

The new Lower Secondary curriculum: syllabuses, assessment and exams.

By NCDC

In previous articles we explained that we are changing from a knowledge-based curriculum, mainly aimed at the needs of the minority of students who go on to higher education, to a skill and competence-based curriculum suitable for the needs of all, now that we are aiming for all students to go to Lower Secondary school. To achieve this we need syllabuses, methods of assessment and exams which all put an emphasis on understanding, skills and values as much as knowledge.

The new curriculum ensures this by the structure of the syllabuses for each of the Learning Areas outlined in the previous article.

Each syllabus has an introduction which specifies the skills which should be taught and used in the Learning Area. These include cognitive or thinking skills, as well as practical skills. They include skills special to the Learning Area, such as practical experiments in Science, field work in Social Studies or practical skills in Technology. They also include the Generic Skills listed in the previous article.

There are also lists of ways in which the Learning Area is linked to and contributes to the Core Values and Key Learning Outcomes of the whole curriculum. In addition, there is a list of ways in which the Learning Area is linked to other Learning Areas, so it is not taught in isolation, as subjects often are at present.

This ensures that teachers fulfill the basic aims of the new curriculum.

The syllabuses themselves are divided into Strands and sub-strands, with each sub-strand being one topic. Each sub-strand starts with a heading which names the topic and tells the teacher what the learners should achieve during the teaching e.g. in S2 Science: *Carbon in the environment: Learners should investigate the diversity of carbon compounds in the environment.* Notice, this is an active statement saying what learners should *do*. They are going to *investigate*, not just 'learn about'

Then there are three columns:

Learning Outcomes tell the teacher what should be the Outcomes of their teaching, again in terms of what learners should *achieve*. This is headed *Learners should...* This column shows what learners should *know, understand, be able to do (skills) and appreciate or have formed opinions about (values)*. Thus the four aims of knowledge, understanding, skills and values are all covered.

The second column *Evidence of Achievement statements* shows the teacher what the learner should be able to do at the end of the lessons to prove that they have achieved the outcomes. This column is headed *Learners can.....* This will give the teacher guidance for *activities* learners can do to achieve the outcomes. For instance, for the topic of carbon above, the teacher must ensure that the learners can:

State some of the uses of carbon structures such as carbon fibres and graphene. This is *knowledge*.

Explain the terms 'renewable' and 'non-renewable' as applied to fuels. This involves *understanding*.

Design an activity to make carbon dioxide by reaction of limestone and dilute hydrochloric acid. This is a *skill*.

Investigate fuel use in the area around the school and make proposals for ensuring that it becomes more sustainable. This involves the *skills* of doing field work but also links with the *values* of sustainability.

In all Learning Areas we want learners to start by looking at their own areas and environments, partly so they can begin to think of how to use their own environment when they leave school. So there is considerable encouragement to do field work wherever it is possible.

The third column of the syllabus is headed *Exemplar assessment activities*. This simply means examples of activities teachers can use to show whether the learners have achieved the outcomes we want.

In the present curriculum, assessment mainly relies on 'tests' and 'examinations' in written form, with marks or 'pass' or 'fail' at the end. The new curriculum encourages two forms of assessment.

Formative assessment is when teachers try to find out, during the normal teaching activities, whether learners have achieved the outcomes we want them to achieve. Since the new curriculum wants them to learn understanding, skills and values, not just knowledge, we cannot just rely on written tests where learners are expected to remember and reproduce what the teacher has taught them or what they read in the text book. We must give them assessment activities which assess whether they have understood the topic. This means giving activities where they have to *use* the knowledge they have learnt in a different way, not just reproduce it. Not just "*Name three renewable fuels*" but "*What kind of renewable energy would you recommend for your home region or any area you know well and why?*" They have to *think* about what they have learnt and *apply* it to new situations.

We must also test the *use of skills* and whether they have thought about *values*. In this case: "*Design and carry out an activity to make charcoal from waste organic materials*". This will test their *skills*.

"*Air pollution is a global problem. It can only be controlled if all the countries of the world, including Uganda, agree to do something about it. Why is this so?*" This tests both understanding and skills, but also *values* relating to pollution. It is not easy to assess values. One way is to ask questions like this one involving opinions. Another way is to ask groups to discuss topics involving values and to listen to groups and assess whether they can make valid arguments.

These types of *formative assessments* can be done informally within each lesson. They need not be marked, but they help the teacher to judge whether the Outcomes have been achieved, and what needs to be done to make sure they are achieved. Formative assessment is strongly encouraged in the new curriculum.

However, we still need *Summative assessment*, that is tests and exams which help us grade learners at the end of a term, as well as public exams at the end of the school period. In the new curriculum these will still be important, but the kinds of questions asked in the exams will not just be factual questions asking for the reproduction of knowledge, but the kinds of questions given above, involving the testing of understanding, skills and values. For instance, many questions in the new exams will be based on *stimulus materials*. This means giving a picture, a diagram, a map, a table, some statistics, a graph or a written passage which the learners have to analyse and answer questions about. This forces them to think for themselves and *use* what they have learnt, not just reproduce it. Such questions also test *skills*. Questions will not just be based on memory, but on what are called 'higher thinking skills' using words like 'explain', 'analyse' and 'compare'. Some questions will also ask for opinions which help to test *values*.

The exams for the new curriculum, therefore, will ensure that teachers teach, and learners learn, in new ways, corresponding with the aims of the new curriculum. They will in many ways be more challenging for both learners and teachers, but unless we face such challenges we will not have an education system fit for the twenty first century.