

Curriculum reform at the Faculty of Pharmacy

Nina Katajavuori

Senior lecturer in Higher Education

Faculty of Pharmacy, University of Helsinki

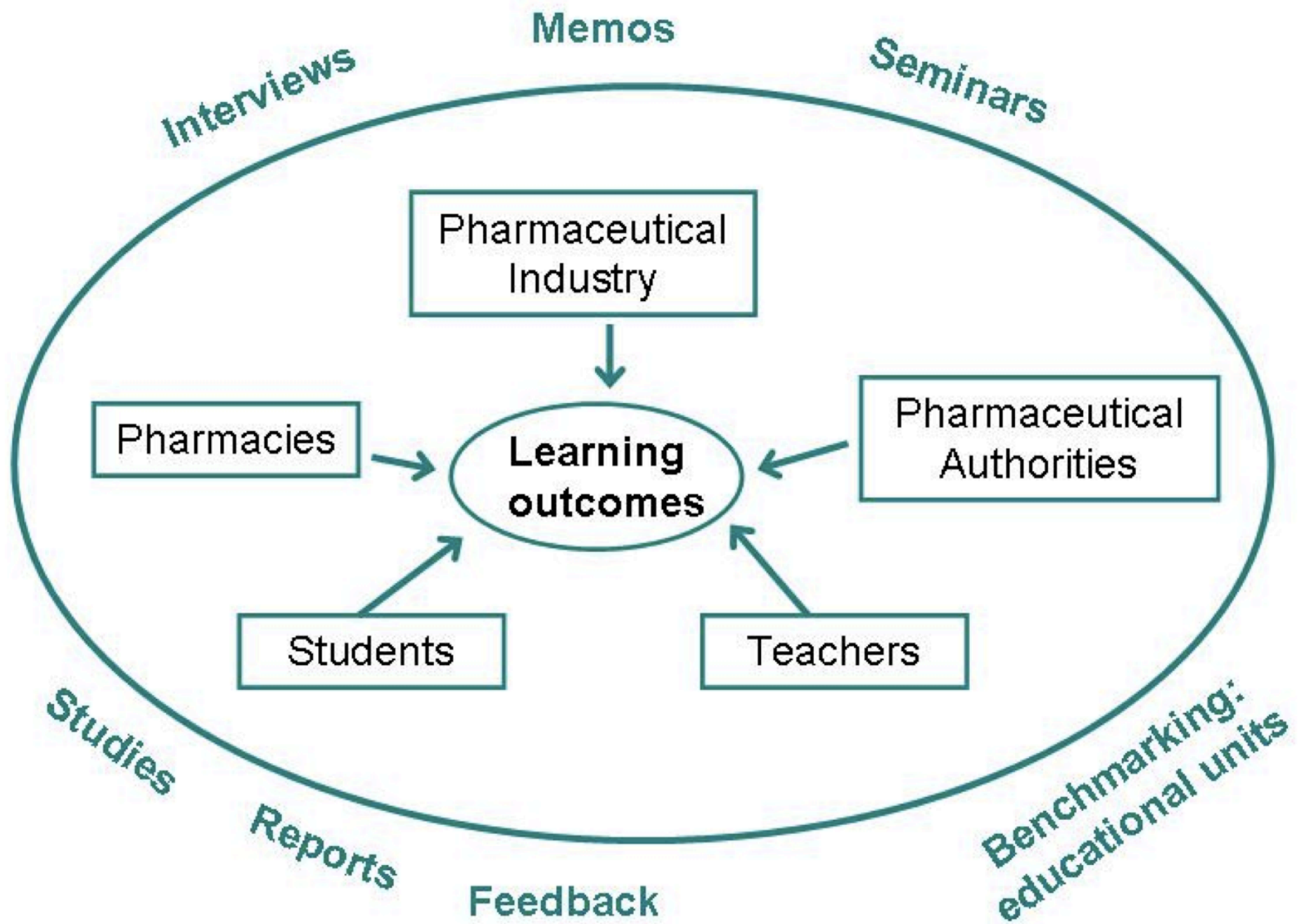
nina.katajavuori@helsinki.fi

Curriculum development project 2012-2014

- Previous curriculum reform in 2005 → 9 years of experience on the strand-model and its problems
- Teachers eager to develop teaching
- **Need to define learning outcomes for the degrees** → Do we teach the right things?
- Project started in the autumn 2012:
 - Project group of 5
 - Benchmarking, reports, researches, feedback
 - Interviews: students, divisions, professors, interest groups (11)
 - Several meetings in a faculty with the staff and also with the interests groups
- Renewed curriculum starts in the autumn 2014

