Modernisation of study programme

Dr Milan Antonijevic
University of Greenwich

What students have to say about their HE experience

- http://www.youtube.com/watch?v=dGCJ46vyR90

Modernisation

- What is new in tourism?
- Is it tourism in Serbia/World the same?
- Are today's students the same as those studied tourism 20 years ago?
- Are you aware of recent developments in teaching tools?
- Is there a need for modernisation of study programmes?
- What needs to be modernised?
- Do students today have same knowledge and understanding as those studied tourism in Serbia 50 years ago?

Modernisation

- Global HE situation
  - New generations – Generation Z
- Current trends in HE
  - Heavy use of VLEs
  - Distance learning
  - On-line learning
- EU Framework
  - Bologna – EU vs. USA

Modernisation

- Curricula needs to be up to date with current research
- Add new course content but please bear in mind that you need to take something out of curricula as time and credit weight of your course is not changing
- Use modern delivery stiles – video clips, interactive lectures, workshops and seminars in years 3 and 4
- Problem-based learning must be the major component of teaching strategy in year 3 and 4, otherwise even gifted students would not meet set degree standards
- Involve, consult and adhere to the Quality Assurance documentation
- Listen to student's voice – involve them in decision making process

What is next?

- We know what the end product of our programmes should look like but we need to develop material, tasks, exercises, lab experiments in such way that students obtained required knowledge in given time and space.
- Creativity in development of teaching materials is a crucial for students engagement

Pitfalls of higher education

Often are:

- Overload of information
- No clear connection between different subjects
  - Horizontal, vertical
  - Interdisciplinary connections

Lack of:

- Interaction with students
- Problem based learning
- Learning by doing
- Feedback

Pitfalls of higher education

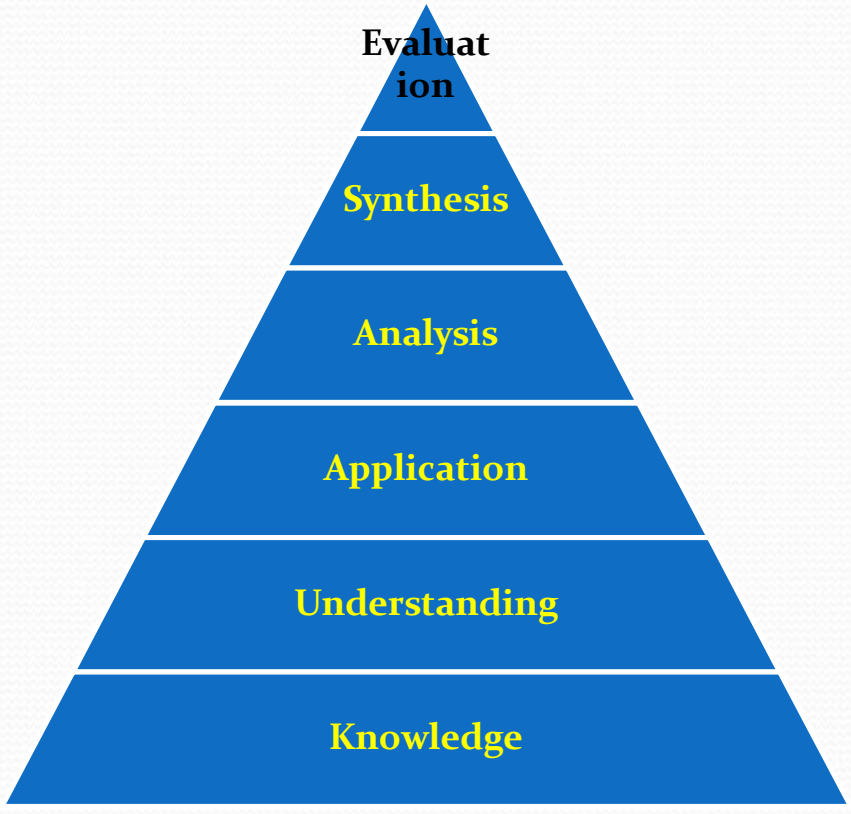
- Distribution of assessment trough the year
  - Year one often but smaller assessments
  - Year 3 and 4 a few bigger assessments
  - Map my programme - list of all assessment
- Understand student's abilities, motivation
  - Attention – 5 min span
  - More visual than vocal
  - Listen to their opinions

How do students learn?

