



Importance of Transferable skills

WHAT ARE TRANSFERABLE SKILLS?

Transferable skills, also known as "portable skills" are qualities that can be transferred from study to work or from one job to another

«learning-by-doing»

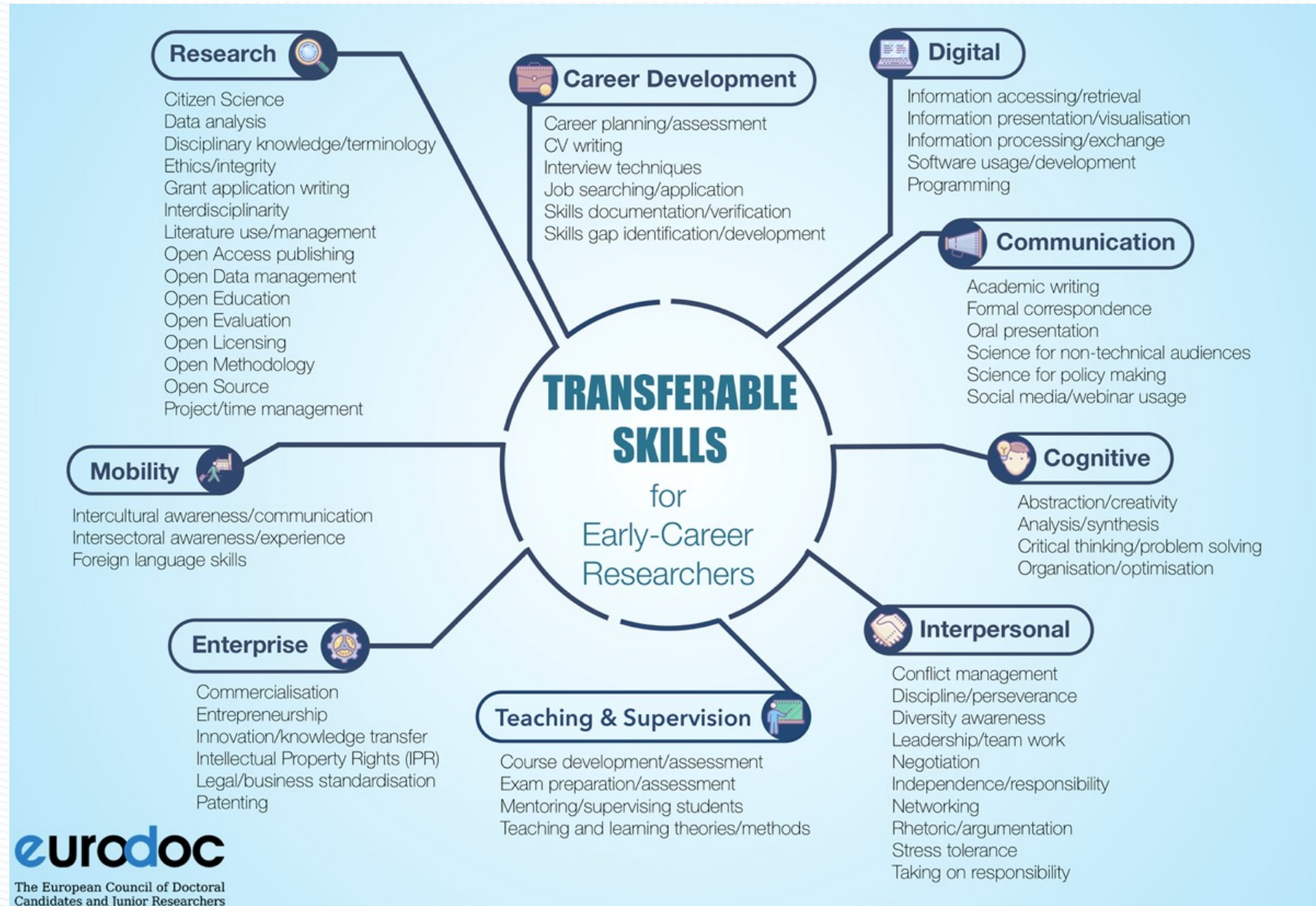
Hard skills + soft skills



IMPORTANT: employment landscape is increasingly intersectoral, international and interdisciplinary



SCHEME transferable skills



1. Research
2. Career development
3. Digital
4. Communication
5. Cognitive
6. Interpersonal
7. Teaching and supervision
8. Enterprise
9. Mobility

Wider objectives

What do we want to achieve with CORRIENTE XXI?



