering & Developing Others • Commitment levels • ICT Integrated Teams <ul style="list-style-type: none"> - Subject areas - Establishment of student support - ICT clubs 	2hrs
1.6.0	Community and stakeholders education and involvement	<ul style="list-style-type: none"> • Various stakeholders in the community <ul style="list-style-type: none"> a) School Community (Parents, Students, Teachers, Non-teaching Staff) b) Partnerships c) NGOs and CBOs d) Local Authority e) Local Government f) Community Centers g) Local Professionals and Alumni • Roles of stakeholders <ul style="list-style-type: none"> a) School Community (Parents, Students, Teachers, Non-Teaching Staff) b) Partnerships c) NGOs and CBOs d) Local Authority e) Local Government f) Community Centres g) Local Professionals and Alumni • Ways of involving the community and the stakeholders 	2hrs
1.7.0	Resource mobilization and Sustainability	<ul style="list-style-type: none"> • Sources of funds <ul style="list-style-type: none"> - Grants - Income generating Activities - Fundraising - Donations - Constituency Development Fund - Alumni (Old boys/girls association) • Public Procurement • Maintenance 	2hrs

1.1.0 MANAGING AND LEADING CHANGE

1.1.01 Competencies

At the end of the sub module unit, the trainee should have the ability to:

- (i) Lead effective and innovative teaching and learning.
- (ii) Manage changes brought about by technological developments.
- (iii) Create a school vision for ICT integration in teaching and learning.
- (iv) Understand educational policies and trends that affect the school and shape stakeholders views.
- (v) Accept change and new information.
- (vi) Formulate and build a shared vision with others .
- (vii) Implement plans consistent with the long term interests of the school in a global environment.

1.1.02 Specific Objectives

By the end of this sub-module unit the trainee should be able to:

- (a) Describe the various changes brought about by information communication technology in human lives.
- (b) Explain the changing role of the teacher and the learner.
- (c) Discuss the role of the head teacher as a change agent in the school.
- (d) Discuss factors leading to resistance to use of ICTs in teaching and learning.
- (e) Explain how the school head can overcome resistance to use of ICTs in teaching and learning.
- (f) Explain the role of effective communication in the change process.
- (g) Explain how the school leader can help the teachers deal with the phases of the change process.

1.1.03 Content

- Technological changes brought about by ICT in human lives.
- The changing roles of the teacher and the learner.
- The role of the head teacher as a change agent.
- Factors leading to resistance to use of ICTs in teaching and learning.
- Overcoming resistance to use of ICTs in teaching and learning.
- Phases of the change process.

Activities

- Class presentation.
- Demonstration.
- Focus group discussions.
- Practical exercises.
- Interactive lectures.
- Question and answer.
- Role play

Resources

- Video clips.
- Computers.
- White board.

- Flip chart.
- Projector.
- Marker pens.
- Training manual.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment methods

- Assignments.
- Oral assessment.

1.2.0 LEADING EFFECTIVE TEACHING AND INNOVATIVE LEARNING THROUGH ICT

1.2.01 Competencies

At the end of the sub-module unit, the trainee should have the ability to:

- Lead effective and innovative teaching and learning.
- Communicate effectively the need for paradigm shift in teaching and learning.
- Acquire effective instructional supervisory skills.
- Formulate and implement strategies for effective use of technology in teaching and learning.

Theory

1.2.02 Specific Objectives

By the end of the sub-module unit, the trainee should be able to:

- Explain the concept of ICT integration
- Describe the benefits of ICT integration in teaching and learning
- Explain the role of ICTs in the acquisition of the 21st century skills.
- Discuss the role of the school head in facilitating ICT integration in teaching and learning.

1.2.03 Content

- The concept of ICT integration.
- Benefits of ICT in teaching and learning.
- The role of ICTs in the acquisition of the 21st century schools.
- Role of the school head in facilitating ICT integration in teaching and learning.
- Assessment of ICT integrated lessons.

Practical

1.2.04 Specific objectives

By the end of the sub-module unit the trainee should be able to:

- Develop an ICT integrated lesson.
- Demonstrate how ICTs can facilitate the acquisition of 21st century skills.
- Assess an ICT integrated lesson.

1.2.05 Content

- Use of ICTs in the acquisition of 21st century skills of:
 - collaboration;
 - communication;
 - Self regulation and initiative;
 - problem solving;
 - ICT skills and
 - Creativity and innovation.
- Developing an ICT integrated lesson.
- Assessment of an ICT integrated lesson.

Activities

- Class presentations.
- Interactive lectures.
- Focus group discussions.
- Practical exercises.
- Question and answer.

Resources

- Reference books.
- Flip chart.
- Marker pen.
- White board.
- LCD projector.
- Computer.
- Training manual.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment methods

- Assignments.
- Oral assessment.

1.3.0 THE ICT VISION, POLICY & IMPLEMENTATION PLAN

1.3.01 Competencies

At the end of the sub-module unit, the trainee should have the ability to:

- (i) Create an ICT Vision.
- (ii) Create an ICT policy.
- (iii) Communicate ICT Vision.
- (iv) Communicate ICT policy.
- (v) Develop implementation plan.

Theory

1.3.02 Specific Objectives

By the end of the sub-module unit, the trainee should be able to:

- (a) Describe the process of developing a school ICT Vision in tandem with the school vision.
- (b) Develop and share the ICT policy.
- (c) Demonstrate the basic ICT skills.
- (d) Discuss strategies of organizing staff to participate in the ICT implementation in school.
- (e) Discuss factors to consider in identifying potential development partners for ICT integration.
- (f) Plan an ICT training programme for teachers.

1.3.03 Content

- Development of an ICT vision
- Development of a school ICT policy to include
 - Access,
 - Security (physical, Data),
 - Software,
 - Maintenance,
 - Capacity building,
 - Ethics.
- Basic ICT skills.
- Implementation of ICT usage in schools.
- Factors to consider when identifying partners in ICT integration.
- Planning a training programme for teachers.
- Strategies of organizing staff to participate in the ICT implementation in school.

