

Graduate Training in Professional Skills



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Survey

- Prepared by COL
- Original survey vetted by three academic educators (in 2012)
- Sent to COL Members (academic and non-academic) and other member organizations
- 308 responses from over 40 different organizations:
 - 147 graduate students
 - 102 graduate educators/faculty
 - 18 employers (1 academic, 17 non-academic)
 - 41 early-career employees (20 in academia)

The Questions

- Similar questions asked of each respondent to allow comparison of perceptions
 - For example: **Choose the 4 MOST IMPORTANT and the 4 LEAST IMPORTANT skills for you to have if you pursue a career in academia.** Also, “outside academia.”
- Do the students, the faculty, the employers, and the early-career employees agree? Where are possible areas of inconsistency, thus possible attention needed?

The Skills Addressed

- Research
- Teaching
- Technical Writing
- Project Management
- Non-Technical Writing
- Non-Technical Oral Communications
- Community Outreach
- How to Review a Proposal
- Other technical skills
 - Engineering
 - Computer science / software design
 - Web development
 - Data analysis
 - Database management

Student Response (careers in academia)

	Most Important	Least Important
Research skills	96.4% (106)	3.6% (4)
Teaching skills	78.3% (101)	21.7% (28)
Technical writing skills (such as proposals and journal articles)	100% (101)	0% (0)
Project management skills (such as program development and program evaluation)	66.4% (71)	33.6% (36)
Non-technical writing skills (such as magazine articles and webstories)	0.9% (1)	99.1% (107)
Non-technical oral communication skills (public speaking, community outreach)	35.8% (39)	64.2% (70)
Community outreach	8.4% (9)	91.6% (98)
How to review a proposal	33.6% (36)	66.4% (71)

Student Response (careers outside academia)

	Most Important	Least Important
Research skills	67.6% (73)	32.4% (35)
Teaching skills	10.4% (11)	89.6% (95)
Technical writing skills (such as proposals and journal articles)	62.0% (67)	38.0% (41)
Project management skills (such as program development and program evaluation)	93.6% (103)	6.4% (7)
Non-technical writing skills (such as magazine articles and webstories)	44.9% (48)	55.1% (59)
Non-technical oral communication skills (public speaking, community outreach)	79.8% (87)	20.2% (22)
Community outreach	35.8% (39)	64.2% (70)
How to review a proposal	13.3% (13)	87.7% (93)

Faculty Response (careers in academia)

	Most Important	Least Important
Research skills	98.8% (81)	1.2% (1)
Teaching skills	78.5% (62)	21.5% (17)
Technical writing skills (such as proposals and journal articles)	100% (82)	0% (0)
Project management skills (such as program development and program evaluation)	65.4% (51)	34.6% (27)
Non-technical writing skills (such as magazine articles and webstories)	1.3% (1)	98.7% (75)
Non-technical oral communication skills (public speaking, community outreach)	42.3% (33)	57.7% (45)
Community outreach	6.7% (5)	93.3% (70)
How to review a proposal	22.4% (17)	77.6% (59)

Faculty Response (careers outside academia)

	Most Important	Least Important
Research skills	75.9% (60)	24.1% (19)
Teaching skills	9.6% (7)	90.4% (66)
Technical writing skills (such as proposals and journal articles)	82.1% (64)	17.9% (14)
Project management skills (such as program development and program evaluation)	92.2% (71)	7.8% (6)
Non-technical writing skills (such as magazine articles and webstories)	28.0% (21)	72.0% (54)
Non-technical oral communication skills (public speaking, community outreach)	80.5% (62)	19.5% (15)
Community outreach	30.7% (23)	69.3% (52)
How to review a proposal	13.3% (10)	86.7% (65)

Early Career (careers in academia)

