Curriculum

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Introduction

Curriculum planning and development is very much on the agenda for undergraduate, postgraduate and continuing medical education.

The days are now passed when

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- The lecturer taught whatever attracted his or her interest.

The days are now passed when

- The students clinical training was limited to the patients who happened to present during a clinical attachment.
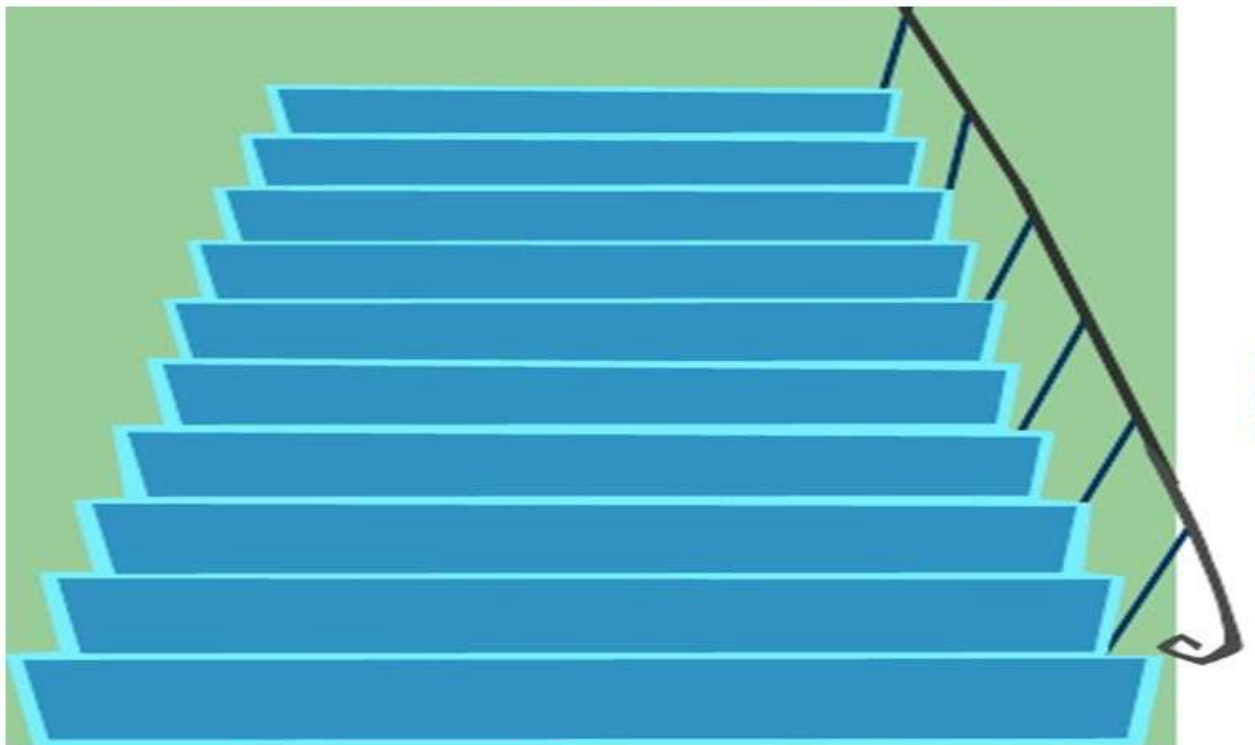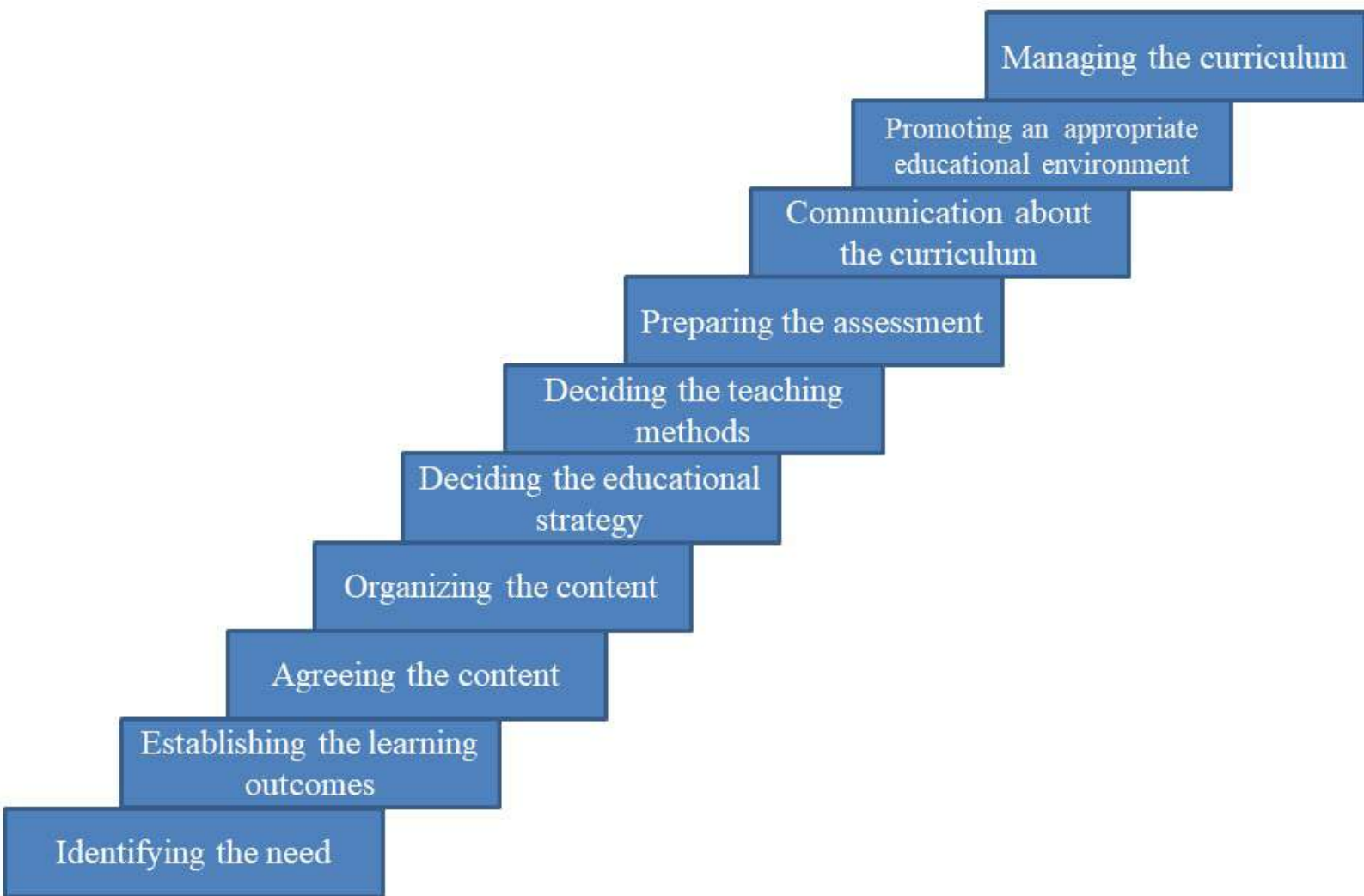
It is now accepted that careful planning is necessary if the program of teaching and learning is to be successful and effective.