Practical

1.3.04 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- (a) Develop and communicate an ICT Vision in tandem with the school vision
- (b) Develop and communicate a school ICT policy

1.3.05 Content

- Development of ICT vision
- Development of an ICT policy

Activities

- Discussion
- Interactive Lecture
- Practical tasks

Resources

- Reference books.
- Links to relevant online Resources.
- UNESCO ICT-enhanced teacher standards for Africa (ICTeTSA).
- Badiliko Facilitators' Manual (Session 3 page 54 to 67).
- National ICT policy.
- ISO 27000(1-6).
- Training manual.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment methods

- Oral assessment.
- Assignment.
- Projects.

1.4.0 BUILDING EFFECTIVE ICT TEAMS

1.4.01 Competencies

At the end of the sub-module unit, the trainee should have the ability to:

- (i) Develop effective ICT teams .
- (ii) Resolve conflicts in teams.
- (iii) Empower and motivate team members.

1.4.02 Specific Objectives

By the end of the sub-module unit, the trainee should be able to:

- (a) Describe the process of team development.
- (b) Discuss strategies of conflict management within a team.
- (c) Discuss factors contributing to ICT teams effectiveness.

1.4.03 Content

- Team development process.
- Strategies of conflict management within a team.
- Factors contributing to ICT team effectiveness.
 - Delegation of Power,
 - Empowering others
 - Developing Others

Activities

- Discussions.
- Interactive Lectures.
- Group tasks.

Resources

- Reference books.
- UNESCO ICT-enhanced teacher standards for Africa (ICTeTSA).
- Badiliko Facilitators' Manual (Session 3 page 70).
- Training manual.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment methods

- Oral assessment.
- Assignment.

1.5.0 KEY STAKEHOLDERS INVOLVEMENT IN ICT INTEGRATION

1.5.01 Competencies

At the end of the sub-module unit, the trainee should have the ability to:

- Identify the key stakeholders.
- Determine the role of various stakeholders.
- Engage the stakeholders in ICT integration.

1.5.02 Specific Objectives

By the end of the sub-module unit, the trainee should have the ability to:

- Assess the qualities of key stakeholders.
- Identify the role of various stakeholders.
- Identify ways of engaging the stakeholders in ICT integration.

1.5.03 Content

- Qualities of key stakeholders.
- Roles of stakeholders.
- Ways of engaging the stakeholders in ICT integration.

Activities

- Questions and Answers.
- Debates.
- Field Visits.
- Discussions.

Resources

- Reference books.
- Resource persons.
- Journals .
- Internet.

- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt
- Training manual.

Assessment methods

- Assignments
- Oral assessment

1.6.0 RESOURCE MOBILIZATION AND SUSTAINABILITY

1.6.01 Competencies

At the end of the sub-module unit, the trainee should have the ability to:

- Mobilize Resources for ICT integration.
- Create strategies for sustainability of ICT integration project.

1.6.02 Specific Objectives

By the end of the sub-module unit, the trainee should have the ability to:

- Describe resource mobilization skills .
- Determine strategies for sustaining ICT integration projects.

1.6.03 Content

- Mobilization skills:
 - Sourcing of funds.
 - Networking / Partnerships.
- Strategies for sustaining ICT integration projects.

Activities

- Case Study.
- Debates.
- Field Visits.
- Discussions.

Resources

- FHI 360 Sustainability Toolkit.
- Reference books.
- Resource persons.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment methods

- Assignment (Case study).

2.0 BASIC ICT SKILLS, INTERNET USE, MAINTENANCE, SAFETY, SECURITY AND ETHICS

Code	Sub Module Unit	Content	Total Hours
2.1.0	Introduction to ICT	<ul style="list-style-type: none"> • Definition of key ICT terms; • History of computing; • Applications of ICT in personal life and school environment; • Benefits of ICT in personal life and school environment; • The roles of ICT in enhancing; <ul style="list-style-type: none"> - Class management. - Teaching and learning. - Assessment and examinations. - Communication and collaboration. 	2hrs
2.2.0	ICT Devices and use	<ul style="list-style-type: none"> • ICT hardware devices. • Parts of ICT hardware devices. • Appropriate ICT devices for teaching and learning. <ul style="list-style-type: none"> - Conventional class. - PWD-Persons With Disabilities. • Integration of ICT devices in teaching and learning. 	2hrs
	Introduction to Operating Systems	<ul style="list-style-type: none"> • Types of operating systems. <ul style="list-style-type: none"> - Open Source. - Licensed. - GUI-Graphical User Interface. - Command line. • Functions of operating systems. • Managing Files and Folders. <ul style="list-style-type: none"> - User interface tools. - Creating folders and files. - Performing basic file operations. 	
2.3.0	Application programs	<ul style="list-style-type: none"> • Basic features of applications programs. • Application programs for specific teaching and learning tasks. <ul style="list-style-type: none"> - Word Processing. - Spreadsheets. - Presentation programs. - Interactive Data Journals programs. 	6hrs

Code	Sub Module Unit	Content	Total Hours
	Accessibility Tools	<ul style="list-style-type: none"> Customizing a system. Ease of access centre. Adapting teaching and learning materials. <ul style="list-style-type: none"> - Narrators. - Magnifying. 	2hrs
2.4.0	Internet Access and Use	<ul style="list-style-type: none"> The internet. Online Resources. Networking and collaboration. 	2hrs
2.5.0	Basic Support and Maintenance	<ul style="list-style-type: none"> Basic Troubleshooting. Maintenance. Support. 	2 hrs
2.6.0	Safety, Security and Ethics	<ul style="list-style-type: none"> Safety procedures. Security measures. Ethical use of ICTs. 	2 hrs

2.1.0 INTRODUCTION TO ICT

2.1.01 Competencies

At the end of the sub-module unit, the trainee should have the ability to:

- (i) Apply ICT skills in :
 - Daily life and school environment
 - Personal and professional development

Theory

2.1.02 Specific Objectives

By the end of the sub-module unit the trainee should be able to:

- (a) Define key ICT terms.
- (b) Outline the history of computing relevant to education.
- (c) Describe the applications of ICT in personal life and school environment.
- (d) State the benefits of ICT in personal life and school environment.