	Most Important	Least Important
Research skills	90.0% (18)	10.0% (2)
Teaching skills	35.3% (6)	64.7% (11)
Technical writing skills (such as proposals and journal articles)	83.3% (15)	16.7% (3)
Project management skills (such as program development and program evaluation)	66.7% (12)	33.3% (6)
Non-technical writing skills (such as magazine articles and webstories)	26.7% (4)	73.3% (11)
Non-technical oral communication skills (public speaking, community outreach)	62.5% (10)	37.5% (6)
Community outreach	6.3% (1)	93.8% (15)
How to review a proposal	40.0% (6)	60.0% (9)

Early Career (careers outside academia)

	Most Important	Least Important
Research skills	90.0% (9)	10.0% (1)
Teaching skills	0% (0)	100% (8)
Technical writing skills (such as proposals and journal articles)	87.5% (7)	12.5% (14)
Project management skills (such as program development and program evaluation)	71.4% (5)	28.6% (2)
Non-technical writing skills (such as magazine articles and webstories)	25.0% (2)	75.0% (6)
Non-technical oral communication skills (public speaking, community outreach)	75.0% (6)	12.5% (1)
Community outreach	28.6% (2)	71.4% (5)
How to review a proposal	42.9% (3)	57.1% (4)

Summary Skill Assessment (careers in academia)

Early-Career - Important

<ul style="list-style-type: none">• Non-Technical Oral Communication	<ul style="list-style-type: none">• Research• Technical Writing• Project Management
<ul style="list-style-type: none">• Community Outreach• Proposal Review• Non-Technical Writing	<ul style="list-style-type: none">• Teaching Skills

Students
& Faculty
- Not
Important

Students
& Faculty
- Important

Early-Career – Not Important

Summary Skill Assessment (careers not in academia)

Early-Career & Employers - Important

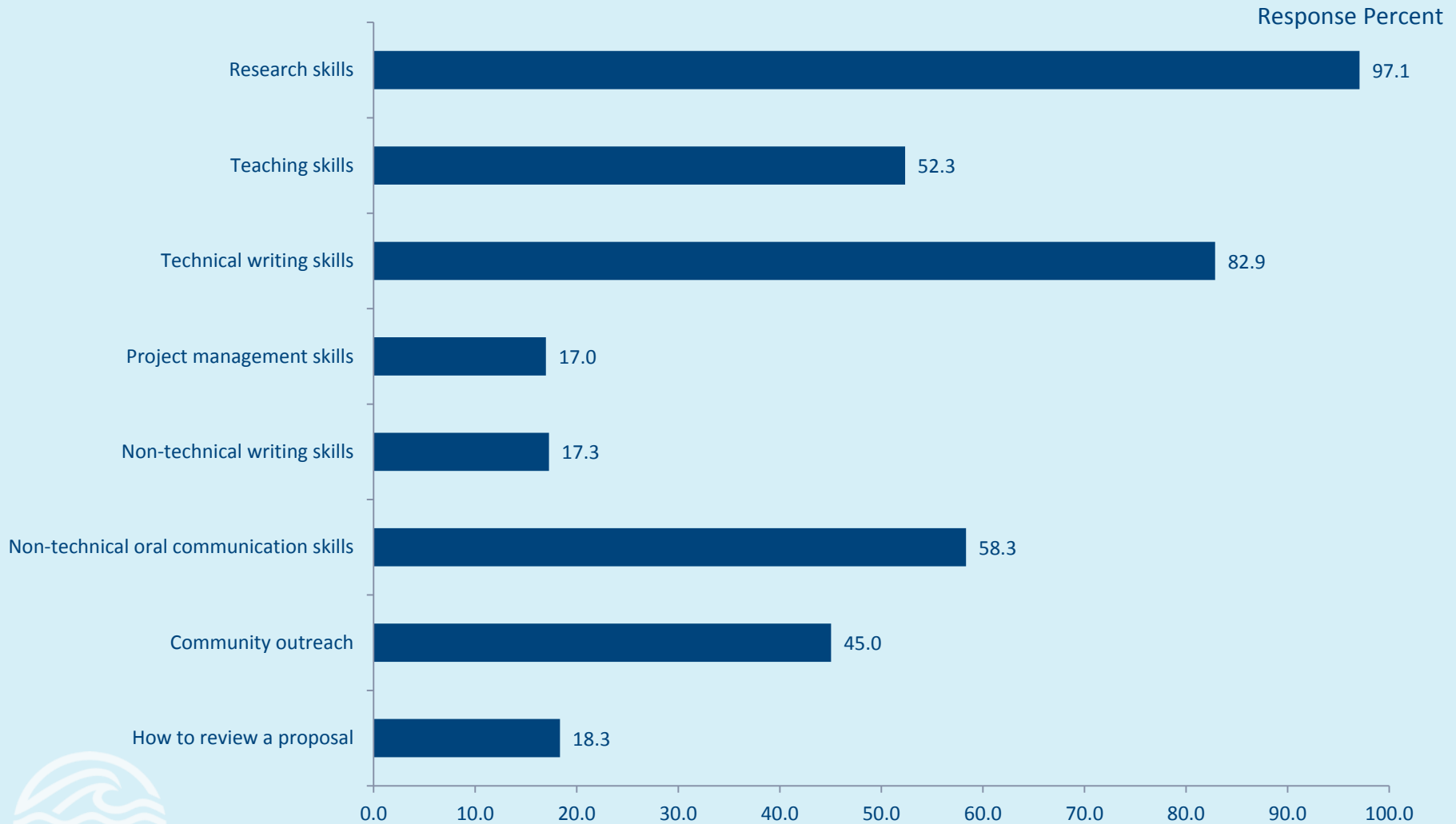
	<ul style="list-style-type: none">• Research• Technical Writing• Project Management• Non-Technical Oral Communication
<ul style="list-style-type: none">• Non-Technical Writing• Community Outreach• Teaching• Proposal Review	

