



# Inventory, observations and analysis of audiology educational programs

Heleen Luts<sup>1</sup>, Jan Wouters<sup>1</sup>, Birger Kollmeier<sup>2</sup>

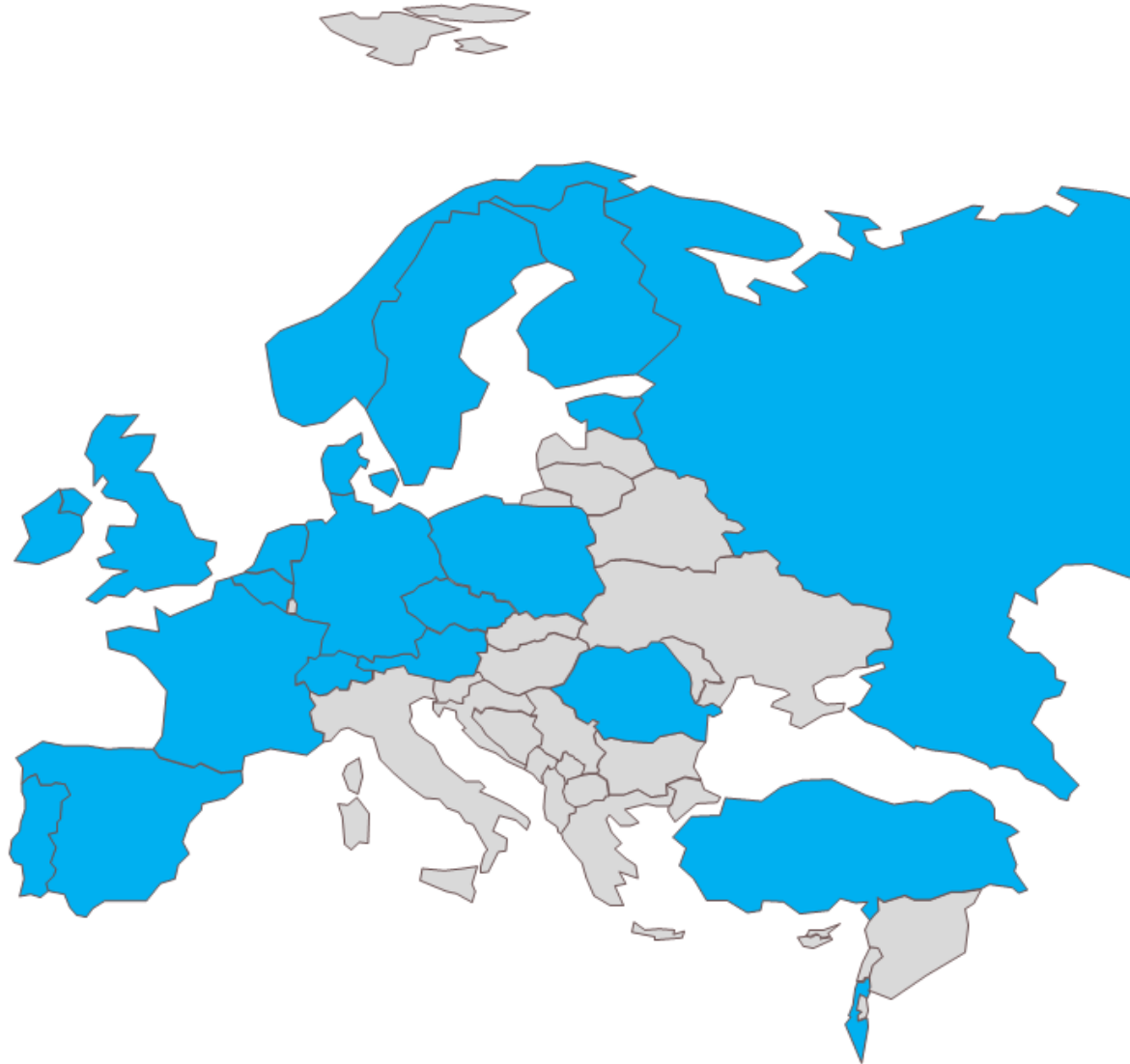
<sup>1</sup> ExpORL, Dept. Neurosciences, KU Leuven