2.1.03 Content

- Definition of key ICT terms.
- History of computing.
- Applications of ICT in personal life and school environment.
- Benefits of ICT in personal life and school environment.

Activities

- Interactive lectures
- Discussions
- Question and answer

Resources

- CEMASTEa manual on ICT integration in Teaching and Learning(online collaboration).
- Ministry of education Manual On ICT Integration in Teaching and learning(Internet Use).
- www.elimika.ac.ke, www.elimuportal.net , www.mwalimukenya.org
- www.tsc.go.ke , www.teachersonline.go.ke
- www.kie.ac.ke , www.britishcouncil.org/schoolsonline.
- <http://www.convinceandconvert.com/social-media-tools>
- Partner in learning network www.pil-network.com
- Preloaded content, offline, DVDs.
- Training manual.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Practical

2.1.04 Specific Objectives

By the end of the sub-module unit the trainee should be able to:

- (a) Apply ICT skills to enhance the roles of a teacher.

2.1.05 Content

The roles of ICT in enhancing:

- Class management.
- Teaching and learning.
- Assessment and examinations.
- Communication and collaboration.

Activities

- Interactive lectures.
- Practical tasks.
- Discussions.
- Demonstrations.
- Session presentations.

Resources

- www.elimika.ac.ke .
- Partners in Learning: ICT Skills for Teachers- http://www.schoolnet.org.za/PILP/scenarios/sc_appl_index.htm.
- Digital Literacy Curriculum- <http://www.microsoft.com/about/corporatecitizenship/citizenship/giving/programs/up/digitalliteracy/default.msp>.
- CEMASTEa Manual.

- MoE Manual on ICT integration in teaching and learning.
- Intel Teach.
- Training manual.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment Methods

- Practical assessment.
- Assignments.
- Oral assessment.

2.2.0 ICT DEVICES AND USE

2.2.01 Competencies

At the end of the sub-module unit, the trainee should have the ability to:

- Determine appropriate devices for ICT integration in teaching and learning.
- Use common ICT devices in teaching and learning.

2.2.02 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- Identify ICT devices that can be integrated in teaching and learning.
- Describe parts of ICT hardware devices.
- Determine appropriate devices for specific teaching and learning tasks.
- Use ICT devices in teaching and learning.

2.2.03 Content

- ICT hardware devices.
- Parts of ICT hardware devices.
- Appropriate ICT devices for teaching and learning.
 - Conventional class.
 - PWD-Persons With Disabilities .
- Integration of ICT devices in teaching and learning.

Activities

- Session presentations.
- Demonstrations.
- Interactive lectures.
- Practical tasks.
- Discussions.

Resources

- Internet Resources.
- ICT Hardware devices.

- Training manual.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment Methods

- Practical tests.
- Oral tests.
- Assignments.

2.3.0 INTRODUCTION TO OPERATING SYSTEMS

2.3.01 Competencies

At the end of the sub module unit, the trainee should have the ability to:

- Determine appropriate operating system for teaching and learning.
- Manage teaching and learning content /hardware using an operating system.

Theory

2.3.02 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- Identify the basic components of an operating system.
- Explain the common functions of an operating system.

2.3.03 Content

- Types of operating systems.
 - Open Source.
 - Licensed .
 - GUI-Graphical User Interface.
 - Command line.
- Functions of operating systems.

Practical

2.3.03 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- Manage files and folders using an operating systems.

2.3.04 Content

- Managing files and folders.
 - User interface tools.
 - Creating folders and files.
 - Performing basic file operations.

Activities

- Practical tasks.
- Demonstration.
- Class discussion.

Resources

- Online Resources.
- Training manual.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment methods

- Practical test.
- Session presentation.

2.3.10 APPLICATION PROGRAMS

2.3.11 Competencies

At the end of the sub module unit, the trainee should have the ability to:

- Determine appropriate application programs for teaching and learning.
- Perform basic tasks using application programs for teaching and learning.

Theory

2.3.12 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- Identify the basic features of applications programs.
- Determine applications programs for specific teaching and learning tasks.

2.3.13 Content

- Basic features of applications programs.
- Application programs for specific teaching and learning tasks.

Activities

- Practical tasks.
- Demonstration.
- Class discussion.
- Question and Answers.

Resources

- Partners in Learning: ICT Skills for Teachers- http://www.schoolnet.org.za/PILP/scenarios/sc_appl_index.htm
- Digital Literacy Curriculum-<http://www.microsoft.com/about/corporatecitizenship/citizenship/giving/programs/up/digitalliteracy/default.msp>

- Training manual.
- Working computer.
- Running application program.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment methods

- Oral assessment.
- Practical assessment.

2.3.20 Word Processing

2.3.22 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- (a) Load and use word processors.
- (b) Edit and format text.
- (c) Manipulate tables and graphics.
- (d) Use basic functions and formulas.
- (e) Print a word document.

2.3.23 Content

- Getting started in word processing.
- Basic functions and formulas.
- Editing and formatting text.
- Printing a word document.
- Tables and graphics.

Activities

- Practical tasks.
- Discussions.
- Demonstrations.
- Question and Answer.

Resources

- Partners in Learning: ICT Skills for Teachers- http://www.schoolnet.org.za/PILP/scenarios/sc_appl_index.htm
- Digital Literacy Curriculum- <http://www.microsoft.com/about/corporatecitizenship/citizenship/giving/programs/up/digitalliteracy/default.mspx>
- Training manual.
- Working computer.
- Running word processor.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment methods

- Practical test.
- Oral assessment.