Curriculum planning

Can be considered in 10 steps

Managing the curriculum

Promoting an appropriate
educational environment

Communication about
the curriculum

Preparing the assessment

Deciding the teaching
methods

Deciding the educational
strategy

Organizing the content

Agreeing the content

Establishing the learning
outcomes

Identifying the need

ESTABLISHING THE LEARNING OUTCOMES

In recent years, the move to an outcome- or competency-based approach to the curriculum with outcome frameworks has gained momentum and is increasingly dominating education thinking.
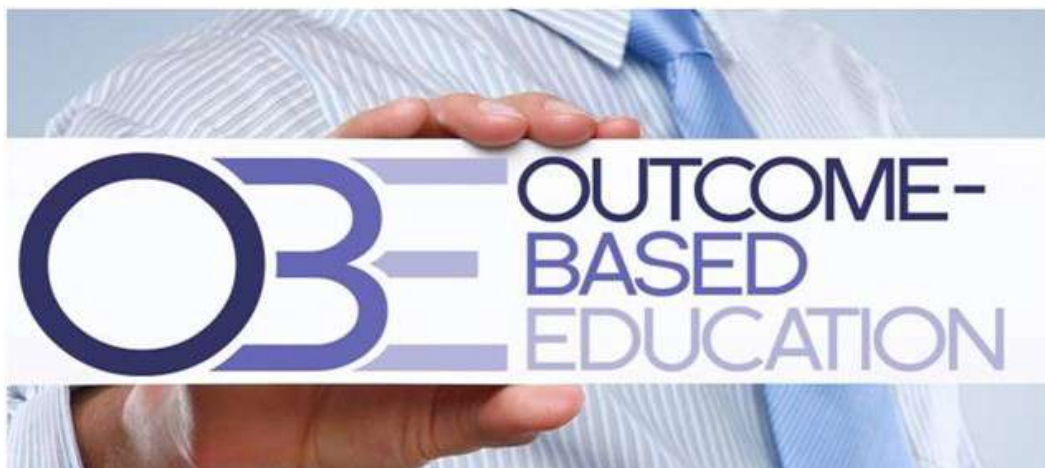
AGREEING ON THE CONTENT

- The content of a curriculum is found in the syllabus and in the topics covered in lectures and other learning opportunities

- Traditionally, there has been an emphasis on knowledge, and this has been reflected in student assessment.

- Content relating to skills and attitudes is now recognized also as important.

The content of the curriculum can be presented from a number of perspectives

- Subjects or disciplines (a traditional curriculum).
- Body systems, e.g. the cardiovascular system (an integrated curriculum).
- The life cycle, e.g. childhood, adulthood, old age.
- Problems (a problem-based curriculum)
- Clinical presentations or tasks (a scenario-based, case-based or task-based curriculum).

These are not mutually exclusive; grids can be prepared which look at the content of a curriculum from two or more of these perspectives.

ORGANIZING THE CONTENT

An assumption in a traditional medical curriculum was that students should first master the basic and then the applied medical sciences before moving on to study clinical medicine.

Too often students failed to see the relevance of what was taught to their future career as doctors, and after they had passed examinations in the basic sciences, they tended to forget or ignore what they had learned.
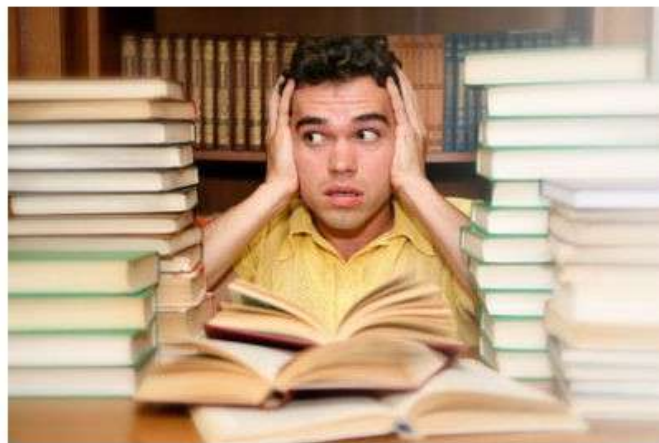
In a vertically integrated curriculum, students are introduced to clinical medicine alongside the basic sciences in the early years of the programme.
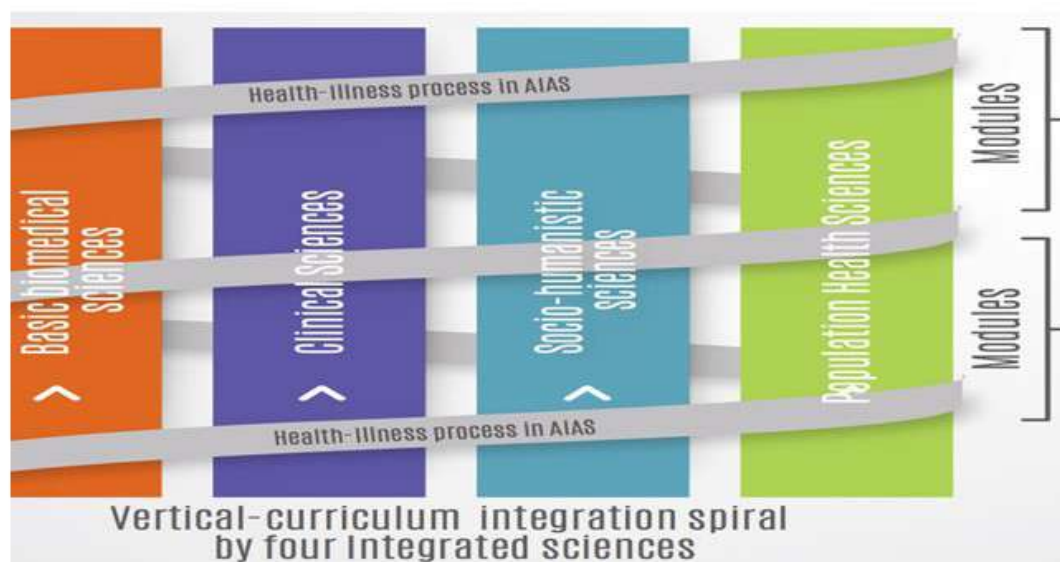
The need for students to continue their studies of the basic sciences as applied to clinical medicine in the later years is now recognized.