- Attending lectures
- Interaction with teachers and colleagues
- Laboratory classes
- Reading books
- Engaging with research
- Coursework
- Understanding assessment
- Feedback that they receive on their performance

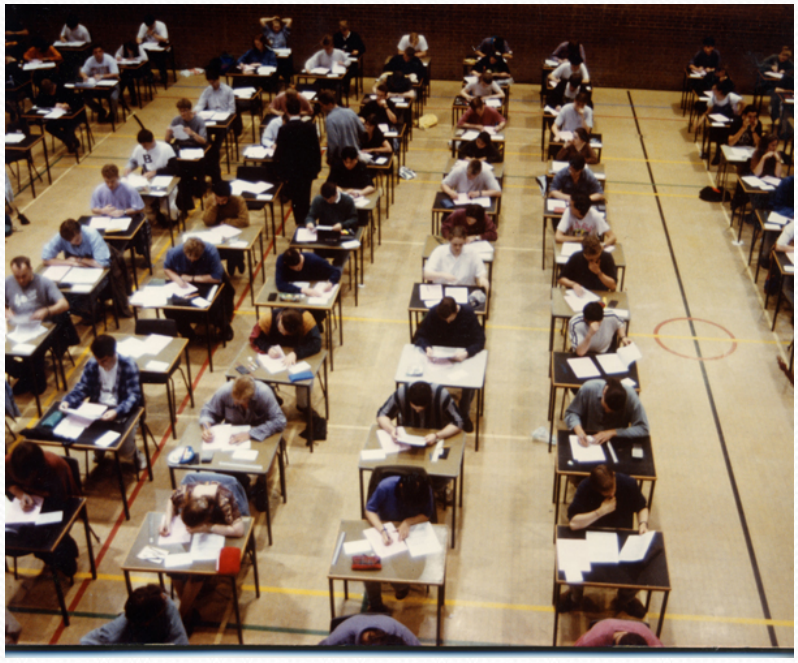
They should become reflective learners!

- Blum's taxonomy was the base for development of statements



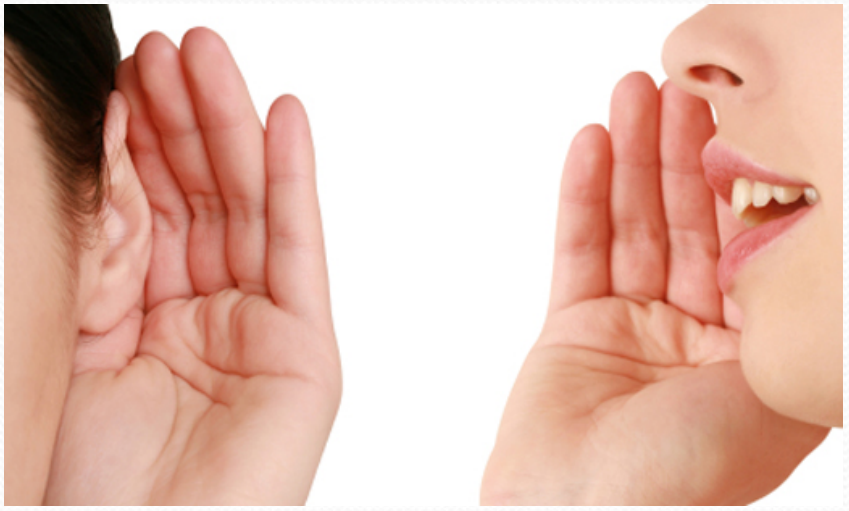
Assessments

- Types of Assessment – based on credit value
  - Formative
  - Summative
- Types of Assessment
  - Oral
  - Written
  - Electronic



Feedback

- Is feedback useful?
- May student benefit from it?
- Negative
- Positive
- Constructive



Feedback

- Best feedback is:
  - Timely
  - Constructive
  - Informative
  - Requires action to be adopted and implemented

- Strategies to be used:
  - Feedforward
  - Two stage assessment

A Knowledge and understanding of:

On successful completion of this programme students will be able to:

1 Demonstrate an understanding and critical awareness of a substantial area of inorganic, organic, physical and analytical chemistry.

2 Demonstrate an understanding of fundamental physicochemical principles and apply that knowledge to a range of theoretical and practical problems.

3 Demonstrate a in-depth knowledge of advanced topics related to current research in chemistry.

4 Understand and critically evaluate further advanced material at Masters level of current aspects of chemical research and solve problems of an advanced nature.

5 Conduct a substantial research project.

A Teaching and learning:

1 is acquired through core lecture courses in years 1 – 3 supplemented by tutorials, workshops and seminars

2 is acquired through the core courses as well as through practical laboratory work and tutorials.