2.3.10 Spreadsheets

2.3.11 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- (a) Identify the components of a spreadsheet.
- (b) Manipulating numeric data.
- (c) Generate output forms.
- (d) Print a spreadsheet.

2.3.12 Content

- (a) Components of a spreadsheet.
- (b) Numeric data in spreadsheets
- (c) Output forms.
- (d) Print a spreadsheet.
 - Page.
 - Worksheet.
 - workbook.

Activities

- Practical tasks.
- Demonstrations.
- Discussions.

Resources

- Partners in Learning: ICT Skills for Teachers- http://www.schoolnet.org.za/PILP/scenarios/sc_appl_index.htm
- Digital Literacy Curriculum- <http://www.microsoft.com/about/corporatecitizenship/citizenship/giving/programs/up/digitalliteracy/default.mspx>
- Working computers.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt
- Running spreadsheet.

Assessment methods

- Practical test.
- Oral assessment.

2.3.13 Presentation programs

2.3.14 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- (a) Identify the basic components of a presentation programs.
- (b) Determine the uses of components of a presentation program.
- (c) Create a presentation.
- (d) Print a presentation.

2.3.15 Content

- Components of a presentation program.
- uses of components of a presentation program.
- Creating a presentation.
 - Master slides.
 - Text .
 - Graphics.
 - Multimedia.
- Printing presentation.
 - Slides per page.
 - Speaker's notes.

Activities

- Practical tasks.
- Demonstrations.
- Discussions.
- Question and answer.

Resources

- Partners in Learning: ICT Skills for Teachers- http://www.schoolnet.org.za/PILP/scenarios/sc_appl_index.htm
- Digital Literacy Curriculum- <http://www.microsoft.com/about/corporatecitizenship/citizenship/giving/programs/up/digitalliteracy/default.msp>
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt
- Functional computers.
- Running presentation program.
- Screen Projector.
- Printer.

Assessment methods

- Practical test.
- Class presentation.

2.3.50 Interactive Data Journals programs

2.3.52 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- (a) Identify the basic components of a data journal program
- (b) Use components to manipulate data in journal program.
- (c) Create an e-diary using a data journal program.
- (d) Share data through data journal program.

2.3.53 Content

- Basic components of a data journal program.
- Functions of a data journal's components.
- Creating an e-diary.
- Sharing data.

Activities

- Practical tasks.
- Demonstrations.
- Class discussions.
- Question and answer.

Resources

- Partners in Learning: ICT Skills for Teachers- http://www.schoolnet.org.za/PILP/scenarios/sc_appl_index.htm
- Digital Literacy Curriculum- <http://www.microsoft.com/about/corporatecitizenship/citizenship/giving/programs/up/digitalliteracy/default.msp>
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt
- Working computers.
- Running data journal program.
- Screen Projector.
- Printer.

Assessment methods

- Practical assessment.
- Class presentation.

2.3.60 Accessibility Tools

2.3.61 Competencies

At the end of the sub-module unit the trainee should have the competence to:

- (i) Customize a system to make it accessible to people with special needs.
- (ii) Adapt teaching materials for use in a customized system for learners with special needs.

2.3.62 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- (a) Customize a system to make it more accessible to learners with special needs.
- (b) Adapt teaching materials to make them more accessible to all learners.

2.3.63 Content

- Customizing a system.
 - Ease of access centre.
- Adapting teaching and learning materials.
 - Narrators.
 - Magnifying.

Activities

- Practical tasks.
- Demonstrations.
- Discussions.
- Question and answer.

Resources

- Accessibility tutorials.
- Accessibility tools.
- Working computers.
- Running operating systems.
- Training manual.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment methods

- Practical tests.
- Oral assessment.
- Session presentation.s

2.4.0 INTERNET ACCESS AND USE

2.4.01 Competencies

At the end of the sub-module unit, the trainee should have the ability to:

- Determine online resources appropriate to teaching and learning.
- Utilize online tools for teaching and learning.
- Share online teaching and learning Resources.

2.4.02 Specific Objectives

- (a) Identify online Resources for use in teaching and learning.
- (b) Access online Resources for use in teaching and learning.
- (c) Develop online integrated teaching and learning Activities.
- (d) Share online teaching and learning Resources.

2.4.03 Content

- The internet.
- Online Resources.
- Networking and collaboration.

Activities

- Practical Tasks.
- Demonstrations.
- Session Presentations.

Resources

- CEMASTEIA manual on ICT integration in Teaching and Learning(online collaboration).
- Ministry of education Manual On ICT Integration in Teaching and learning(Internet Use).
- Intel teach Module 2 (Internet use).
- (www.elimika.ac.ke, www.elimuportal.net, www.mwalimukenya.org).
- www.tsc.go.ke , www.teachersonline.go.ke
- www.kie.ac.ke , www.britishcouncil.org/schoolsonline.
- <http://www.convinceandconvert.com/social-media-tools>
- Partner in learning network www.pil-network.com
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt
- Preloaded content, offline, DVDs.
- Working computers.
- Internet connectivity.
- Running browser.

Assessment Methods

- Practical assessment.
- Presentation assessment.
- Oral assessment.

2.5.0 BASIC SUPPORT AND MAINTENANCE

2.5.01 Competence

At the end of the sub module unit, the trainee should have the ability to:

- (i) Troubleshoot the computer systems.
- (ii) Support other ICT systems users.

2.5.02 Specific Objectives

By the end of the sub- module unit the trainee should be able to:

- (a) Identify basic ICT problems.
- (b) Solve basic ICT problems.
- (c) Provide support to ICT users.

2.5.03 Content

- Basic troubleshooting.
- Maintenance.
- Support.

Activities

- Practical tasks.
- Demonstrations.