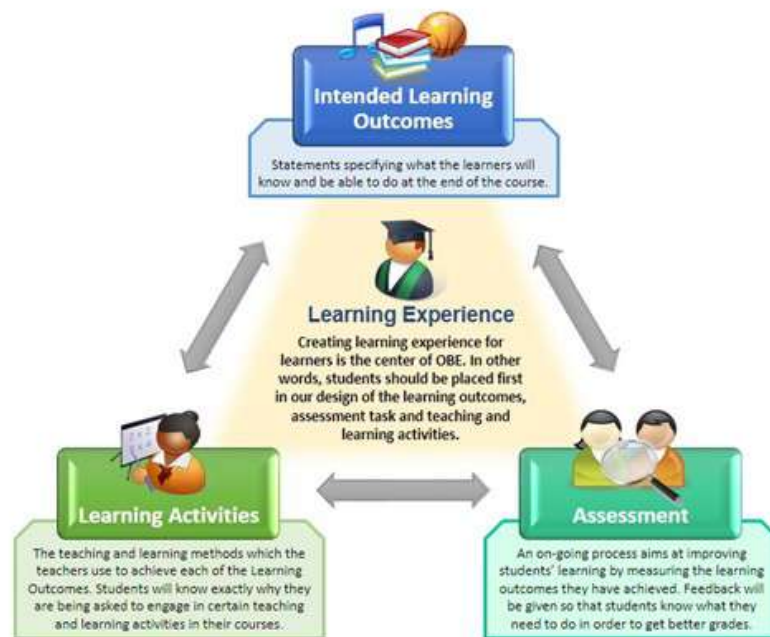
Intended Learning Outcomes

Statements specifying what the learners will know and be able to do at the end of the course.

Learning Experience

Creating learning experience for learners is the center of OBE. In other words, students should be placed first in our design of the learning outcomes, assessment task and teaching and learning activities.

Learning Activities

The teaching and learning methods which the teachers use to achieve each of the Learning Outcomes. Students will know exactly why they are being asked to engage in certain teaching and learning activities in their courses.

Assessment

An on-going process aims at improving students' learning by measuring the learning outcomes they have achieved. Feedback will be given so that students know what they need to do in order to get better grades.

A spiral curriculum

- There is iterative revisiting of topics throughout the course.

- Topics are revisited at different levels of difficulty.

- New learning is related to previous learning

- The competence of students increases with each visit to a topic.

DECIDING THE EDUCATIONAL STRATEGY

- Much discussion and controversy in medical education has related to education strategies

The SPICES model

1. Student-centred
2. Problem-based
3. Integrated or interprofessional
4. Community-based
5. Elective-driven
6. Systematic

1. Teacher-centred
2. Information-oriented
3. Subject or discipline-based
4. Hospital-based
5. Uniform
6. Opportunistic

CHOOSING THE TEACHING METHODS

A good teacher facilitates the students' learning by making use of a range of methods and applying each method for the use to which it is most appropriate.