<sup>2</sup> Center of Excellence for Hearing Research and Medizinische  
Physik, Universität Oldenburg



# Representatives EFAS workshop 2014

45 participants  
of 21 countries





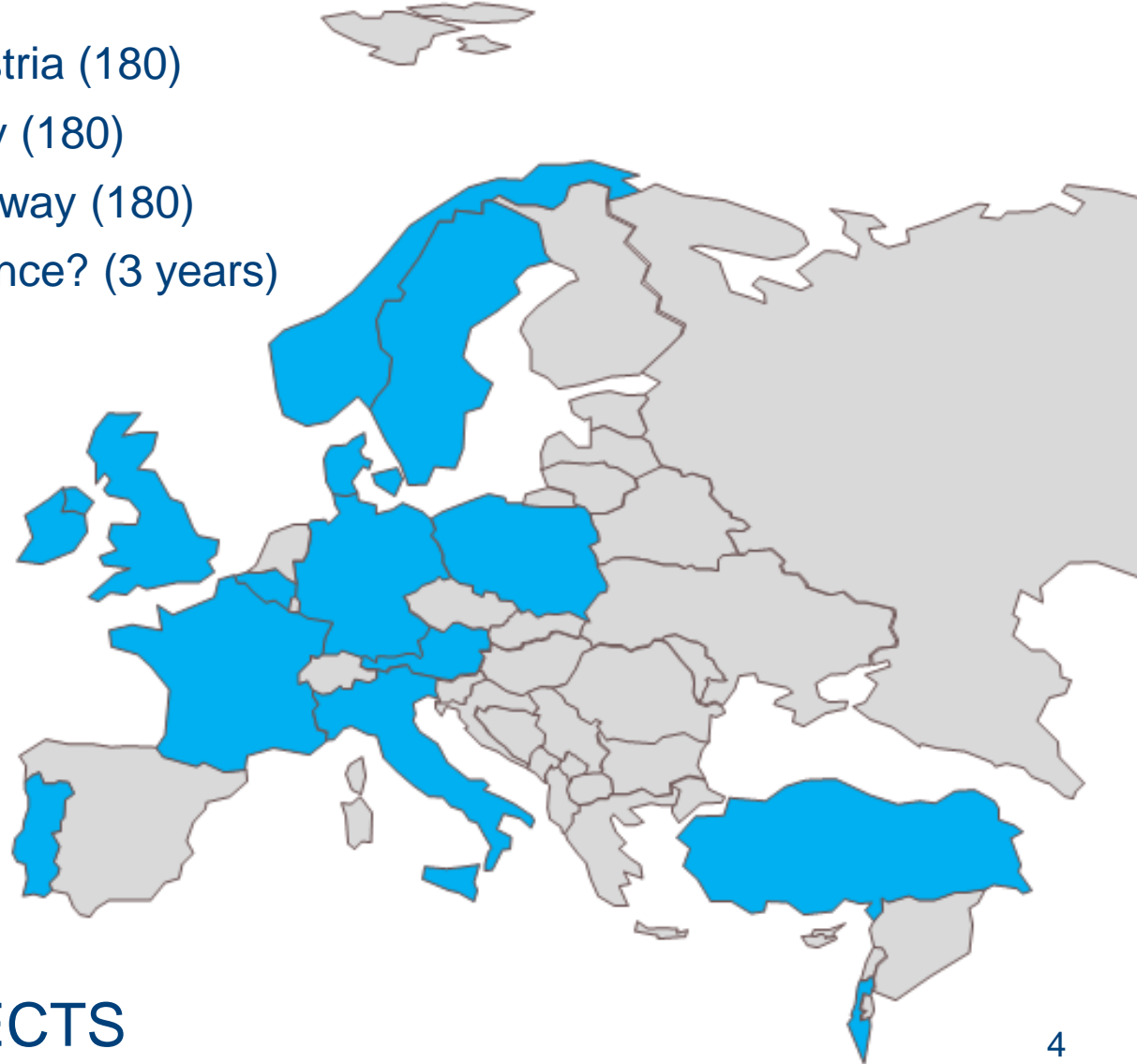
# Step 1: Inventory of education in audiology

