Preparing Graduate Students for a Global Workforce

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The State University of New York at Buffalo
What skills do graduate students need to succeed in a globalizing workforce?
The central questions that we face in graduate education globally:

• How do we articulate graduate program objectives with societal needs?

• How do we develop the domains of competences that our young researchers need to develop for this new environment?

• A challenge: What does it mean to function in a global and knowledge-based society?
# Changing contexts

**Changing Ph.D. demographics**
- More doctoral candidates than ever before are completing a Ph.D. at universities throughout the world.

**Knowledge-based economies**
- Many more to be trained to meet the future needs of knowledge economies.

**Recognition of transferable training needs**
- Doctoral candidates encounter increasing difficulties in securing employment as public and private funding flows less freely.
TRANS-DOC: TRANS-Atlantic and TRANSferability aspect of DOCtloral training

- Organized by the Coimbra Group of Universities in Europe working with a consortium formed in the BALANCE Project (2006-2009), funded by the European Commission through the Erasmus Mundus program

- Through the earlier project, partners in Europe, Canada and the United States collaboratively identified a new area for cooperation

- Partners had a shared interest in doctoral studies and career readiness of Ph.D. students
Project Partners

- The Coimbra Group Office, Brussels (coordinator) and 8 institutional partners (4 European, 4 North American)

- Aarhus University, Denmark
- University of Alberta, Canada
- University at Buffalo, SUNY, USA
- University of California, Davis, USA
- University of Granada, Spain
- University of Graz, Austria
- University of Leuven, Belgium
- York University, Canada
Principal Objectives

• Facilitate intra-European and transatlantic collaboration at the doctoral level

• Enhance employability prospects for Ph.D. students

• Enhance global skills and social responsibility of doctoral students

• Provide universities with their own in-house trainers, through a train-the-trainers program

• Create a flexible template for a transferable skills program for doctoral students in various institutional settings
TRANS-DOC PROJECT (2010-2012)

Main Activities

• Survey of structure and administration of doctoral programs in Europe and North America (Dec. 2010)

• Evaluation of the LEADER* training program at Aarhus University, Denmark (August 2011)

• Train-the-Trainer Workshops in March 2012 at Granada, (Spain), York (Canada), and Davis (USA)

• Two-week pilot course on transferable skills at SUNY Buffalo in August 2012 → Generic template

• Final Seminar in Brussels on Trans-Atlantic Cooperation in Doctoral Training (October 2012)

* Learning Environment for Advancement of Doctoral Excellence and European Research
Developing the TRANS-DOC course template

Developing a course template for doctoral candidates on transferable skills

• To ensure that doctoral candidates are well prepared to apply interdisciplinary and inter-sectoral skills and knowledge

• To prepare for a research and professional context typically characterized by international (e.g. transatlantic) collaboration

• Focal themes include funding opportunities, communication, interdisciplinary collaboration, team building, project management and entrepreneurial skills, etc.
The Transferable Skills Program
for Ph.D. Students
at the University at Buffalo

July 22 – August 2, 2012
Week 1

- Underscoring the importance/relevance of transferable competences
- Inter-/intrapersonal skills
- Inter-/intra-cultural communication
- Creativity
- Challenge of collaboration
- Networking

Week 2

- Global competence
- Technology transfer
- Leadership skills
- Entrepreneurship
- Experiential knowledge
- Professionalization
- Evaluation & Certificate Conferral
Distinctive features

- **Intensive** - a two-week residential program on transferable skills
- **Experiential** - the design facilitated *understanding, acquiring and making use* of these skills
- **Extensive** – Week 1 self-awareness and self-expression; Week 2 leadership skills; knowledge transfer; innovation
- **Globally-oriented** – program capitalized on diversity of students in terms of national origin, institution and discipline
- **High relevance of content** – careful selection and design
- **Effective pedagogy** – modes of delivery; diversity of speakers (European, Canadian and American)
- **Goal-oriented** – professionalization of the young researcher
The Outcome
Student Learning

Metacognition of the importance of transferable skills
Knowledge of Self
Metacognition of higher education

Global competence
Understanding the entrepreneurial spirit
Interdisciplinarity

Student Voices
What I found most compelling of today’s workshop is how to understand the meanings of transferable competencies and how to develop these competencies/survival skills to be a responsible professional.