Picture by N. Koedam

QUALITY

research-basis, improved international embedding,
new teaching approaches,...



EMPLOYABILITY

alignment with job market needs



Picture by N. Koedam

AWARENESS

importance of aquatic sciences and management
translation to more effective guidelines for policy and
management
both nationally and in transboundary regions



Picture by L. Pinti

COLLABORATION

(inter)national scientific collaboration

➡ Importance of transferable skills, also for our collaboration

AT THE START...

**Workshop portfolio of compEtences and learning
outcomes (QUITO- 20-24/01/2020)**

Survey results

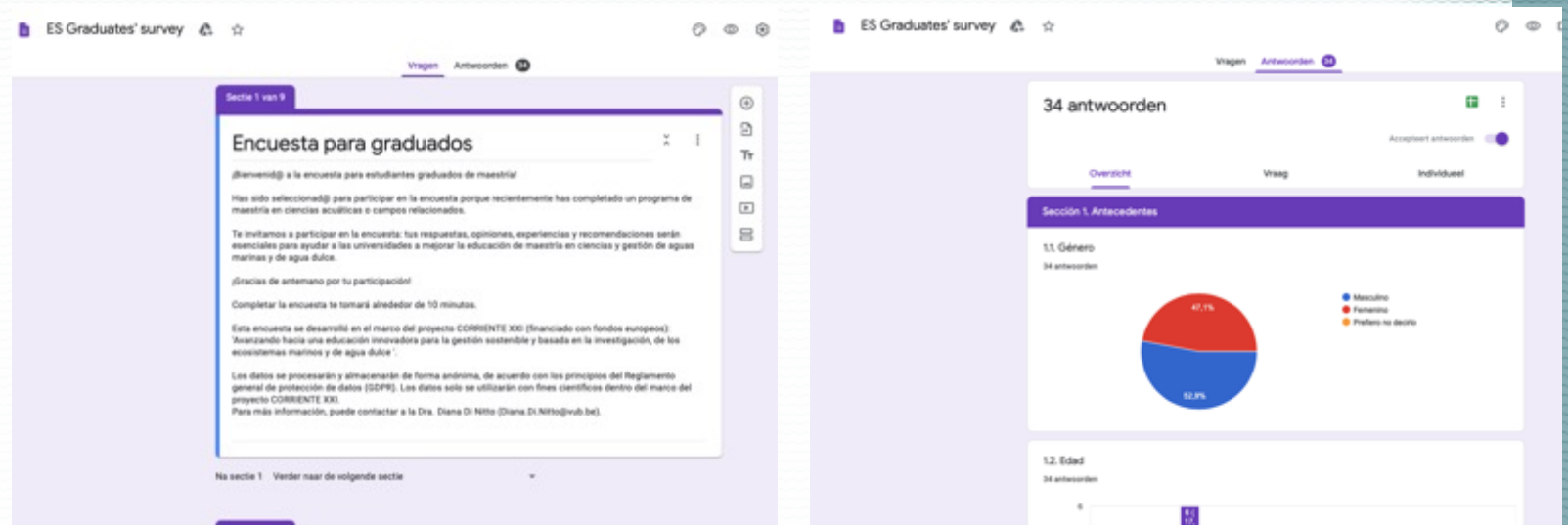


Customized surveys for four stakeholders groups

Google forms:
ENG/SP

- 1) Students
- 2) Former students
- 3) Employers
- 4) Lecturers

MAIN GOAL: to identify skills and competences lacking in current educational set-up of Master programmes