- Goal of the overview file: inventory of audiology education, 17 dimensions
- Overview file was created more than 2 years ago, difficult to obtain complete information
- Currently information about more than 130 programs in 18 countries
- The overview in this presentation is limited to bachelor and master programs, but we aim to obtain a full overview of all programs in the future
- Inventory is not complete



# Bachelor programs

- Belgium (180)
- Denmark (180)
- Germany (180/210)
- Ireland (240)
- Israel (220)
- Poland (180)
- Portugal (240)
- Sweden (180)
- UK (120/180)
- Turkey (240)
- Austria (180)
- Italy (180)
- Norway (180)
- France? (3 years)

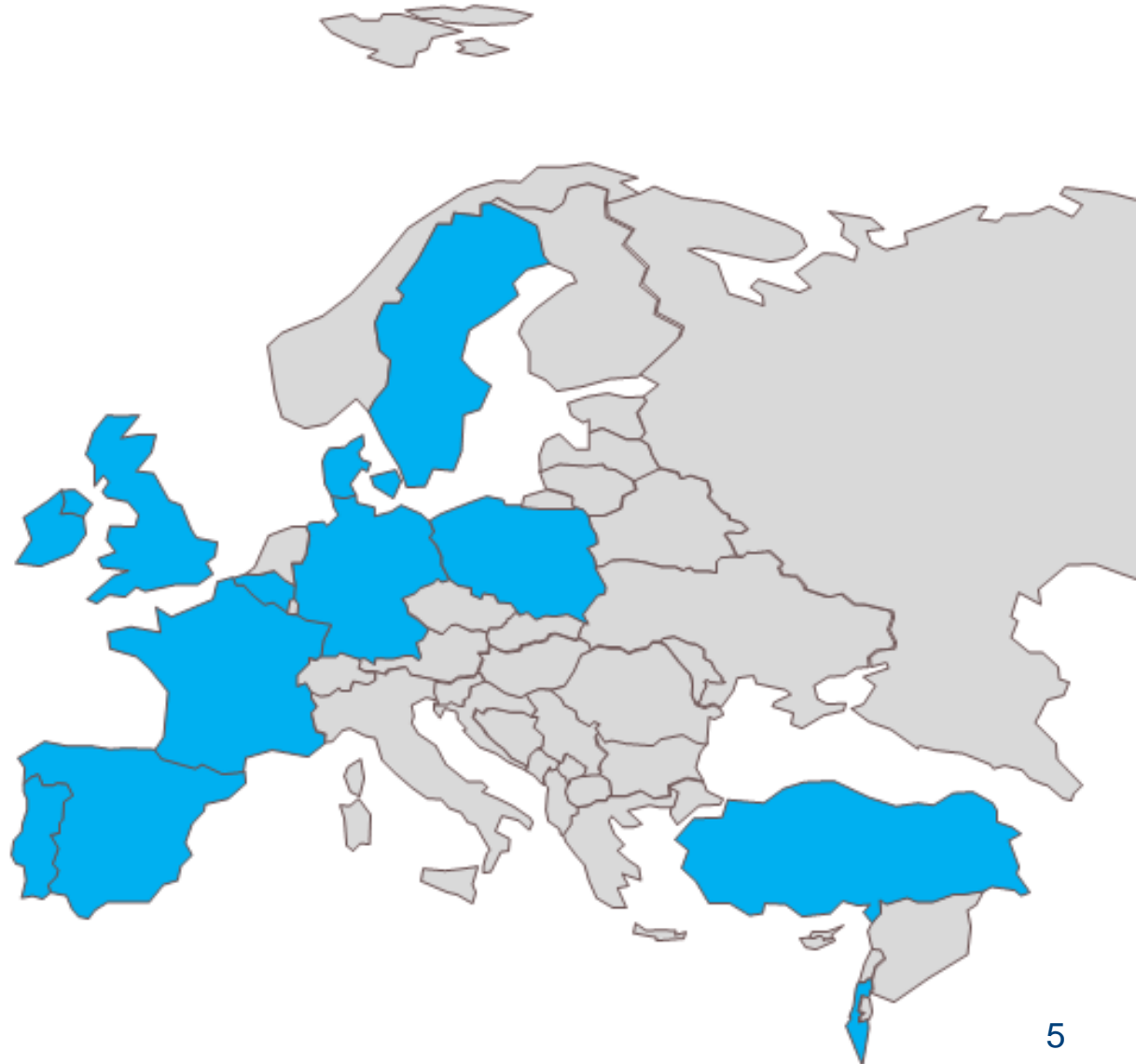


→ Usually 180 ECTS



# Master programs

- Belgium
- Denmark
- Germany
- Ireland
- Israel
- Poland
- Portugal
- Sweden
- UK
- Turkey
- Spain
- France?





# Full Bachelor + Master programs

Country	City	ECTS Ba+Ma	Total ECTS
Belgium	Leuven, Ghent	180+60 (+45)	240 (+45)
Denmark	Southern Denmark	180+120	300
Germany	Oldenburg	210+90	300
Ireland	Cork	240+60	300
Israel	Haifa, Tel Aviv,...	220+30/38	250-258
Poland	Bialystok, Lublin	180+120	300
Portugal	Coimbra	240+120	360
Sweden	Lund, Örebro, Stockholm	180+60/120	240/300
UK	Birmingham, London, Manchester, Southampton	120/180 + 90	210-270
Turkey	Ankara, Istanbul	240+120	360



## Other courses: some examples

- **Finland: Training in medical audiology**
  - duration: 2 years
  - for medical doctors with a 5-year specialization in Otorhinolaryngology or Phoniatics
- **Switzerland: Certificate of Advanced Studies in Acoustics and Audiology**
  - duration: 1 semester
  - for engineers and acousticians
- **Turkey: Audiometry courses**
  - duration: 2 years
  - entrance with high school degree



