KD Module 1: Understanding ICT in Education

Unit 1: Advancing Policy through Classroom Action and the use of Technology

Objectives:   
Pre-service teachers should be able to explain and analyse the principles of using ICT in education. Describe how these principles can be put into practice in their own teaching. Analyse the issues that arise in implementing these principles and how the issues can be addressed (UNESCO ICT, KD.1.a).

****Duration:   
Total of 3 notional hours – 1 hour lecture and 2 hours group tutorial.

# A] Lecture (Total 1 hour)

**Notes to Lecturer**

The students will require some guidance on how to go about developing relevant and engaging learning activities. The checklist of questions below should be presented to the students as a tool that can be used in order to focus their thinking and guide them as they develop a particular learning activity. These questions are only suggestions; you may want to change them or add some of your own. For more ideas refer to ‘*Being a Teacher*’. [[See Being a Teacher: Professional Challenges and Choices](M1/U1/Being_a_teacher_guide_B.pdf)]. Ideally you should work through an example lesson plan and facilitate a discussion on whether the lesson meets the requirements of the guidelines listed below. Example lesson plans can be downloaded from the web [see [www.lessonplanspage.com](http://www.lessonplanspage.com)].

## Guidelines for Creating Learning Activities[[1]](#footnote-1) [CC: BY-ND]

A learning activity that is not carefully planned and structured can confuse and discourage learners. As educators, our challenge is to use activities in a way that will motivate learners, and help them to achieve worthwhile learning outcomes. If activities don’t motivate and encourage learners, learners will try to find ways not to do them! When planning an activity, you should ask yourself the following four ‘big’ questions:

1. ***WHO is the activity for?***

* Is the activity at a manageable level for learners in this grade?
* Will the activity be real and interesting for the learners? (This will apply particularly if it is based on things that are part of their experience.)

1. ***WHY are they doing it?***

* What is the purpose of the activity?
* What new information will the learners learn?
* What will the learners learn to do? For example, will they learn new skills, will they learn new ways of thinking, will they practice working together, etc.?
* Will learners see some purpose in the activity?
* Is it clear to them why it is worthwhile to do the activity?
* Does the activity give them an opportunity to assess what they have done, or to think about what they are learning?

1. ***HOW will they do it?***

* Are the instructions clear, simple and well-ordered? (If not, the whole activity could be ineffective!)
* Does the activity require learners to work together meaningfully? (Collaborating with others is a valuable way of learning, although obviously some activities will be designed for individuals.)

1. ***WILL they really do it, and want to do more?***

* Have you used exciting/interesting material to stimulate the learners (for example, pictures, sounds, objects, articles, etc.)?
* Does the activity come from somewhere and go somewhere?
* Does it lead them into the next activity or topic?
* Does it provide the right level of challenge? (This can be tricky because if activities are too difficult too soon, some learners will lose confidence. It is useful to vary the level of challenge. Some activities can be easier than others, hence it is often useful to add optional challenges for learners who complete these activities quickly.)
* Does the activity provide feedback which will help to motivate learners and build their confidence?
* Have you encouraged learners to express their own ideas, and think about their own opinions? (This makes them feel valued and encourages critical thinking.)

Carefully planned learning activities that address the checklist of questions above will help develop the personal attributes or soft skills of learners, including:

* Empathy
* Teamwork
* Leadership
* Communication
* Good manners
* Negotiation
* Sociability
* The ability to teach.

## How Teaching Activities Support Education Policy

Remember, when you are creating activities, all the educational experiences must not only motivate learners and help them to achieve worthwhile learning outcomes, but also work towards achieving national objectives and priorities. See some national statements below:

 **Canada**

The Goals of the Learning and Technology Policy Framework from Canada (Alberta)

(Ref: [Alberta Learning](M1/U1/CAN_ltfwrk.pdf) 2004)

The following goals will provide direction for the use of technology and support the achievement of Alberta learning system objectives:

1. Access to quality learning opportunities is expanded
2. Learning is enriched
3. Learning outcomes are improved
4. Information and communication technology skills of Albertans are enhanced
5. The efficiency of learning system management is improved
6. Research and knowledge creation are advanced
7. Markets for learning programs, resources and services are expanded’

 **Kenya**

The Vision and Mission of Kenya’s National Information Communication Technology Strategy for Education and Training (Ref: [Min. Info. Comm](M1/U1/KEN_national_ict_policy.pdf). 2006)

**Vision**

The vision of the ministry is to facilitate ICT as a universal tool for education and training. In order to achieve this vision every educational institution, teacher, learner and the respective community should be equipped with appropriate ICT infrastructure, competencies and policies for usage and progress. It calls for recognition of the fact that ICT provides capabilities and skills needed for a knowledge-based economy. It also calls for transforming teaching and learning to incorporate new pedagogies that are appropriate for the 21st century.