HOW IMPORTANT ARE THE FOLLOWING SKILLS....TOP 5

Employers

- Teamworking skills
- Ability to adapt to and act in new situations
- Good reading/writing skills
- Analytical and problem-solving skills
- Ethical & social awareness skills

Lecturers

- Exploring the most recent scientific insights
- Analytical and problem-solving skills
- Good reading/writing skills
- Critically assessing the validity of (scientific) information sources
- Ethical & social awareness skills

Graduates

- Developing research projects
- Fieldwork skills
- Collecting and analysing information
- Problem-solving skills
- Effectively use my scientific & technical skills to motivate and guide others

Students

- Formulating relevant research questions and hypotheses
- Collecting and analysing information / Problem-solving skills
- Interact and work in collaborative groups (with specialists & non-specialists)
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Learning outcomes - Educational matrices

Programme: Master Program in Marine Sciences - UPCH			
Learning outcome 1	Knowledge in the field of marine sciences, advanced knowledge in one of the subdisciplines and in the interaction of the various subdisciplines within the broader field of application.		
Learning outcome 2	The ability to delineate, recognise and situate biological or geological elements in the context of the scientific domain, in particular in relation to aquatic and marine ecosystems.		
Learning outcome 3	The ability to formulate a relevant research question concerning a complex problem in the field of marine and aquatic studies, and to formulate a corresponding hypothesis to develop a scientific research following the scientific method.		
Learning outcome 4	The ability to activate and link acquired knowledge from different disciplines to analyse and solve a scientific problem.		
Learning outcome 5	Advanced and thorough practical skills in field research, experimental research, research in a laboratory context and in processing data, in order to solve scientific questions.		
Learning outcome 6	Advanced organisational skills in relation to research (e.g. teamwork, task division, development and logistics of a research approach).		
Learning outcome 7	Communicative skills regarding (personal) research results to specialists as well as nonspecialists, using various adapted media and formats.		
Learning outcome 8	A critical attitude with respect to the value, reliability and usefulness of non-selfgenerated data, with advanced skills in data-mining, analysis of data files, analysis of sources and literature study.		
Learning outcome 9	The ability to formulate a proposal for a scientific project and/or to search the necessary financial resources.		
Learning outcome 10	The ability to elaborate an original scientific research manuscript.		
Course units		XXX (e.g. Master year 1/master year 2) (drop	XX Comp

Learning outcomes

*Learning outcomes describe the **intended knowledge, insights, skills and attitudes** that the student must master **after completing a learning process** or in the case of programme-specific learning outcomes, after completing a programme.*