## Step 2: Observations and analysis of specific programs

- Observations beyond the 17 dimensions, about content and ECTS (European Credit Transfer and Accumulation System)
- Information available via internet, and via contacts to the specific program contact persons
- Far from complete, only a limited number of programs have an overview of courses accessible in English
- Large 2-dimensional matrix of curriculum items: try to simplify by identifying a number of principal components





# Components

- **Basic & Applied Physics (Ph)**
  - Basic Mechanics
  - Vibrations-Waves-Acoustics
  - Signal Processing
  - Psychoacoustics
  - Mathematics
  - Programming/Informatics
  - Sonometrics



# Components

- Basic & Applied Physics (**Ph**)
- Anatomy & Physiology (**A&P**)
  - Anatomy and Physiology
  - Molecular Biology
  - Genetics
  - Pharmacology
  - Basic Histopathology
  - Chemistry



# Components

- Basic & Applied Physics (**Ph**)
- Anatomy & Physiology (**A&P**)
- Pathology and Diagnosis of Auditory Disorders (**Aud**)
  - Audiology
  - Otology
  - Vestibulology
  - Electrophysiology (ECochG, VEMP's, ABR)



# Components

- Basic & Applied Physics (**Ph**)
- Anatomy & Physiology (**A&P**)
- Pathology and Diagnosis of Auditory Disorders (**Aud**)
- Rehabilitation of Auditory Disorders (**Reh**)
  - Hearing aids
  - Cochlear Implants & Middle ear implants technology
  - Auditory Rehabilitation
  - Tinnitus
  - Prevention



# Components

- Basic & Applied Physics (**Ph**)
- Anatomy & Physiology (**A&P**)
- Pathology and Diagnosis of Auditory Disorders (**Aud**)
- Rehabilitation of Auditory Disorders (**Reh**)
- Communication (**Com**)
  - Speech & Language Development & Pathology
  - Neurology of Communication Disorders
  - Linguistics
  - Phonetics
  - Psychology
  - Gerontology
  - Pediatrics
  - Education