Defining learning outcomes

- *What kind of knowledge, skills and competencies pharmacists should have in order to work as pharmaceutical experts in working life?*
- Were defined based on interviews, were discussed together with teachers, students and interest groups
- **Theoretical knowledge and generic skills**
- **Constructive alignment** – learning outcomes as a basis for planning and designing the curriculum and courses



Learning outcomes – KNOWLEDGE AND SKILLS

WHEN THE STUDENT GRADUATES SHE/HE IS..

- ***Able to apply and use the knowledge in **basic natural sciences to actual work*****
- ***Understands the **wholeness of drugs and drug therapy** (from drug preparation to safe and rational drug usage)***
- ***Understands **the significance and role of pharmacy in society*****
- ***Understands the **basic economical and marketing principles** of a company and also of the public health in society***
- ***Masters the **communication skills** and has adequate skills in Finnish, Swedish and English***

Learning outcomes – GENERIC SKILLS

WHEN THE STUDENT GRADUATES SHE/HE

- *Has developed **his/her professional identity** and understands his/her role as a health care professional in part of the health care system in society*
- *Is able **to think critically**, to assess the information and its relevance and is able to apply this theoretical knowledge to practice*
- *Is able **to solve problems** and is able to work under a hard pressure*
- *Understands **the significance of life long learning** and is eager to develop himself/herself*
- *Takes his/her work as a pharmacist **with great responsibility and activity***
- *Is able to work in a **multiprofessional team***

Learning outcomes – KNOWLEDGE AND SKILLS (master's degree)

WHEN THE STUDENT GRADUATES SHE/HE..

- *Has deepened his/her knowledge in **selected major** and is able to apply this knowledge in pharmacy industry or other work as a pharmacist in health care*
- *Is able to make **scientific conclusions**, write scientific text, create new knowledge*
- *Masters the basic **principles of a leadership** and of a business economics*

Learning outcomes – GENERIC SKILLS (master's degree)

WHEN THE STUDENT GRADUATES SHE/HE..