Students
& Faculty
- Not
Important

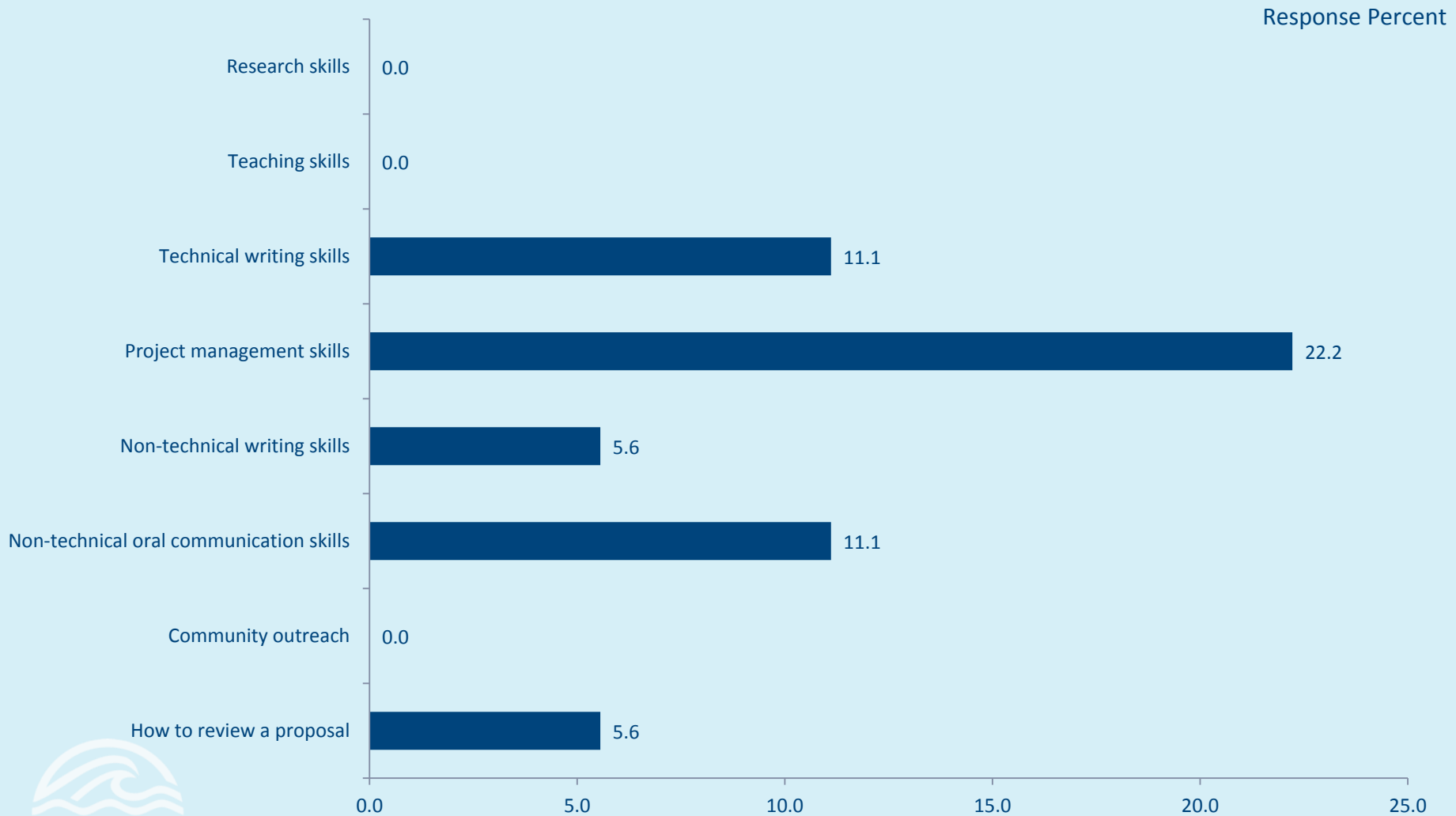
Students
& Faculty
- Important

Early-Career & Employers – Not Important

Skills Taught (student response)