Resources

- Trouble shooting manuals.
- Working computers.
- Toolkit.
- Bootable DVDs.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment Methods

- Practical assessment.
- Oral assessment.

2.5.05 Content

- Troubleshooting or carrying first line maintenance of ICT devices.

Activities

- Practical tasks.

Resources

- Manufacturers websites e.g. www.microsoft.com, www.oracle.com
- Equipment user and technical manuals.
- Installation steps.
- System documentations.

- Technical blogs and websites
- TSC and MOE technical service areas
- Training manual
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment methods

- Practical assessment
- Oral assessment.

2.6.0 SAFETY, SECURITY AND ETHICS

2.6.01 Competencies

At the end of the sub-module unit the trainee should have the ability to:

- Determine the best practice in use of ICTs.
- Create conducive environment for use of ICTs.

2.6.02 Specific Objectives

By the end of the topic, the trainee should be able to:

- Identify safety procedures for using ICTs in teaching and learning.
- Identify security measures for ICTs infrastructure.
- Evaluate the ethical uses of ICTs in Teaching and learning.

2.6.03 Content

- Safety procedures.
- Security measure.
- Ethical use of ICTs.

Activities

- Class presentation.
- Practical exercises.
- Demonstration.
- Interactive lectures.
- Class discussions.

Resources

- Reference books.
- White board.
- Ethical guidelines.
- Safety and security Manuals.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment methods

- Practical assessment.
- Oral assessment.

3.0 ICT INTEGRATION IN TEACHING AND LEARNING

Code	Sub Module Unit	Content	Total (Hours)
3.1.0	Change Management	<ul style="list-style-type: none"> Change management towards 21st skills ICT and the changing role of the teacher Change management model 	2hrs
3.2.0	Steps Towards ICT Integration	<ul style="list-style-type: none"> ICT tools Importance of ICT integration ICT tools for teaching and learning Integration of ICTs in teaching and learning 	6hrs
3.3.0	Instructional Practice	<ul style="list-style-type: none"> Innovative instructional approaches <ul style="list-style-type: none"> - Teacher design teams - Characteristics of a 21st century classroom environment - Learner-centered teaching and learning Management of ICT classroom 	2hrs
3.4.0	Content Knowledge and Curriculum Support	<ul style="list-style-type: none"> Integration of ICT in teaching/Learning Process ICT enhancement of pedagogical processes Teaching learning Activities/Experiences Use of digital content in learning Designing ICT learning Resources Accessing learning Resources online 	4hrs
3.5.0	Continuous Learning/Life-long Learning	<ul style="list-style-type: none"> Learning beyond the classroom Project /Problem based learning 	2hrs
3.6.0	Introduction of the 21 st Century Skills	<ul style="list-style-type: none"> Introduction to the 21st Century skills Skills of the 21st century at the workplace Skills of the 21st century in Homes and families Skills of the 21st century in Communities and Citizen and global village Skills of the 21st century in Schools 	2hrs

Code	Sub Module Unit	Content	Total (Hours)
3.7.0	Collaboration	<ul style="list-style-type: none"> • Define collaboration • Aspects of collaboration • Collaboration skills at the workplace • Collaboration skills in home and families • Collaboration skills in communities, citizens and global village • Collaboration skills in schools 	2hrs
3.8.0	Problem Solving	<ul style="list-style-type: none"> • design a learning activity that show learners/teachers sharing responsibility and making substantive decisions with other people • design a learning activity that embeds Problem solving in the workplace • design a learning activity that embeds Problem solving in homes and families • design a learning activity that embeds Problem solving in communities, citizens and global village • design a learning activity that embeds Problem solving in schools 	2hrs
3.9.0	Communication	<ul style="list-style-type: none"> • design a learning activity that show learners/teachers sharing responsibility and making substantive decisions with other people • design a learning activity that embeds Effective Communication in the workplace • design a learning activity that embeds Effective Communication in homes and families • design a learning activity that embeds Effective Communication in communities, citizens and global village • design a learning activity that embeds Effective Communication in schools 	2hrs

Code	Sub Module Unit	Content	Total (Hours)
3.10.0	Creativity and innovation	<ul style="list-style-type: none"> • Define Creativity and innovation • Aspects of Creativity and innovation • Creativity and innovation skills at the workplace • Creativity and innovation skills in home and families • Creativity and innovation skills in communities, citizens and global village • Creativity and innovation skills in schools • design a learning activity that shows learners/teachers sharing responsibility and making substantive decisions with other people • design a learning activity that embeds Creativity and innovation in the workplace • design a learning activity that embeds Creativity and innovation in homes and families • design a learning activity that embeds Creativity and innovation in communities, citizens and global village • design a learning activity that embeds Creativity and innovation in schools 	2hrs
3.11.0	Self-regulation & initiative	<ul style="list-style-type: none"> • Define Self-regulation and direction skills • Aspects of Self-regulation and initiative • Self-regulation skills at the workplace • Self-regulation skills in home and families • Self-regulation skills in communities, citizens and global village • Self-regulation skills in schools • Designing learning Suggested teaching/learning Activities that require students to plan and assess their own work. • Designing Suggested teaching/learning Activities that embeds self-regulation in the workplace Homes and families, Communities, citizens and global village, Schools 	2hrs

Code	Sub Module Unit	Content	Total (Hours)
3.12.0	ICT Skill	<ul style="list-style-type: none"> Define ICT skills Aspects of ICT skills ICT skills at the workplace ICT skills in homes and families ICT skills in communities, citizens and global village ICT skills in schools <ol style="list-style-type: none"> design learning Suggested teaching/learning Activities that require students to be passive consumers of ICT, active users, or designers of an ICT product for an authentic audience design a learning activity that embeds ICT in homes and families design a learning activity that embeds ICT in communities, citizens and global village design a learning activity that embeds ICT in schools 	2hrs

3.1.0 CHANGE MANAGEMENT

3.1.01 Competence

At the end of the sub- module unit the trainee should have the ability to:

- Apply 21st century skills in teaching and learning.