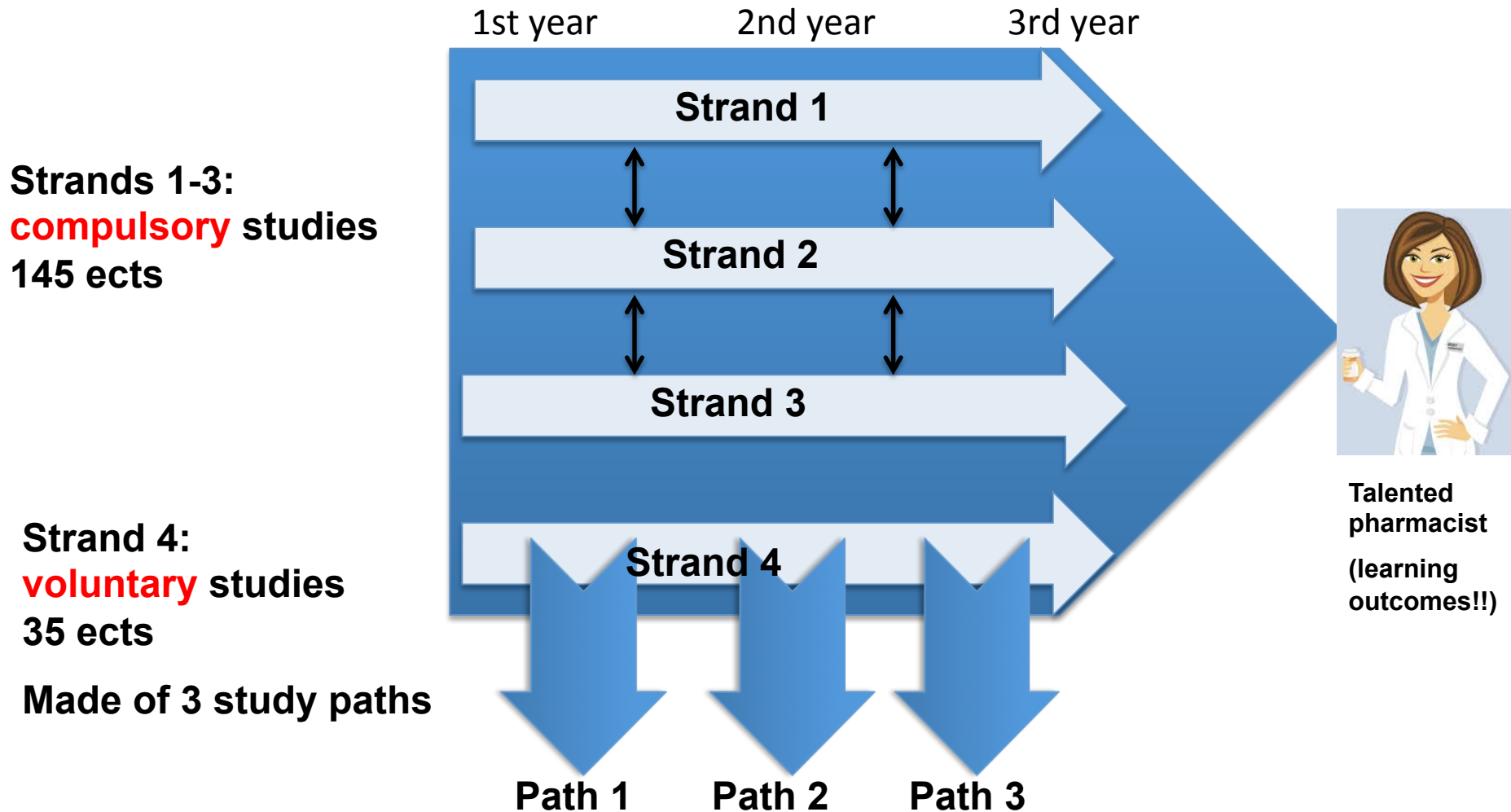
- *Is able to work actively as an **expert and educator** in pharmaceutical tasks*
- *Has developed his/her professional identity and understands his/her role as a **health care professional** in part of the health care system in society*
- These learning outcomes should be (and they are) the foundation for curriculum, course design and teaching and assessment practices

Aims for the reform based on the interviews

- Need to increase the optional studies and flexibility for studying
- More challenging studies; students' participation → teaching and assessment methods
- Need to support the professional identity of students
- 3 unities for studies: pharmaceutical sciences, patient and medication, the significance of pharmacy in society

Bachelor level studies:
strand-based teaching and
new curriculum 2014-2015

Strand model



Strands 1-3: compulsory studies

1. Scientific thinking and development of professional identity
(55 ects)
leader Hanna Kortejärvi
2. Patient and pharmacotherapy
(50 ects)
leader Outi Salminen
3. Pharmaceutical sciences
(40 ects)
leader Katariina Vuorensola

Strand 4: voluntary studies

4. Voluntary studies (35 ects)
leader Helena Huhtala

→ Made of three study paths

1. Pharmacy and hospital pharmacy
2. Pharmaceutical industry and authorities
3. Research and scientific thinking

Bachelor studies and strand leaders - aims

- Constructive alignment in teaching and assessment methods
- Integration of courses **within** the **strands**
 - co-operation with responsible persons of the courses
- Integration of the courses **within** the **periods**
 - co-operation between strand leaders and responsible persons of the courses
- Co-operation with pedagogy lecturer, vice dean of teaching and head of academic affairs