# Components

- Basic & Applied Physics (**Ph**)
- Anatomy & Physiology (**A&P**)
- Pathology and Diagnosis of Auditory Disorders (**Aud**)
- Rehabilitation of Auditory Disorders (**Reh**)
- Communication (**Com**)
- Research Methodology (**RM**)
  - Statistics
  - Evidence Based Practice Skills
  - Critical Evaluation of Literature



# Components

- Basic & Applied Physics (**Ph**)
- Anatomy & Physiology (**A&P**)
- Pathology and Diagnosis of Auditory Disorders (**Aud**)
- Rehabilitation of Auditory Disorders (**Reh**)
- Communication (**Com**)
- Research Methodology (**RM**)
- Clinical Training (**CT**)
- Research Training and Thesis (**RT**)



# Components

- Basic & Applied Physics (**Ph**)
- Anatomy & Physiology (**A&P**)
- Pathology and Diagnosis of Auditory Disorders (**Aud**)
- Rehabilitation of Auditory Disorders (**Reh**)
- Communication (**Com**)
- Research Methodology (**RM**)
- Clinical Training (**CT**)
- Research Training and Thesis (**RT**)
- Other (**O**)

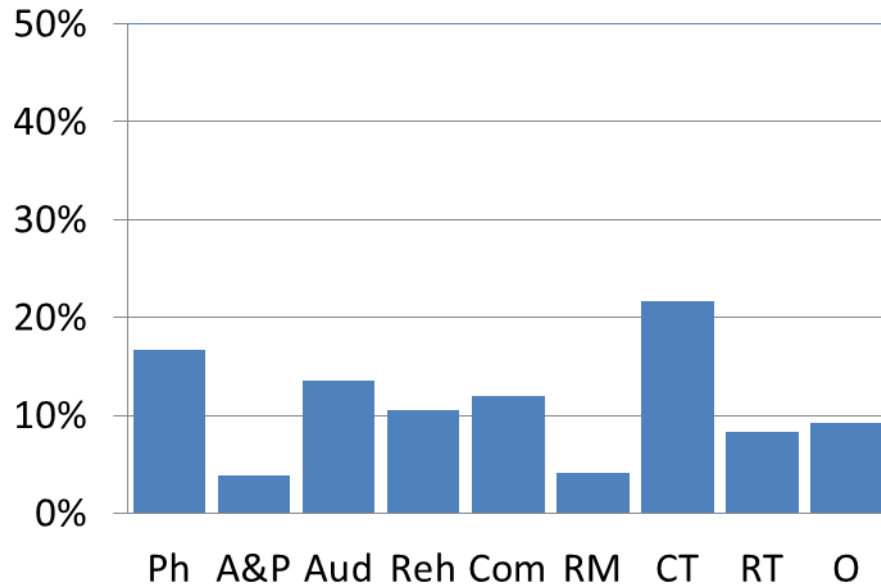
Ethics, Religion, Philosophy, English, Law, Management, Economics