The lecture and whole-class teaching remain powerful tools if used properly.

They need not be passive, and their role is more than one of information transfer.

Small-group work facilitates interaction between students and makes possible cooperative learning, with students learning from each other. Small-group work is usually an important element in problem-based learning.

Teaching and learning experiences can be rated in terms of:

• authenticity, with theoretical approaches at one end of the spectrum and real-life ones at the other.

• formality, with different levels of formality and informality. Teaching situations can be located in each quadrant of the formality/authenticity grid.

formality			
	High	Lectures	Clinical Ward-based tutorials
	Low	Tutorials	Community attachments
		Low	High
		authenticity	

PREPARING THE ASSESSMENT

"I believe that teaching without testing is like cooking without tasting."

Ian Lang, former Scottish Secretary

Issues that should be addressed in assessment include:

- What should be assessed?

A grid or blueprint should be prepared relating the assessment to the specific learning outcomes.

This should include knowledge, skills and attitudes.

How should it be assessed?

Methods should include:

1. A written approach such as multiple-choice questions (MCQs) or constructed response questions

2. A performance assessment such as an Objective Structured Clinical Examination (OSCE)

3. A collection of evidence such as in a portfolio.

What are the aims of the assessment process?

Aims may include:

to pass or fail the student

to grade the student

to provide the student and teacher with feedback

to motivate the student

to support the learning.

There is a move from 'assessment of learning' to 'assessment for learning' and 'assessment as learning'.

When should students be assessed?

Students can be assessed:

at the beginning of the course to assess what they already know or can do.

during the course as formative assessment

at the end of the course to assess their achievement of the expected learning outcomes.

Who should assess the student?

- Depending on the context, the responsibility may rest with a national or international body, the medical school, the teachers or student peers.

- Increasing attention should be paid to self-assessment, with students encouraged to assess their own competence.

COMMUNICATION ABOUT THE CURRICULUM

Teachers have the responsibility to ensure that students have a clear understanding of:

- what they should be learning – the learning outcomes

- their access to the range of learning experiences and opportunities available

- how they can match the available learning experiences to their own personal needs

- whether they have mastered the topic or not, and if not, what further studies and experiences are required.

Failure to keep staff and students informed about the curriculum is a common recipe for failure.

Communication can be improved by providing students with:

- a clear statement of the learning outcomes expected at each stage of the curriculum

- a curriculum map which matches the learning outcomes to the learning experiences and the assessment

- an electronic or print-based study guide which helps the students to manage their learning and make the best use of their time.

PROMOTING AN APPROPRIATE EDUCATIONAL ENVIRONMENT

- The educational environment or 'climate' is a key aspect of the curriculum.

- It is less tangible than the content studied, the teaching methods used or the examinations.

- It is nonetheless of equal importance.

- Measurement of the education environment should be part of a curriculum evaluation

- There is little point in developing a curriculum where an aim is to orientate the student to medicine in the community and to health promotion if the students perceive that what is valued by the senior teachers is hospital practice, curative medicine and research.

- In the same way, it is difficult to develop in students a spirit of teamwork and collaboration if the environment in the medical school is a competitive rather than a collaborative one.

MANAGING THE CURRICULUM

- Attention to curriculum management has become more important with

- increasing complexity of the curriculum including integrated and interdisciplinary teaching

- increasing pressures on staff with regard to their clinical duties, teaching responsibilities and research commitments

- distributed learning on different sites
- increased demands and increased student numbers at a time of financial constraints

- changes in the healthcare system and medical practice
- increasing demands for accountability.

- The development of a teaching programme can no longer be left to chance.
- A curriculum must be carefully planned.
- Ten questions need to be addressed.
- These relate to the following:

Summary

1. The needs the training programme is intended to fulfil

2. The expected student learning outcomes

3. The content included

4. The organization of the content including the sequence in which it is covered

5. The educational strategies adopted – integrated teaching is an example

6. The teaching methods used, including largegroup teaching, small-group teaching and the use of new learning technologies

7. Assessment of the students' progress

8. Communication about the curriculum to all the stakeholders including the students

9. The educational environment

10. Management of the curriculum.

Thank you