Student C in week 1
The most compelling one in terms of revealing my professional preferences and the ways of working was to explore my own preferences for collaboration and communication with others. It helped me to see what my preferences actually are and it seems a large benefit to know my own strengths and challenges connected to my working skills. The same goes for the learning styles. I will definitely use this knowledge in the future.

Student A in week 1
I think institutions (academic programs) need to develop the professional skills and/or retrain their current faculty; the same demand should be placed on the faculty, who themselves have the obligation to prepare their students for academic/non-academic jobs.
The most influential one for my scholarly development was the introduction to each specific transferable skill and their pivotal roles in the workplace, and why Ph.D. students need to acquire these skills.

Student G in week 1
Today, we explored the importance of global competence. It was interesting to hear that global competence is an increasingly relevant skill. I feel that this skill is not emphasized at my university and when I return, I will let my peers know of the importance and opportunities for studying abroad out there. [The lecture] inspired me to become more self-reflexive of my own global competency; to start to think about global competency as a skill and asset in my future career.

Student M in week 2
Transferring the kinds of knowledge that we acquired in graduate studies to the campus-external community is a presentation of personal aspiration for socioeconomic mobility; but at the same time it is a contribution of higher education professionals to the society. The nature of knowledge transfer is well indicated in Dr. Genco’s key position that the goal of transferring technology (or knowledge) is ‘about society’, not anything like commercializing our ideas.

Student I in week 2
I am definitely amazed by “thinking cross-disciplinary” (self-created term; not used in the session) for innovative research. I had never thought how my expertise can combine with other areas, and how people from different fields (e.g., computer science, archaeology) can relate to my research. This session and the collaborative challenge project made me think cross-disciplinary and definitely inspired me to seek ways of reaching out to other fields to make collaborative projects cross disciplinary borders.

Student L in week 2
As graduate students, we need to improve, and step back to examine how we can work on the things we are already good at.

Student K in week 2
As future leaders of our society, professors or not, [we] have an ethical responsibility to empower and help others to become productive and active members of our broader society… I see that there really are ways to educate students for the broader world.”
The Research Findings of the Summer Program

In-progress reflection
Summative evaluation
### In-progress reflection

<table>
<thead>
<tr>
<th>Themes</th>
<th>Contents</th>
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</thead>
</table>
| **Metacognition of the Importance of Transferable Skills** | Understanding the importance/relevance of transferable skills  
- from an employer’s perspective  
- from an interpersonal perspective in order to collaborate and learn |
| **Knowledge of Self**                      | Understanding of one’s strengths  
- self-awareness, challenging assumptions, interdisciplinarity  
- possibility of multiple career path |
| **Metacognition of Graduate Education**     | Raising awareness among faculty  
Socialization of graduate students  
- agency on the part of students  
- graduate student placements data  
- interconnections of academic programs and workplaces  
- research funding sources |
| **Learning Transferable Skills**            | Collaboration and teamwork  
Diversity management  
Interpersonal skills  
Networking skills  
Presentation skills  
Communication (oral and written)  
Self-reflection and understanding of the other  
Interdisciplinary thinking  
Problem-solving skills/ Creativity. |
# In-progress reflection

## Week 2

<table>
<thead>
<tr>
<th>Themes</th>
<th>Contents</th>
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</thead>
<tbody>
<tr>
<td><strong>Global Competence</strong></td>
<td>Understanding the relationship between global competence and employability&lt;br&gt;Intercultural communication</td>
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<tr>
<td><strong>Interdisciplinarity</strong></td>
<td>Developing interdisciplinary collaboration skills</td>
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<tr>
<td><strong>Understanding of Entrepreneurial Spirit</strong></td>
<td>Understanding entrepreneurship&lt;br&gt;-becoming an entrepreneur&lt;br&gt;-other opportunities for PhD students</td>
</tr>
<tr>
<td><strong>Knowledge transfer</strong></td>
<td>Understanding technology as a social good&lt;br&gt;-need to develop skills for translational research&lt;br&gt;-understanding social values and examples of technology transfer</td>
</tr>
<tr>
<td><strong>Professionalization</strong></td>
<td>Active development of various domains&lt;br&gt;Interview skills&lt;br&gt;Writing letters and interviewing&lt;br.CV/resume writing skills&lt;br&gt;Knowledge of academic and non positions&lt;br&gt;Application of Strength Quest&lt;br&gt;Enhancement of non-academic employability skills</td>
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## Summative evaluation

