INNHOLD

PUBLISERT 19. OKT. 2021 | OPPDATERT 6. NOV. 2021

Competence – attracting talent could become a challenge

The application statistics to higher education in Norway show that M.Sc.-studies are popular and that they even experience an increased interest in 2021 from the year before (KD – Samordna opptak, 2021). Oil companies, oil service companies and other suppliers to the petroleum industry recruit from a broad range of technology studies, and the recruitment basis appears solid provided that the jobs offered are attractive. The statistics do however also show that the petroleum specific studies are becoming less popular: To the petroleum M.Sc. study at NTNU with a capacity to enroll 20 students, only 26 people applied for the study as their first choice in 2021. An even lower interest was shown for the petroleum M.Sc. studies at the UiS where 21 people had the study as their first choice as compared to a maximum enrollment capacity of 20.

Whether the low interest in petroleum specific studies reflect a reduced support for the petroleum industry among young people, is uncertain. A poll in December 2019, conducted for Klassekampen, revealed that 49% of the people interviewed supported the opening of new areas, whereas 28% were against. 23% had not decided. Among the 18-22 year age group, 58% supported the opening up of new areas. A study from Cicero (2019) suggests that 30% of Norway's population wants to reduce the oil production, whereas 40% are against reducing the production. The low application numbers to petroleum studies could therefore have other explanations, e.g. a perception of insecure jobs after several hiring and firing cycles over the last two decades.Some universities find innovative ways to attract people to petroleum studies. The BRU21 initiative at the NTNU is a telling example of how new approaches can boost the interest in petroleum relevant studies (see case description).

CASE - BRU21

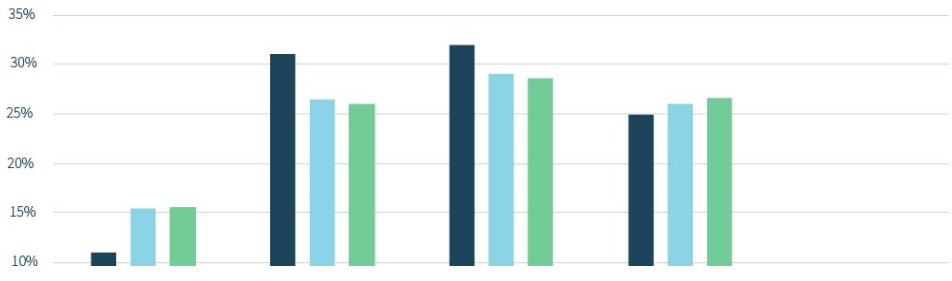
The BRU21 initiative

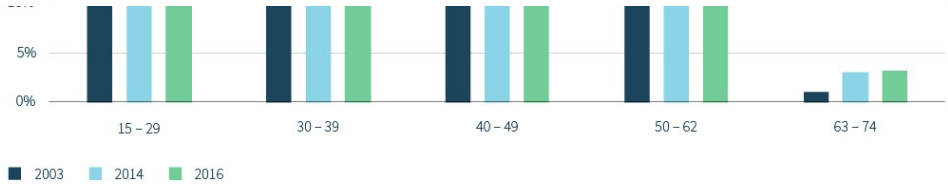
The BRU21 case example from NTNU illustrates a general observation related to Ph.D. studies in technology disciplines. In 2020, 64% of technology Ph.D students in Norway were non-Norwegians (RCN, 2021). This provides unique opportunities for establishing international networks and for cultural exchange and awareness. The risk is that highly skilled people leave Norway to return to their home country or other countries. Numbers from NIFU (2013) suggest that around 50% of foreign Ph.D. students remain in Norway after finalized studies. Foreigners with a technology Ph.D. from a Norwegian university are less inclined to leave Norway after finalized Ph.D. studies as compared to the average for all disciplines (37% as compared to 50%) (NIFU, 2013).

The petroleum R&D project portfolio at the RCN is very important for educating people to high competence positions in academia and the industry. Combined the Petromaks2 projects and the Petrocenters have had around 80 full-time Ph.D positions annually over the last three years, engaging more than 100 people annually with Ph.D. studies.

The workforce in the Norwegian petroleum industry is aging as Figure 59 shows. Around 30% are expected to retire over the next decade. With the "great crew change" looming in the petroleum industry, it is important that the industry can offer stable, meaningful, and attractive jobs to young talents. If not, lack of competence and skills could become a bottleneck in the further development of the NCS in the years to come.

Figure 59. Age distribution of workforce in oil companies, pipe transport, oil service, petroleum onshore bases and yards. Year 2003, 2014 and 2016. (SSB, 2017)





The digital transformation that the Norwegian petroleum industry is going through, requires new competencies and skills within areas such as artificial intelligence, robotics, cyber security, and more. The availability of people with such skills could become scarce, e.g. a study by Mark (2019) indicated a potential undersupply of 4100 cyber security experts in Norway by 2030. Going forward, we could therefore expect a competition for professionals with computer science backgrounds. To secure sufficient competence, the industry not only needs to become more attractive to young professionals, it also needs to educate its existing workforce in digital technologies. Some universities have started to offer continued education courses within data science, like for instance the "From data to insight" program at the University in Oslo (see textbox).

Recommendation: The industry needs to improve its attractiveness to young professionals. They need to be offered exciting and meaningful jobs, and be convinced through tangible results that the industry takes climate change seriously.

Recommendation: To harvest the value of digitalization the work force must understand the technology, its opportunities, and its limitations. Such competence development is a life-long endeavor, and the industry therefore needs to educate and train its employees to master and adopt new digital technologies. Industry enterprises should as part of this look for ways to collaborate with universities to develop their staff.

From data to insight

"From data to insight" is an educational program offered by the University of Oslo to professionals working in various industries. It provides the students with relevant state-of-the-art knowledge within data science, machine learning and computation. The program provides a broad introduction, with some deep dives, of the process from data collection and representation, to knowledge extraction and the use of new technologies based on data.

← Forrige side

Neste side →

Meldinger ved utskriftstidspunkt 13. mars 2025, kl. 07.25 CET

Det ble ikke vist noen globale meldinger eller andre viktige meldinger da dette dokumentet ble skrevet ut.