Constructive alignment

Learning outcomes

Bachelor

Aim 1

Aim 2

Aim 3

Aim 4

Strand

Strand 1

Strand 2

Strand 3

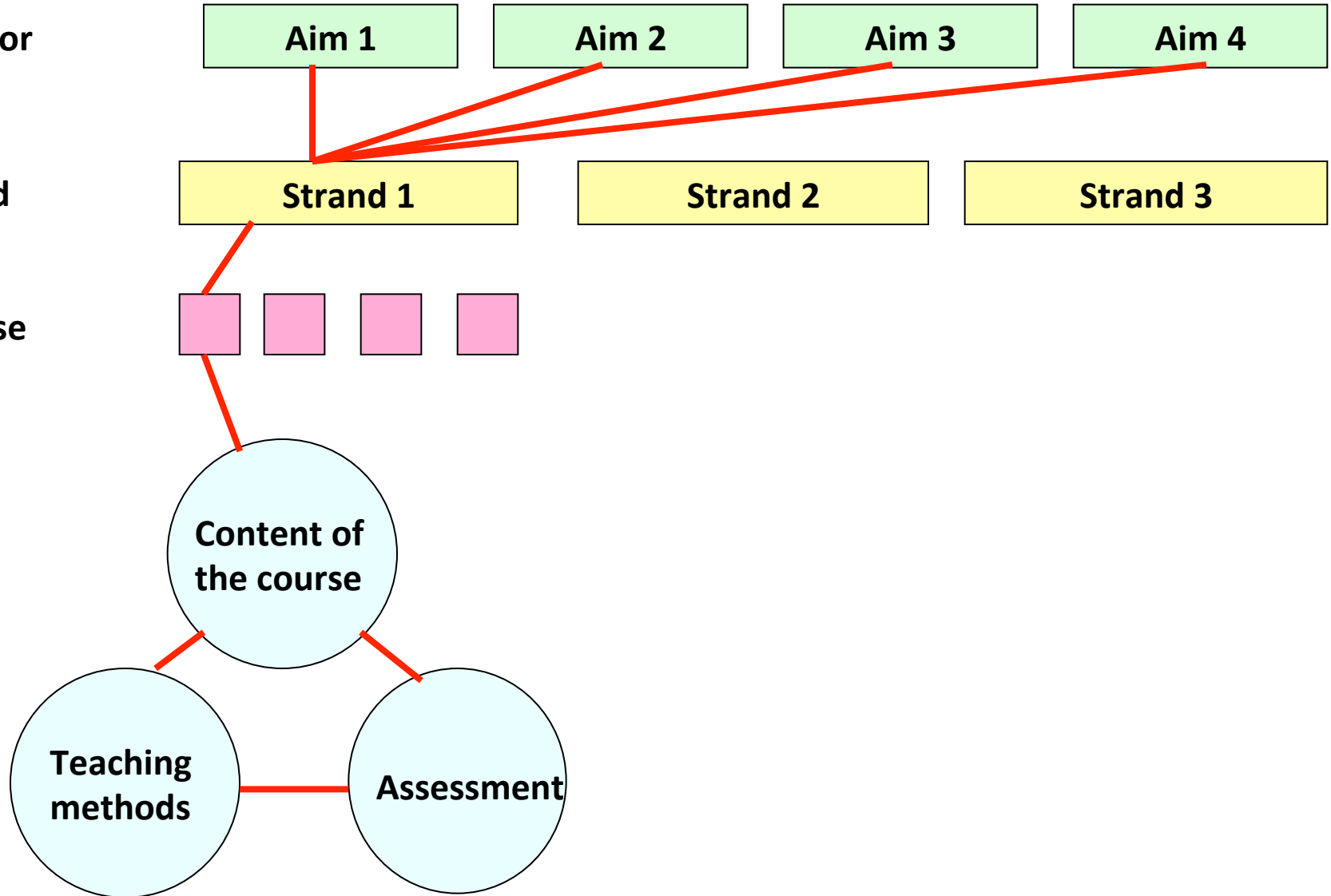
Course

□ □ □ □

Content of the course

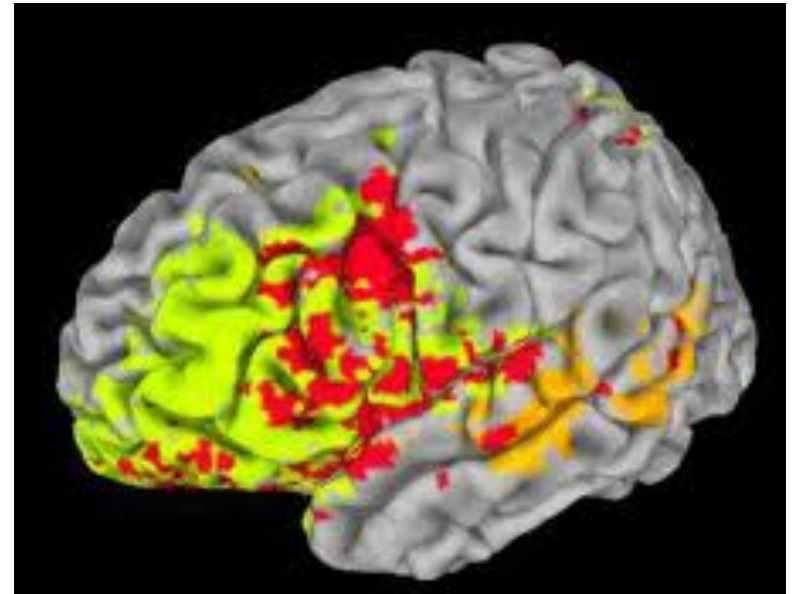
Teaching methods