**Mission**

The ministry’s mission is to facilitate effective use of ICT to improve access, learning and administration in delivery education programmes and services. The principal objective will be to integrate ICT in the delivery of education and training curricula.

 **Australia**

Australian Strategic Plan to guide the Implementation of the Digital Education Revolution initiative and related initiatives (Ref: [DER](M1/U1/AUS_DERStrategicPlan.pdf) 2008)

Aspirational Goals include:

* All students have personal access to an appropriate information access and/or computing device in all areas of learning
* Teachers devise student centric programs of learning that address agreed curriculum standards and employ contemporary learning resources and activities.
* Students engaged in rigorous and stimulating programs of learning that meet their individual needs and prepare them for success in 21st Century
* Courses and resources are available anywhere, anytime
* Parents able to view student programs and progress at any time online and communicate with teachers and school leaders
* Students and teachers routinely collaborate, build and share knowledge using digital technologies – blogs, file sharing, social networking, videoconferencing, etc.
* Students and teachers are able to innovate in their use of ICT to achieve learning outcomes.
* School leaders routinely plan at the school and system level for ongoing improvement enabled by ICTs

 **Namibia**

Namibian National Curriculum for Basic Education

(Ref: [Namibian MoE](M1/U1/NAM_National%20Curriculum%20for%20Basic%20Education%20Jan10.pdf) 2008)

**4.3 Framework of Phase ICT Competencies**

4.3.1 PRE-PRIMARY PHASE: On completion of the Pre-Primary

Learners participate freely in ICT- related activities and use educational games, software and multimedia appropriate to their purpose.

4.3.3 UPPER PRIMARY PHASE: On completion of the Upper Primary

Learners demonstrate understanding and correct use of software applications such as Microsoft Office and/or Open Office. They conduct basic navigation through the Windows environment or other operating systems.

4.3.4 JUNIOR SECONDARY PHASE: On completion of the Junior Secondary

Learners proficiently and legally use a computer and the most usual application packages, do basic programming, ensure computer hygiene, and explain the components and processes involved in computer information technology.

4.3.5 SENIOR SECONDARY PHASE: On completion of the Senior Secondary

Learners make appropriate selections from a range of hardware and software to solve information problems and systematically try out and evaluate ICT solutions. They communicate effectively through and about ICTs, and explain the practical and social effects of ICTs.

# C] Tutorial (2 hours)

**Notes to Tutor**

During the Technology Literacy course, students were given an opportunity to review the specific objectives of the National ICT Policy/Strategy Document, list the objectives that should be addressed within the classroom setting and brainstorm three classroom practices that would support the objectives. In this unit students will build on this knowledge by developing a carefully planned learning activity that aligns to the learning outcomes of the relevant ‘Word Processing’ section of an Information Technology Curriculum Guide.

Students should be divided into groups consisting of no more than 4 members. The team members in each group should be allocated a particular teaching level. Each group will require the Information Technology curriculum statement/guide from your particular country. If you are unable to get a copy of the curriculum statements/guide for your country, you can make use of ones from Guyana that are available on this CD.

Please note that Task 3 is a recommended **Portfolio Task** and it is recommended you collect the presentations in for evaluation. A marking memo is available [here](KD%20M01U01%20Marking%20Memo%20for%20Portfolio%20Task.docx).

**Task 1: Download Information Technology Curriculum Guide**

Working in tutorial groups (3-4 members), select the Information technology Curriculum Guide that is relevant to your groups’ particular teaching level.

Note: You may be assigned a grade that is different from your level of study. It is important to complete this activity as it will help you to become familiar with the ICT curriculum guides and develop an understanding of the learning outcomes which can be applied to you specific level of specialism or integrated into other subject/learning areas.

 **Guyana**

* [Information Technology Curriculum Guide (Grade 7)](M1/U1/IT%20Curriculum%20Guide%20Grade%207.pdf)[[2]](#footnote-2) [CC: BY-NC-ND]
* [Information Technology Curriculum Guide (Grade 8)](M1/U1/IT%20Curriculum%20Guide%20Grade%208.pdf)[[3]](#footnote-3) [CC: BY-NC-ND]
* [Information Technology Curriculum Guide (Grade 9)](M1/U1/IT%20Curriculum%20Guide%20Grade%209.pdf)[[4]](#footnote-4) [CC: BY-NC-ND]

Study the learning outcomes of the relevant *‘Word Processing’* section of the curriculum guide.

