

What do educators need to know about the workforce, and how should this information be communicated?

- Not all students are going to be professors – communicate this firmly and often
- Be aware of technical requirements of the workforce that they are targeting (if teaching the wrong stuff it doesn't work) – communicate this using a web-based system so that it can be updated
- Need access to **current** information (no lag) on jobs available (e.g., OceanCareers.com, professional society jobs releases, etc.)
- Look at workforce demographics and create a flexible way of getting education – communicate this by going to the companies to see exactly what they do
- Need to know what the skills are needed – face-to-face communication, working through major education meetings
- Good education is inherently linked to a viable workforce, not separate entities (“system science”)
- Training versus education – how do you bridge that gap? Communicate this by posting it on the web so that it's widely available
- Students have to be flexible and practical and integrate that with social sciences so students have a broad base
- Feedback from students who are now in the workforce; developed through personal relationships while students
- There are a number of colleges that are successful, the relationship is just one-to-one (i.e., with just one company) – need to expand this
- Bring educators into the work force – teacher learning programs, hands-on projects (e.g., building ROVs), teachers volunteer on scientific cruises to help, etc.

What are the best practices for aligning educational experiences with workforce needs?

- Get teachers out in the workplace – cross pollinate – get industry people into the classroom
- Industry advisory committees
- Feedback loop – people that complete a program provide feedback
- Exchange programs
- Co-ops for students
- Work scenarios presented to students, videos, simulators, etc.
- Give educators actual work scenarios so that students can apply what they learn to that scenario
- Get industries to come to colleges – that's easier than getting colleges to go to industries
- Model the medical profession – “clinical professors”
- Industry-sponsored projects and investment by industry to bring educators to them
- Teachers can only teach what they know – getting teachers who have “been there” is important
- Professional societies can play a role
- Career fairs and other ways to get input from industry

How can we attract people to occupations where there is an undersupply? How should we handle OSTO occupations for which there is oversupply?

- “Truth in advertising” – take into account timelines/trend predictions
- Internships are key for undersupply – gives students the chance to take a look at the job
- Marketing opportunities to students, teachers, professionals, etc.
- Critical occupations that need small #s
- E-mails or quick way to get information (e.g. OceanCareers.com)
- Incentives (e.g. Oceaneering’s example of taking care of employee’s family)
- Target students at early age, particularly in math and science – but how?
- Look for overlap and parallels between under- and over-supply and redirect students
- Make sure students have the background fundamentals – many employers are willing to train in the technical skills
- No inhibiting mechanism in university production contributes to oversupply problem

How can we recruit and retain people from underrepresented groups?

- Outreach to middle and high schools – proactive
- Get students interested in science first and foremost at a young age (middle school or younger) – middle schools still teach in a interdisciplinary way
- Students need to see people like them doing the jobs, in internships, on board ships, etc. – give them role models
- Show students oceans’ relevance to their daily lives
- Charter schools
- Marketing, marketing, marketing
- Teachers play a very important role in the process, especially those who will go the extra mile to make sure that their students can take advantage of opportunities and participate in unique learning experiences