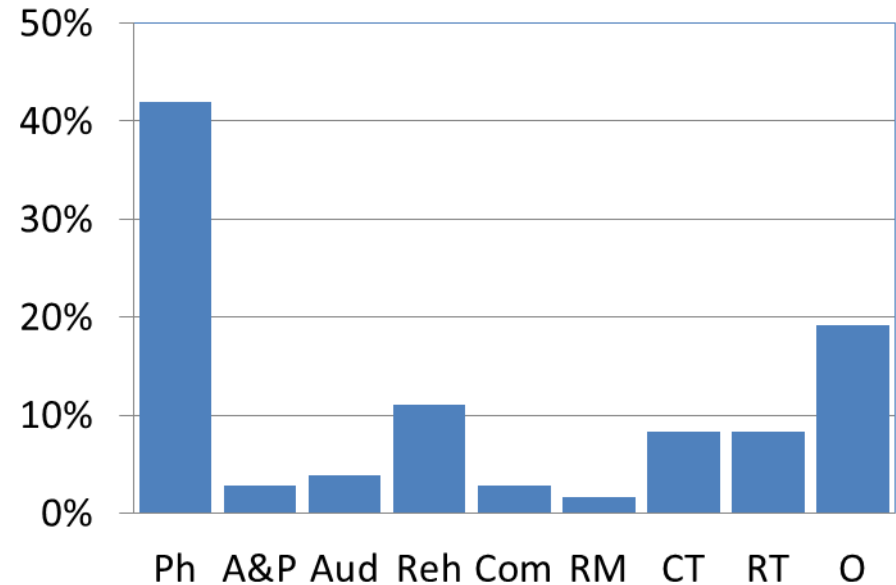


# Some examples: Bachelor programs

## Brussels: Bachelor in audiology



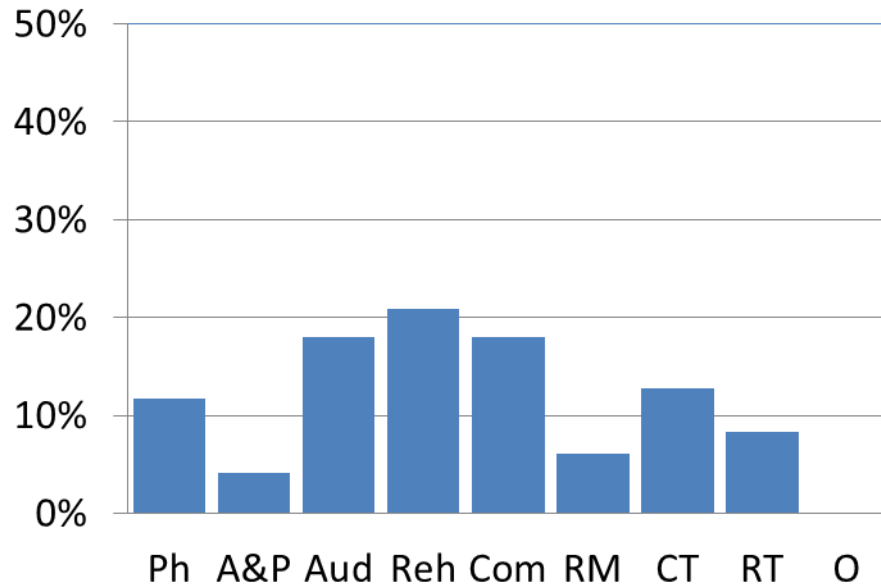
## Lübeck: Hörakustik