3.1.02 Specific Objectives

By the end of this sub- module unit, the trainee should be able to:

- Identify the 21st century skills.
- Outline the change management principles in teaching and learning.
- Discuss the change management process in teaching and learning.
- Determine methods of monitoring and evaluation effectiveness of change.

Content

- 21st century skills.
- Principles of change management.
- Change management process.

Practical

3.1.03 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- Apply 21st century skills in teaching and learning.
- Create a roadmap for change.

Content

- Application of 21st century in teaching and learning
- Creating a roadmap for change.

Activities

- Session presentations
- Practical tasks.
- Demonstrations.
- Interactive lectures.
- Discussions.
- Role play.
- Question and answer.

Resources

- Partners in learning (PIL) change management tool kit (ONE NOTE).
- MOE ICT integration in teaching and learning manual (session 2 – ICT and the changing role of the teacher).
- INTEL TEACH getting started (module 12 – Accepting Change).
- BADILIKO facilitators' manual (session 1- Managing change).
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt
- Training manual.
- ICT devices e.g. Mobile phones, radio, TV.
- Flip chart.
- Marker pen.
- Data projector.
- Computer.

Assessment Method

- Assignments.
- Written tests.
- Active observation.
- Use of assessment tool.

3.2.0 STEPS TOWARDS ICT INTEGRATION

3.2.01 Competence

At the end of the sub- module the trainee should have the ability to:

- (i) Integrate ICTs in teaching and learning.

Theory

3.2.02 Specific Objectives

By the end of the sub- module, the trainee should be able to:

- (a) Identify ICT tools for teaching and learning.
- (b) Explain ICT integration and its importance in teaching and learning.
- (c) Identify effective ICT approaches in teaching and learning.
- (d) Discuss how ICTs can be integrated in teaching and learning.

Content

- ICT tools.
- Importance of ICT integration.
- ICT tools for teaching and learning.
- Integration of ICTs in teaching and learning.

Practical

3.1.01 Specific Objectives

By the end of the sub- module, the trainee should be able to:

- (i) Identify areas for ICT integration in teaching and learning.
- (ii) Create an integrated lesson.

Content

- Topical areas in the curriculum suitable for ICT integration.
- Integrated lessons.

Activities

- Presentations.
- Practical exercises.
- Demonstrations.
- Interactive lectures.
- Discussions.
- Question and answer.

Resources

- Partners in learning (PIL) change management tool kit (ONE NOTE)
- MOE ICT integration in teaching and learning manual (session 2 – ICT and the changing role of the teacher).
- INTEL TEACH getting started (module 12 – Accepting Change).
- BADILIKO facilitators' manual (session 1- Managing change).
- Teacher handbook/ guides (support).
- ICT devices e.g. Mobile phones, radio, TV.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt
- Flip chart.
- Marker pen.
- Data projector.
- Working computer.

Assessment Method

- Assignments.
- Written tests.
- Active observation.
- use of assessment tool.

3.3.0 INSTRUCTIONAL PRACTICE

Competence

At the end of the sub-module unit the trainee should have the ability to;

- (i) Apply relevant innovative approaches in teaching and learning.

Specific Objectives

By the end of the sub-module unit, the trainee should be able to;

- (a) Plan and organize for a 21st century skills classroom environment.
- (b) Prepare and facilitate a learner-centred ICT integrated lesson.
- (c) Manage an ICT classroom (a 21st century classroom environment).

Content

- Planning and organizing a 21st century classroom environment.
- Characteristics of a 21st century classroom environment.
- Learner-centered ICT integrated lesson.
- Management of ICT classroom environment.

Activities

- Interactive lecture.
- Discussions Sessions.
- Presentations.

Resources

- ICT integration tools.
- Training manual.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment methods

- Observation.
- Oral assessment.
- Practical assessment.

3.4.0 CONTENT KNOWLEDGE AND CURRICULUM SUPPORT

Competence

At the end of the sub-module unit, the trainee should have the ability to:

- (i) Effectively integrate technology in teaching and learning.

Specific Objectives

By the end of the sub-module unit, the trainee should be able to;

- (i) Integrate technology in the teaching/ learning process.

Content

- Integration of ICT in teaching/learning process

Activities

- Interactive lectures.
- Practical tasks.
- Discussions Sessions.
- Presentations.

Resources

- Use of available Digital Content e.g. KICD.
- Education portals e.g. elimika.
- Resource Persons e.g. TAC tutors and ICT Champions.
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt

Assessment methods

- Practical assignments.
- Observations.
- Oral tests.

3.5.0 CONTINUOUS LIFELONG LEARNING

Competencies

At the end of the sub-module unit, the trainee should be able;

- (i) Determine the role of ICTs in lifelong learning.
- (ii) Create problem based educational projects using ICTs.

Specific Objectives

By the end of the sub-module unit the trainee should be able to:

- (a) Outline the role of ICTs in lifelong learning
- (b) State strategies that enhance integration of ICTs in lifelong learning.
- (c) Develop projects that enhance lifelong learning using ICTs.

Content

- Role of ICTs in lifelong learning.
- Strategies for lifelong learning.
- Problem based projects learning.

Activities

- Interactive lectures.
- Designing strategies for lifelong learning.
- Developing projects that enhance lifelong learning.

Resources

- Partners in learning Resources.
- Intel teach.
- British council schools online project based on learning Activities.
- Interactive radio lessons, Edu-channel, on/offline Resources (Open Distance Learning).
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt
- Resource persons.
- Online Resources.

Assessment methods

- Project assessment.
- Oral assessment.

3.6.0 21ST CENTURY SKILLS

3.6.01 Competencies

At the end of the sub-module unit, the trainee should have the ability to:

- (i) Determine the 21st century skills necessary for integration of ICTs in teaching and learning.
- (ii) Develop strategies for using 21st century skills in teaching and learning.