* Grade 7 – Introduction to Word Processing [See page 11]
* Grade 8 – Intermediate Word Processing [See page 11]
* Grade 9 – Advanced Word Processing [See page 22]

**Task 2: Information Technology Lesson Plan**

Create an activity for the Information Technology subject area that addresses the learning outcomes for the ‘*Word Processing’* topic. The activity should be aligned to the particular grade (7, 8 or 9) allocated to the group. When planning the activity make use of the checklist of questions presented as a tool to focus your thinking and guide you as you develop the learning activity.

Complete the form below by adding the details of a specific classroom activity using both the curriculum guide and your own knowledge of Information Technology.

|  |  |
| --- | --- |
| Lesson Plan | |
| Level (Primary/Secondary): | **Secondary** |
| Grade: |  |
| Subject: | **Information Technology** |
| Topic: |  |
| Objective: | |
| * *Skills:* |  |
| * *Knowledge:* |  |
| * *Attitude:* |  |
| Content: |  |
| Description of Activities (Methods/Strategies/Materials): |  |
| Evaluation: |  |
| Areas of Integration: |  |

**Task 3: Presentation of Learning Activity**

Please note that this activity is a recommended **Portfolio Task** and will be submitted for evaluation.

Prepare a short presentation which describes the learning activity and demonstrates the way in which it addresses the following questions:

1. WHO is the activity for?
2. WHY are they doing it?
3. HOW will they do it?
4. WILL they really do it, and want to do more?
5. In what way does this lesson plan contribute to the nations’ needs as expressed in national policy?
6. Explain and analyse the principles of using ICT in education.

Your tutor will also collect in the individual presentations.

# Resources Used in this Lesson Unit

SchoolNet SA, South African Department of Education, & South African Institute for Distance Education. (2010). *Commonwealth Educators' Network*. Retrieved from <http://www.schoolnet.org.za>.

Guyana Ministry of Education. (2011). *Level 7 - Information Technology Curriculum Guide*. Retrieved from <http://www.education.gov.gy/Public/Resource.aspx?cat=6>.

Guyana Ministry of Education. (2011). *Level 8 - Information Technology Curriculum Guide*. Retrieved from <http://www.education.gov.gy/Public/Resource.aspx?cat=7>.

Guyana Ministry of Education. (2011). *Level 9 - Information Technology Curriculum Guide*. Retrieved from <http://www.education.gov.gy/Public/Resource.aspx?cat=7>.

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Canada (Alberta) Minister of Learning. (2004). Learning and Technology Policy Framework. Retrieved from <http://www.csdms.in/gesci/pdf/CANADA-Alberta.pdf>

Kenya Ministry of Education. (2006). National Information Communication Technology (ICT) Strategy for Education and Training. Retrieved from <http://www.cck.go.ke/regulations/downloads/national_ict_policy.pdf>

Australian Department of Education, Training and Youth Affairs. (2008). Strategic Plan to guide the Implementation of the Digital Education Revolution initiative and related initiatives. Retrieved from <http://www.csdms.in/gesci/pdf/AUSTRALIA.pdf>

Namibian Ministry of Education (2008). National Curriculum for Basic Education. Retrieved from <http://www.nied.edu.na/publications/nieddocs/National%20Curriculum%20for%20Basic%20Education%20Jan10.pdf>

1. SchoolNet SA, South African Department of Education, & South African Institute for Distance Education. (2010). *Commonwealth Educators' Network.* Retrieved from <http://www.schoolnet.org.za>. [↑](#footnote-ref-1)
2. Guyana Ministry of Education. (2011). *Level 7 - Information Technology Curriculum Guide*. Retrieved from <http://www.education.gov.gy>. [↑](#footnote-ref-2)
3. Guyana Ministry of Education. (2011). *Level 8 - Information Technology Curriculum Guide*. Retrieved from <http://www.education.gov.gy>. [↑](#footnote-ref-3)
4. Guyana Ministry of Education. (2011). *Level 9 - Information Technology Curriculum Guide*. Retrieved from [http://www.education.gov.gy](http://www.education.gov.gy/Public/Resource.aspx?cat=7). [↑](#footnote-ref-4)