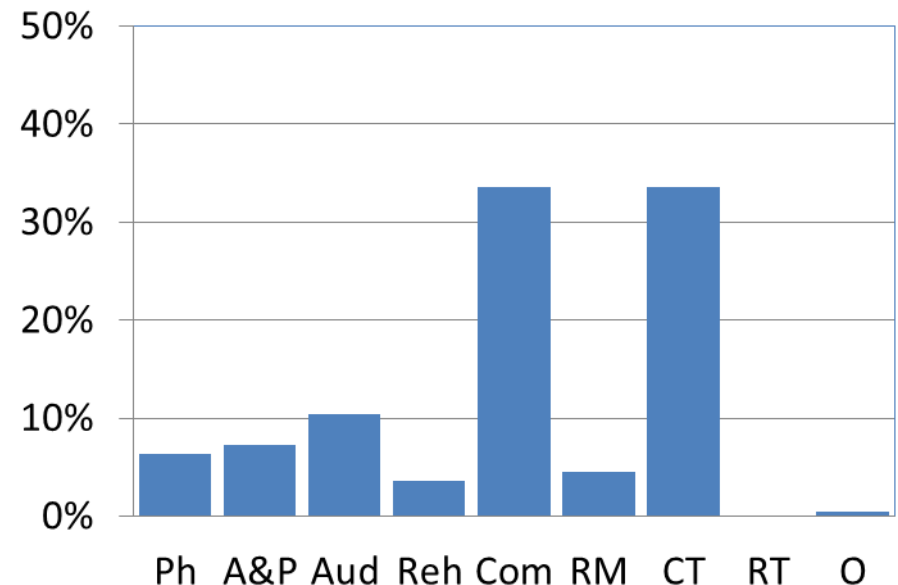


# Some examples: Bachelor programs

## Gotenborg: Bachelor in Audiology



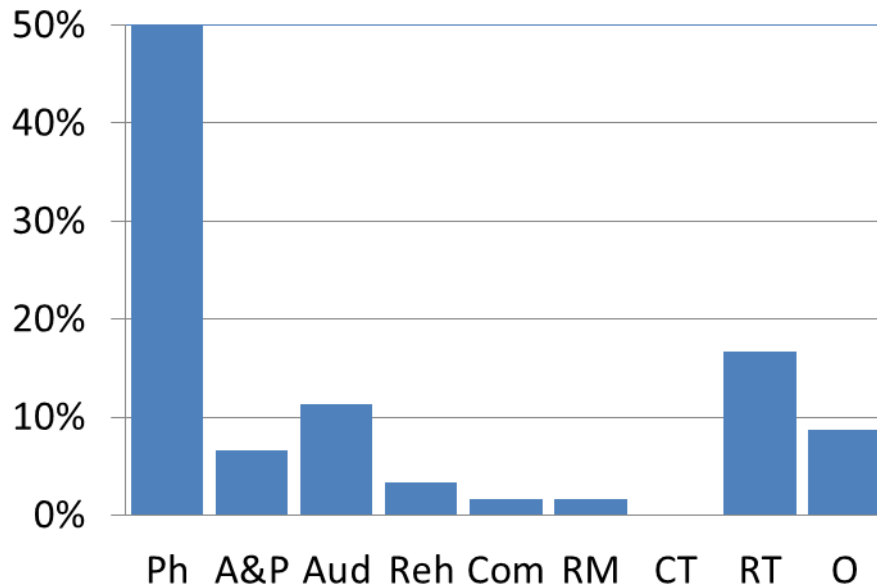
## Tel Aviv: Ba of communication disorders