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<tr>
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<th>Contents</th>
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</table>
| **Transferable Skills** | Collaboration/teamwork  
Communication skills/networking  
Leadership/entrepreneurship  
Job searching skills  
Presentation skills  
Skills in writing a proposal  
Global competence  
Self-awareness of one’s strength  
Creativity  |
| **Interdisciplinarity** | International, intercultural, interdisciplinary interaction  
Group interaction across disciplines  
Awareness of interdisciplinary Potential collaboration across individuals  
& disciplines  |
| **Professionalization** | Creating a LinkedIn account  
MBTI/ Strength Quest  
Tutorials on CVs, resumes, cover letters and interviews  
More focus on practical aspects  
Focus on non-academic opportunities  
How to use education in humanities in career search  
More global focus |
### Themes

<table>
<thead>
<tr>
<th>Most useful content</th>
<th>Contents</th>
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<tbody>
<tr>
<td>Diversity of the program</td>
<td>Efficiency in teamwork &amp; communication</td>
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<tr>
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<td>High relevance of contents</td>
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<tr>
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<td>Effective pedagogy</td>
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<tr>
<td>Effective pedagogy</td>
<td>Raising self-awareness</td>
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<tr>
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<td>Useful information on professionalization</td>
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<tr>
<th>Preferences in Organization/ Pedagogy</th>
<th>Contents</th>
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<tbody>
<tr>
<td>Workshops on creativity, teamwork, communication, management skills</td>
<td>Workshops led by the UB career center useful for future career</td>
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<td>Workshop with Louisa and Mark</td>
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<td>Group work/ Working on projects</td>
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<tr>
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<td>Group project presentations/ Workshop on career exploration and options</td>
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<tr>
<th>Need for follow-up activities</th>
<th>Contents</th>
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<tbody>
<tr>
<td>A follow-up to the course sometime in the future would help</td>
<td>Possibility of future reunions to discuss progress and professional development</td>
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<thead>
<tr>
<th>Other Needs</th>
<th>Contents</th>
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<tbody>
<tr>
<td>More about life and career balance</td>
<td>Grant writing practice/ More on how to write a proposal</td>
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<td>Leadership training targeted for PhD candidates pursuing careers within and outside academia</td>
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<td>More information on funding</td>
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<td>More feedback on individuals’ presentation skills</td>
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## Transferable Skills

<table>
<thead>
<tr>
<th>Skill</th>
<th>Recognized/Developed</th>
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<tbody>
<tr>
<td>Collaboration</td>
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<tr>
<td>Networking</td>
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<td>Communication skills</td>
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<tr>
<td>Entrepreneurship</td>
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<td>Professionalization</td>
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<td>Interdisciplinary work</td>
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<tr>
<td>Global Competence</td>
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<td>Inter-/intrapersonal skills</td>
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Conclusion – Graduate Programs

**Societal needs** - graduate programs need to be responsive to societal needs and advance our societies in the 21st century

**Graduate students needs** - graduate education needs to be responsive to its students - develop domains of competencies for diverse career options

- increase their capacities in transferable skills
- increase their awareness of different career paths
- raise the students’ potential to play multiple roles

Graduate Schools need to develop a greater integration of content areas and the processes of socialization of the graduate student

**From challenges to TRANSferability**

- recognize the changing landscape of graduate education
- develop the students’ potential for social roles and social responsibility
Concluding Question:

Could the Trans-Doc program template be adapted to meet the needs of your students and institutions?
The TRANS-DOC: Transferable Skills Program at SUNY Buffalo

Thank you