Theory

3.6.02 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- (a) Identify the 21st century skills at the workplace, homes and familie, schools, communities and citizen and global village.

3.6.02 Content

Skills of 21st century at: work place, homes and families, schools, communities and citizen and global village.

Practical

3.6.03 Specific Objectives

By the end of the sub-module unit, the trainee should be able to:

- (a) Design learning Activities that enhance the 21st century skills at the workplace, homes and families, schools, communities ,citizen and global village.

Content

- (a) Designing learning Activities that embrace 21st skills at the workplace, homes and families, schools, communities ,citizen and global village.

Activities

- Group discussions.
- Debate.
- Projects.
- Demonstrations.
- Presentations.

Resources

- Partners in learning 21CLD learning Activity rubrics 2013.
- Websites (Elimika, Badiliko, PIL).
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt
- Badiliko manual.
- Intel teach – getting started.
- Resource Persons.
- Training manual.
- Checklist for 21st century skills.

Assessment methods

- Assignments.
- Observation.
- Practical assessment.

3.7.0 COLLABORATION

3.7.01 Competencies

At the end of the sub- module unit the trainee should have the ability to:

- (i) Design learning Activities that develop collaboration skills for the learners.
- (ii) Collaborate with other teachers.
- (iii) Work effectively with all learners.

Theory

3.7.02 Specific Objectives

By the end of the sub-module unit, the trainee should be able to:

- (a) Describe the different aspects of collaboration.
- (b) Identify collaboration skills in the workplace, homes and families, school, communities , citizen and global village.

Content

Aspects of collaboration.

Collaborations skills in: work place, workplace, homes and families, schools, communities ,citizens and global village.

Practical

3.7.03 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- (a) Design learning Activities that require learners/teachers to share responsibility and make substantive decisions with other people
- (b) Design learning Activities that embed collaboration skills in the workplace, homes and families, communities, schools, citizen and global village.

Content

- Designing teacher/learner collaboration Activities.
- Designing learning Activities that embed collaboration in the workplace, homes and families, schools, communities, citizens and global village.

Activities

- Group Discussions.
- Debate.

- Projects.
- Demonstrations.
- Session presentations.

Resources

- Partners in learning 21CLD learning Activity rubrics 2013.
- Websites(elimika).
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt
- Resource Persons.
- Training manual.

Assessment methods

- Assignments.
- Observation.

3.8.0 PROBLEM SOLVING

3.8.01 Competencies

At the end of the sub- module unit the trainee should have the ability to:

- Design learning Activities that develop problem solving skills for the learners.
- Develop teachers' capacity to use different approaches that enhances problem solving skills
- Integrate problem solving skills in their teaching and learning Activities
- Solve different problems in an innovative way.

Theory

3.8.02 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- Define problem solving.
- Describe the different aspects of problem solving.
- Identify problem solving skills in the workplace, homes and families, schools, communities , citizen and global village.

Content

- Meaning of problem solving
- Aspects of problem solving
- Problem solving skills at the workplace, homes and families, communities, citizens and global village, and schools

Practical

3.8.03 Specific Objectives

By the end of the sub-module unit, the trainee should be able to:

- (a) Design learning Activities that require learners/teachers to use their problem solving skills.
- (b) Designing learning Activities that embed collaboration in the workplace, homes and families, schools, communities, citizens and global village.

Content

- Design a learning activity that embeds problem solving in the workplace, homes and families, schools, communities, citizens and global village.

Activities

- Group Discussions.
- Debate.
- Projects.
- Demonstrations.
- Session presentations.

Resources

- Partners in learning 21CLD learning Activity rubrics 2013.
- Websites (PIL. Elimika, Intel teach, badiliko).
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt
- Resource Persons
- Training manual.

Assessment methods

- Assignments.
- Observation.

3.9.0 COMMUNICATION

3.9.01 Competencies

At the end of the sub-module unit, the trainee should have the ability to:

- (i) Design learning Suggested teaching/learning Activities that develop communication skills for the learners.
- (ii) Develop teachers' capacity to use different approaches that enhances communication skills.
- (iii) Integrate effective communication skills in their teaching and learning Suggested teaching/learning Activities.

Theory

3.9.02 Specific Objectives

By the end of the sub-module unit, the trainee should be able to:

- (a) Define effective communication.
- (b) Describe the different aspects of effective communication.
- (c) Identify effective communication skills in the workplace, homes and families, schools, communities, citizens and global village.

Content

- Define Effective Communication
- Aspects of Effective Communication
- Effective communication skills at the workplace, homes and families, communities, citizens and global village, and schools

Practical

3.9.03 Specific Objectives

By the end of the sub-module unit, the trainee should be able to:

- (a) Design learning Activities that require students to communicate their own ideas regarding a concept or issue.
- (b) Design learning Activities that embed Effective Communication skills in the workplace, homes and families, communities, citizens and global village, and schools

3.9.04 Content

- (a) Designing learning Activities that require students to communicate their own ideas regarding a concept or issues.
- (b) Designing learning Activities that embeds effective communication in the workplace, homes and families, communities, citizens and global village, and schools.

Activities

- Group Discussion.
- Debate.
- Demonstrations.
- Presentations.

Resources

- Partners in learning 21CLD learning Activity rubrics 2013.
- Websites(Elimika, PIL, Intel).
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt
- Resource persons.
- Training manual.

Assessment methods

- Assignments

3.10.0 CREATIVITY AND INNOVATION

3.10.01 Competencies

At the end of the sub-module unit, the trainee should have the ability to:

- (i) Design Activities that develop creativity and innovative skills for learners.
- (ii) Develop teachers' capacity to use different approaches that enhances creativity and innovation skills.
- (iii) Integrate creativity and innovativeness skills in their teaching and learning Activities.