3 is acquired through the year 3 courses and discussions with the academic staff

4 is acquired through the year 4 courses which involve substantial amounts of independent study.

5 is acquired via the graduation project in year 4

A Assessment Methods:

1-3 are assessed by a combination unseen examination, coursework, which includes practical work.

4 is mainly assessed by case study

5 is assessed in three ways:

the project dissertation

a poster presentation

a viva voce examination

B Intellectual skills:
On successful completion of the programme, students will be able to:

6 Formulate and analyse chemical problems
7 Apply chemical principles to solve a range of analytical and synthetic problems
8 Work in groups researching chemical problems
9 Carry out independent projects and present scientific arguments both in writing and orally
10 Demonstrate a high degree of autonomy when working on problems

B Teaching and learning

6 and 7 are developed through tutorial exercises and the accompanying tutorials where strategies for approaching chemical problems are discussed.
8 is developed mainly through the laboratory work
9 is acquired by the writing of an extended project report and the poster presentation
10 is acquired through working on a piece of original research

B Assessment Methods:
6 and 7 are assessed by unseen written examinations and summative and formative coursework
8 is mainly assessed through the practical work
9 is assessed by a written report and presentation
10 is assessed by written report and viva voce examination.

C Subject Practical skills:

On successful completion of the programme, students will be able to:

11 Safely handle chemical and conduct risk assessments concerning the use of chemical substances and laboratory procedures; carry out standard laboratory procedures involved in synthetic and analytical work

12 Monitor and record by observation and measurement chemical properties, chemical events and changes

13 Plan, devise and execute a practical investigation

14 Understand a wide range of synthetic and measurement techniques and apply them to real problems

15 Operate a range of instruments

16 Devise new approaches, techniques or methods to solve scientific problems

C Teaching and learning

11- 15 are developed through the laboratory classes throughout the programme

16 is developed through the independent graduation project.

C Assessment Methods:

11 – 15 are assessed via the practical exercises. Regular feedback will be given to the students to ensure progressive development of practical skills.

16 is assessed via practical work, written reports and viva voce examination.

D Transferable/ key skills:

On successful completion of the programme, students will be able to:

17 Communicate effectively both orally and in writing using a range of media
18 Demonstrate problem solving skills
19 Demonstrate appropriate IT skills especially word processing and information retrieval
20 Demonstrate interpersonal skills, including self-confidence to deal with people and in tackling problems.
21 Work independently and manage own learning
22 Demonstrate effective self management

D Teaching and learning

17 and 18 are acquired through the programme via tutorials, workshops and practicals.
19 is acquired throughout the programme through a range of exercises
20 is mainly developed through the practical classes
21 and 22 are mainly acquired through the Level 7 courses.

D Assessment Methods:

Transferable skills are assessed throughout the programme through tutorials, coursework, practical work, project work and presentations

Course/Skill	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	2
Inorganic Chemistry	x	x				x	x										x	x			
Organic Chemistry	x	x				x	x										x	x			
Physical Chemistry	x	x				x	x										x	x			
Analytical Chemistry	x	x				x	x										x	x			
Investigative Methodology						x	x	x									x	x	x	x	
Practical and Professional Skills		x				x	x	x			x	x	x	x	x		x	x	x	x	
Further Inorganic Chemistry	x	x				x	x				x	x	x	x	x		x	x		x	
Further Organic Chemistry	x	x				x	x				x	x	x	x	x		x	x		x	
Further Physical Chemistry	x	x				x	x				x	x	x	x	x		x	x		x	
Research and Professional Skills						x	x	x									x	x	x	x	
Instrumental Analysis	x	x				x	x				x	x	x	x	x		x	x		x	
Intermediate Chemistry	x	x				x	x										x	x			
Green Chemistry	x	x				x	x										x	x			
Chemical Investigation						x	x	x									x	x	x		
Advanced Inorganic Chemistry	x	x	x			x	x										x	x			
Advanced Organic Chemistry	x	x	x			x	x										x	x			
Advanced Physical Chemistry	x	x	x			x	x										x	x			
Pharmaceutical Analysis and Testing	x	x	x			x	x										x	x			
Drug Design and Delivery	x	x	x			x	x										x	x			
Computational Chemistry	x	x	x			x	x										x	x			
dvanced Practical Skills and research ethodology				x	x			x											x		
Open Course				x						x									x		
Special Topics in Chemistry				x						x											
Graduation Project					x				x	x						x					