 Importance of transferable skills in these learning outcomes

Learning outcomes - Educational matrices

Master Program in Marine Sciences - UPOCH	Optional	Optional	Sem-ester	Learning outcome 1	Learning outcome 2	Learning outcome 3	Learning outcome 4	Learning outcome 5	Learning outcome 6	Learning outcome 7	Learning outcome 8	Learning outcome 9
Biological Oceanography	Ma1	Compulsory	1	x	x	reset	reset	x	reset	x	reset	
Physical Oceanography	Ma1	Compulsory	1	x		reset	x	x	reset	x	x	
Chemical Oceanography	Ma1	Compulsory	1	x	x	reset	x	x	reset	x	reset	
Geological Oceanography	Ma1	Compulsory	1	x	x	reset	reset	x	reset	reset	x	
Scientific Programming	Ma1	Compulsory	1	reset	reset	x	x	x	reset	x	x	
Applied Statistics for Natural Sciences	Ma1	Compulsory	2	reset	reset	x	x	reset	reset	x	x	
Scientific Communication	Ma1	Compulsory	2	reset	reset	x	reset	reset	reset	x	reset	x
Multivariate Analisis in Oceanography	Ma2	Compulsory	1	reset	reset	x	x	reset	x	x	x	
Marine Science Research I	Ma2	Compulsory	2	reset	reset	x	x	reset	x	x	x	x
Marine Science Research II	Ma2	Compulsory	year	reset	reset	reset	x	x	x	x	x	
Remote Sensing Tools and GIS for the study of coastal systems	Ma1+Ma2	Elective	year	x			x	x	reset	x	x	
Coastal-marine and Litoral Ecosystems	Ma1+Ma2	Elective	year	x	x	reset	reset	x	reset	x		
Dynamics and Ecology of Red Tides	Ma1+Ma2	Elective	year	x	x	reset	x	x	reset	x	reset	
Marine Pollution	Ma1+Ma2	Elective	year	x	x	reset	reset	x	reset	x	reset	
Oceanic Ecological Modeling	Ma1+Ma2	Elective	year	x	x	reset	x	x	reset	x	reset	
Trophodynamics and benthic-pelagic coupling	Ma1+Ma2	Elective	year	x	x	reset	reset	x	reset	x	reset	
Advanced Topics in marine productivity	Ma1+Ma2	Elective	year	x	x	reset	reset	x	reset	x	reset	
Marine Meteorology and Ocean-Atmosphere interactions	Ma1+Ma2	Elective	year	x	x	reset	reset	x	reset	x		
Numerical Modeling in the ocean	Ma1+Ma2	Elective	year	x	x	reset	x	x	reset	x		



Learning Outcomes

Master of Science in Marine and Lacustrine Science and Management - Learning outcomes

1. Knowledge in the field of marine and lacustrine studies, advanced knowledge in one of the subdisciplines and in the interaction of the various subdisciplines within the broader field of application.
2. The ability to delineate, recognize and situate biological or geological elements in the context of the scientific domain, in particular in relation to aquatic ecosystems.
3. The ability to formulate a relevant research question concerning a complex problem in the field of marine and lacustrine studies, to develop a scientific research approach in conformity to accepted scientific methods and to bring this approach into practice.
4. The ability to formulate hypotheses concerning complex problems in the scientific domain and to evaluate them after a thorough literature study and data collection, to apply advanced knowledge of concepts, models, theories in order to solve concrete problems.
5. The ability to assume a responsible role in a pluridisciplinary team and, with overarching knowledge and insight, to develop collaboration with various sectors of society including the corporate sector (e.g. the harbour industry, tourism, fisheries, aquaculture).
6. Advanced and thorough practical skills in field research, experimental research, research in a laboratory context and in processing data, in order to solve scientific questions.
7. Advanced organisational skills in relation to research (teamwork, task division, development and logistics of a research approach).
8. Communicative skills regarding (personal) research results to specialists as well as nonspecialists, using various adapted media and formats.
9. A critical attitude with respect to the value, reliability and usefulness of non-selfgenerated data, with advanced skills in data-mining, analysis of data files, analysis of sources and literature study.
10. The ability to situate scientific problems, results of scientific research and technical views in an ethical and social perspective.
11. The ability to translate scientific views and results into a feasible and realistic management plan or to give an expertise-based contribution to a governance plan in (inter)national perspective.
12. The ability to formulate a proposal for a scientific project and to search the necessary financial resources.
13. The ability to function within an international professional environment keeping in mind the values of a multicultural society.
14. The ability to situate scientific insight, results of scientific research and technical achievements in a social perspective, against a political-historical (especially for the development-oriented finality), economical and governance-related background.

TOUR DE TABLE: which transferable skills are/can be included in your Master programme(s)?



CURRICULUM: educational matrices

- Which transferable skills does your master programme provide? In general, in which specific courses? Illustrate with good practices.
- Which transferable skills are missing and important to include?
- Do the lecturers have the capacity to evaluate / transfer these skills? What is needed to motivate necessary changes?

 **KEY DOCUMENTS to develop the training modules and to work towards continuous curriculum update and development (incl. programme matrix)**