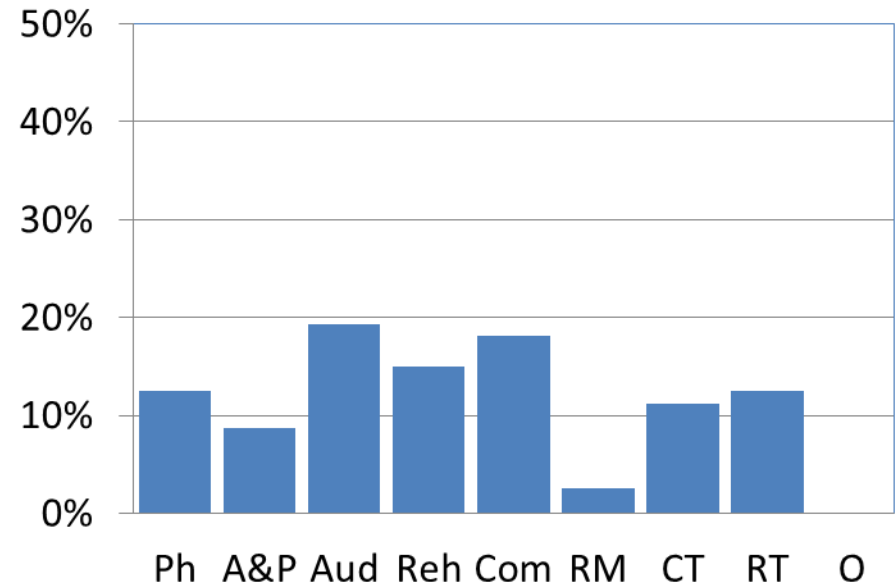


# Some examples: Bachelor + Master programs

## Oldenburg: Hearing technology & audiology



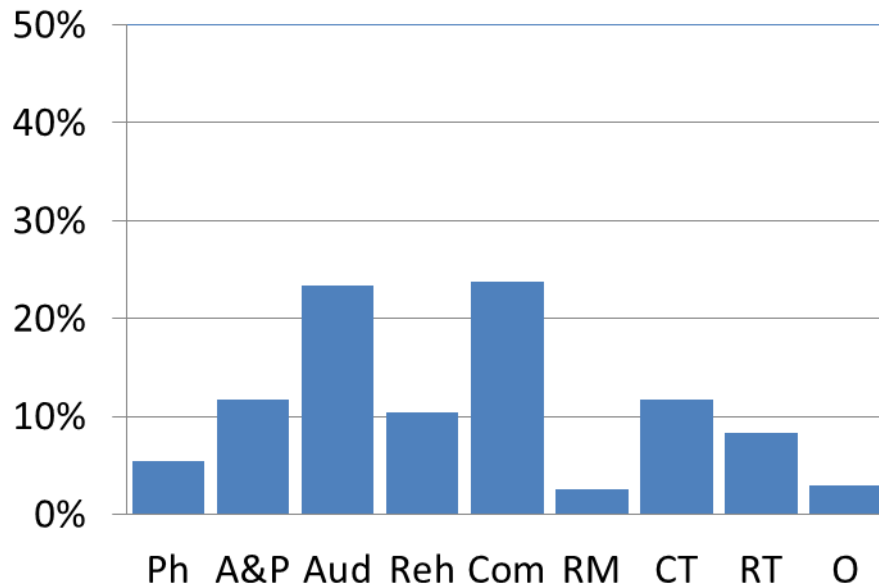
## Lund: Ba + Ma Audiology



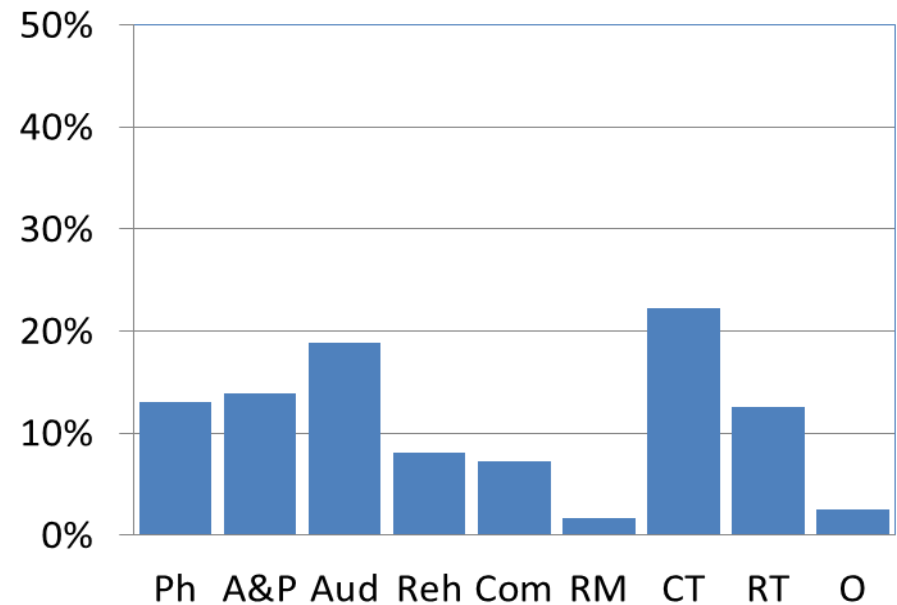


# Some examples: Bachelor + Master programs

## Ghent: Logopaedic and Audiological Sciences



## Coimbra: Ba + Ma Audiology





## Some remarks

- Very interesting exercise
- Variation of content across programs: technical versus general
- The analyses are solely based on the name of the courses. The contents and the level of specialization are not known.
- Limited number of courses in English, no overview yet



# How do we continue? (1)

- We will continue to complete the overview of education in audiology. Is there information we want to add or delete from the overview table?
- For some countries the situation remains unclear (e.g. France, Spain,...)
- Is it useful to know the specific courses of each program? What can we do with this information? Do we want to share this information, and in what form?
- Do we want to go even further and compare the contents of the courses, up to the text book level?



## How do we continue? (2)

- Is it useful to categorize the different courses into a number of principal components? Do the 9 components presented here make sense?
- Do we want a certain degree of similarity between the programs? Can we identify a common denominator? Or is the large variation a richness that we want to maintain?
- Can the information on the different programs facilitate exchange and collaboration?