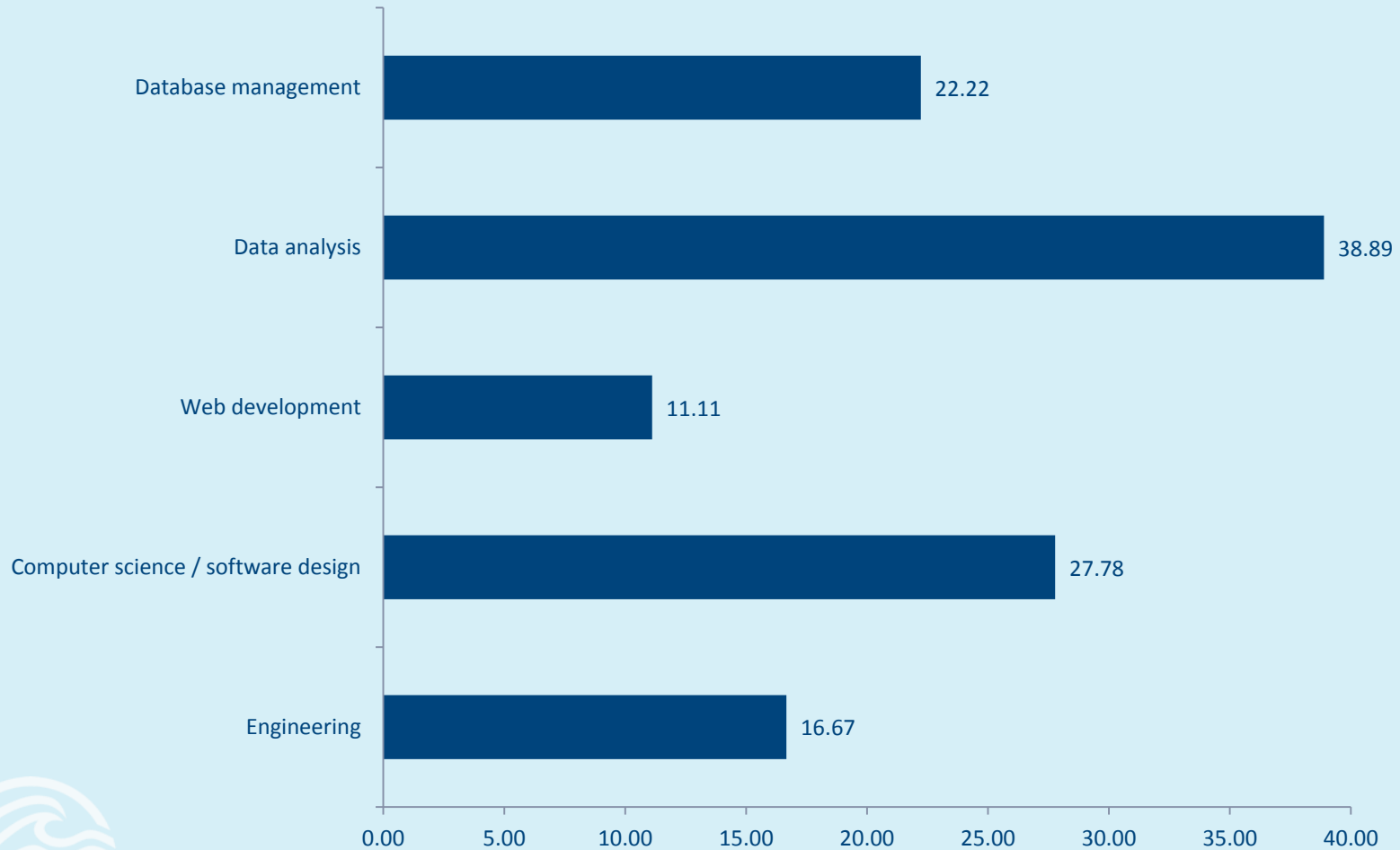


Skills Lacking (employer response)




Skills Lacking (employer response)