Assessment

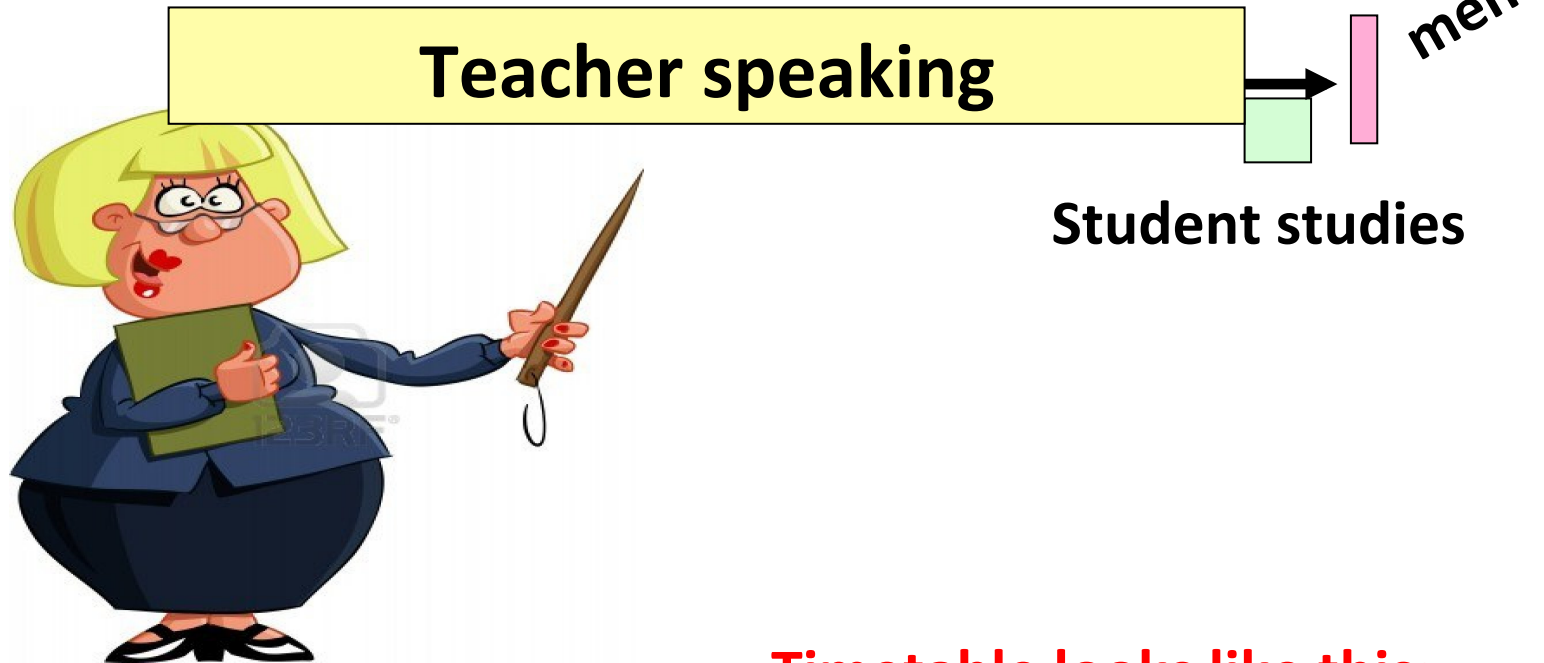


Aims of the strand based teaching

1. To challenge and activate students
 - By developing the teaching methods to strengthen critical thinking and independence
 - Flipped classroom
 - PBL



Traditional teaching...