Theory

3.10.02 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- Define creativity and innovation.
- Describe the different aspects of creativity and innovation.
- Identify creativity and innovation skills in the workplace, homes and families, communities, citizens and global village, and schools.

Content

- Meaning of creativity and innovation.
- Aspects of creativity and innovation.
- Creativity and innovation skills at the workplace, homes and families, communities, citizens and global village, and schools.

Practical

3.10.02 Specific Objectives

At the end of the sub- module unit, the trainee should be able to:

- (a) design learning Activities that embed creativity and innovation skills in the workplace, homes and families, communities, citizens and global village, and schools.

Content

- (a) Designing creative and innovative learning Activities in the workplace, homes and families, communities, citizens and global village, and schools.

Activities

- Group discussions.
- Debate.
- Demonstrations.
- Session presentations.

Resources

- Partners in learning 21CLD learning Activity rubrics 2013.

- Websites(Elimika, PIL, Intel).
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt
- Resource Persons.
- Training manual.

Assessment methods

- Assignments.
- Oral tests.

3.11.0 SELF-REGULATION & INITIATIVE

3.11.01 Competencies

At the end of the sub-module unit the trainee should have the ability to:

- Design learning Activities that develop self-regulation skills for the learners.
- Develop teachers' capacity to use different approaches that enhance self-regulation skills.
- Integrate self-regulation skills in their teaching and learning Activities.

Theory

3.11.02 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- Define self-regulation.
- Describe the different aspects of self-regulation.
- Identify Self-regulation skills in the workplace homes and families, communities, citizens and global village and schools.

Content

- Definition of self-regulation and direction skills.
- Aspects of self-regulation and initiative.
- Self-regulation skills at the workplace homes and families, communities, citizens, global village and schools.

Practical

3.11.02 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- Design learning Activities that require students to plan and assess their own work.
- Design learning Activities that embed self-regulation skills in the workplace homes and families, communities, citizens and global village, schools.

Content

- Designing learning Activities that require students to plan and assess their own work.
- Designing Activities that embeds self-regulation in the workplace homes and families, communities, citizens, global village and schools

Activities

- Group discussions.
- Debate.
- Projects.
- Demonstrations.
- Session presentations.

Resources

- Partners in learning 21CLD learning Activity rubrics 2013.
- Websites(Elimika, PIL, Intel).
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt
- Resource Persons.
- Handbook.

Assessment methods

- Assignments.
- Oral tests.

3.12.0 ICT SKILLS

3.12.01 Competencies

By the end of the sub-module unit, the trainee should have the ability to:

- (i) Design learning Activities that develop ICT skills for the learners.
- (ii) Develop teachers' capacity to use different approaches that enhances ICT skills.
- (iii) Integrate ICT skills in their teaching and learning Activities.

Theory

3.12.02 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- (a) Define ICT skills.
- (b) Describe the different aspects of ICT.
- (c) Identify ICT skills in the workplace homes , families, communities, citizens , global village and schools .

Content

- Definition of ICT skills.
- Aspects of ICT skills.
- ICT skills at the workplace homes and families, communities, citizens and global village, schools.

Practical

3.12.02 Specific Objectives

By the end of the sub- module unit, the trainee should be able to:

- (a) Design learning Activities that require learners to utilize ICTs in learning.
- (b) Design learning Activities that embed ICT skills in the workplace, homes, families, communities, citizens, global village and schools.

Content

- Designing learning Activities that require students to utilize ICTs in learning.
- Designing learning Activities that embed ICT in workplace ,homes and families, communities, citizens, global village and schools.

Activities

- Group discussions.
- Debates.
- Demonstrations.
- Session presentations.

Resources

- Partners in learning 21CLD learning Activity rubrics 2013.
- Websites (elimika, PIL, Intel teach, badiliko).
- Microsoft Teach with Technology - www.pil-network.com/pd/curriculum/twt
- Resource persons.
- Training manual.

Assessment methods

- Assignments.
- Practical assessment.

ANNEX I

Writing Panel

NAME	ORGANIZATION
1. Christopher Khaemba	T S C
2. Mutuku Nguli	British Council
3. Anne Njagi	T S C
4. Francis Mwarucha	T S C
5. Catherine Mwaura	T S C
6. Elijah Gesusu	T S C
7. Joyce Muchori	T S C
8. David Kanyoro	T S C
9. Mwirigi Kiula	JKUAT
10. Brian Indimuli	JKUAT
11. Kenneth Jumba	KLB
12. Martin Kungania	MOE
13. John Oyuga	NI3C
14. Purity Kibui	KEMI
15. Makoba Kizito	CEMASTEIA
16. Suraj Shah	INTEL
17. Stephen Oduor	INTEL
18. Joseph Onyango	Technology Partners
19. Dennis Nyakeka	World Vision
20. Joyce Rungu	KICD
21. Joab Oduor	KICD
22. Florence Keta	KICD
23. Emily Gumba	British Council
24. David Muya	British Council
25. Mandhir Grewal	British Council
26. Dan Otedo	British Council
27. Twalib Ibrahim	MODERATOR
28. Alex Nyingi	MICROSOFT
29. Phil Oduor	MICROSOFT
30. Hugh Moffatt	British Council
31. Dr. Mark Matunga	MICROSOFT
32. Prof. Mabel Imbuga	JKUAT

ANNEX II

Validating Panel

NAME	ORGANIZATION
1. Dr. Lydia Nzomo OGW	KICD
2. John Kimotho	KICD
3. Reuben Nthamburi	KICD
4. Esther Gacicio	KICD
5. Eunice Gachoka	KICD
6. Samuel Nyaga	KICD
7. Jennifer Wambugu	KICD
8. Kanyi Gioko	KICD
9. Joseph Wambua	KICD
10. Grace Mwiti	KICD
11. Martin Kagiri	KICD
12. Dorothy Mwanzile	KICD