Response Percent

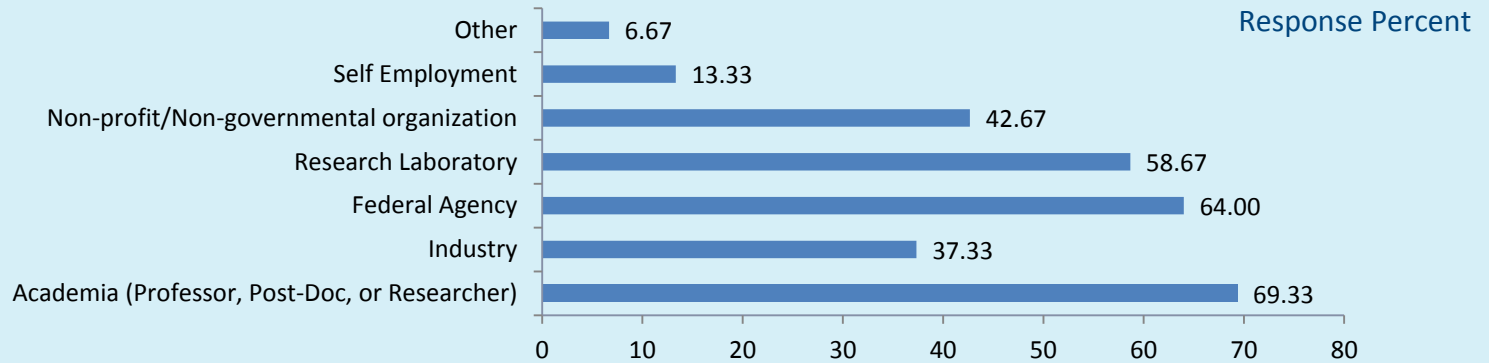


Summary Skills vs Training

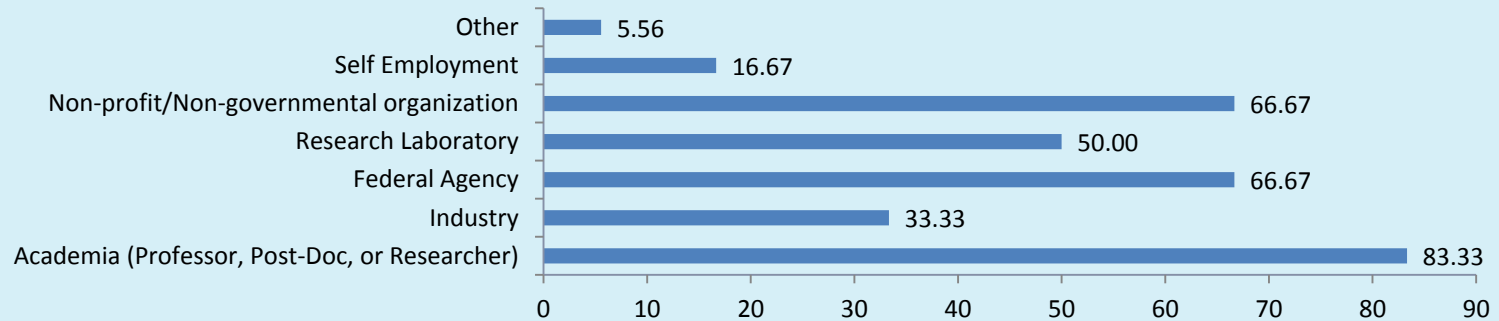
		Skills Taught, and Taught Effectively*			
Not Important Skills	<ul style="list-style-type: none">• Technical Writing• Community Outreach	<ul style="list-style-type: none">• Research• Teaching	<ul style="list-style-type: none">• Non-Technical Oral Communication• Proposal Review• Project Management	Important Skills	<p><i>*as assessed by employers and early-career employees</i></p> 