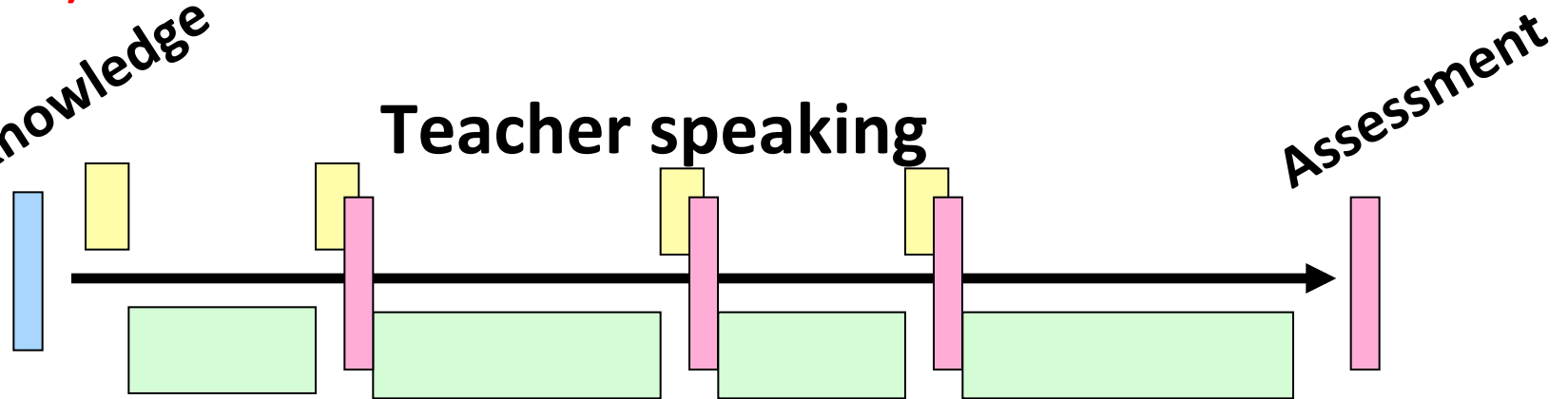


... Timetable looks like this:

KLO	MAANANTAI	TIISTAI	KESKIVIIKKO	TORSTAI	PERJANTAI
VKO 38	16.9.	17.9.	18.9.	19.9.	20.9.
8.15-9.00	Kemian perusteet	Kemian perusteet	Kemian perusteet	Kemian perusteet	Kemian perusteet
9.15-10.00	VIB LS 1	VIB LS 1	VIB LS 1	VIB LS 1	VIB LS 1
10.15-11.00	Lainsäädäntö	Lainsäädäntö	TVT-Tentti	Lainsäädäntö	F.kem,laskuharj
11.15-12.00	2041	2041	TVT-Tentti	2041	2041
12.15-13.00	TVT-ajokortti (3)	F.kem,laskuharj	F.kem,laskuharj	F.kem,laskuharj	TVT-Tentti
13.15-14.00	Info 138	2041	2041	2041	Kirjaston ATK
14.15-15.00	TVT-Tentti	TVT-ajokortti (5)	Kirjaston ATK	TVT-ajokortti (5)	Info 138
15.15-16.00		Info 138	Info 138	Info 138	
16.15-17.00					
17.15-18.00					

More challenging teaching is like this (e.g. Flipped classroom):

Preknowledge



Student studies



Timetable looks like this:

KLO	MAANANTAI	TIISTAI	KESKIVIIKKO	TORSTAI	PERJANTAI
VKO 38	17.9.	18.9.	19.9.	20.9.	21.9.
8-9					
9-10					
10-11					
11-12					
12-13					
13-14					
14-15					
15-16					
16-17					
17-18					

Bloom's taxonomy

Aims, methods, content, evaluation – which level in a taxonomy?



Aims of the strand based teaching

2. To strengthen the professional identity

- Study paths
- Bachelor level thesis can be utilized in a pharmacy practise
- To search places for voluntary practise (e.g. industry, authority, administration etc.) and encourage students to take this possibility (e.g. 1st or 2nd summer)
- At the end of the studies the proficiency test in co-operation with all divisions

3. To increase the number of voluntary studies

- 35 credits

Past and present



Autumn 2013 – Spring 2014

- Learning outcomes for strands 1, 2 and 3
- Constructive alignment in teaching and evaluation methods
(including estimation of work load - student's point of view)
- Development of teaching and evaluation methods together with the responsible persons of courses

Autumn 2014

- Further development of teaching practices → learning outcomes and generic skills: integrated model of studying learning and generic skills
- Assessing the process and its succeeding, designing the evaluation methods for the reform