	<ul style="list-style-type: none">• Non-Technical Writing				
		Skills Not Taught, or Not Taught Effectively*			

Career Paths

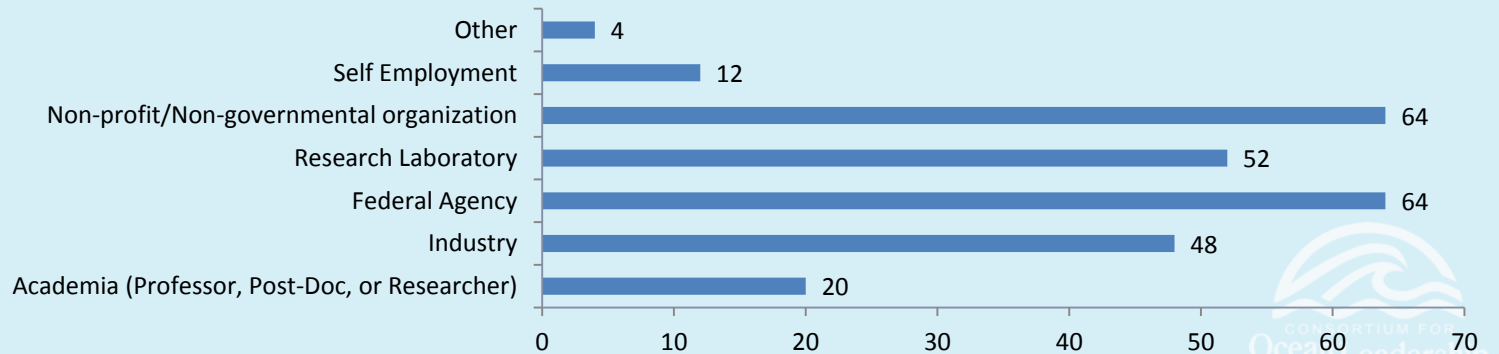
PhDs (75)



Masters (12)



Terminal Masters (25)



Draft Conclusions

- Current academic training could better take into account the needs of all students, even those not going into academia
- Potential skill areas that could use more attention in graduate programs:
 - Project Management Skills
 - Proposal Review Skills
 - Non-Technical Oral Communication Skills

Questions?

