

Wanted: career path for postdocs

The quality of research produced by scientists hinges on the ability of research institutions to strike a balance between short-term contracts, which enable fresh ideas, and permanent positions to ensure continuity of long-term research. Yet, postdoctoral students put through recurring short-term contracts often face a lack of clear career path. This not only discourages talented young scientists but can also become detrimental to research.

Short-term contracts can be positive at the beginning of a career in the physical sciences, as they should give physicists the ability to gain interdisciplinary research experience—a much-valued asset. Most researchers expect their postdoctoral experience to become a stepping-stone towards a full-time academic career. Yet, in the UK for example, only 20% actually get a permanent position, according to a report by the Institute of Physics¹. Instead, postdoctoral positions tend to open the door to opportunities outside science. This could be a career in related industries, IT or banking, where analytical skills are in high demand.

But for those who wish to stay in research, the career prospects are not so bright. Postdocs eventually qualify themselves out of the market, as their experience makes them more expensive than newly qualified PhDs. In the UK, this issue affects typically 25% of postdocs who spend more than six years in postdoctoral positions. And the trend seems to be growing elsewhere too. A report by the American Institute of Physics² shows that the percentage of temporary and non-tenure track positions increased from 12% in 1998 to 14% in 2002, whereas the number of tenured faculties hired in physics in the US decreased from 399 in 2001 to 353 in 2002.

By being forced to stay in postdoctoral positions, scientists are not given the credit that should help them take control over their career. How can their name appear as principal investigators on grant applications if they are not in established positions at a research institution? Unless institutions give credit to short-term contractors within their institutional career path, their chance of firming up their career path slims down, postdoc after postdoc.

So why should research institutions take the risk of employing someone full time when they only have funding for a limited period? Because of the way this form of employment impacts the quality and continuity of research and teaching. Short-term contracts often lead to unfinished, unpublished research and do not leave room for long-term projects. In the long run, institutions could well benefit from increasing the number of permanent positions to ensure continuity in their projects. This remains an unsolved problem that ought to be addressed at a governmental level.

There is no straightforward answer to the problem of employment of research scientists. Looking towards industry, it is striking that the commercial world has developed ways of dealing with the uncertainty of funding, and not only by using contractors. Making tentative predictions of future income enables industry to plan recruitment accordingly.

As sociologist of science Bruno Latour demonstrated a few years ago by studying the career of a future Nobel laureate in the period preceding the award of the prize, it is possible to engineer a research career so that it leads to the highest recognition in science. Yet, achieving this sort of control seems very difficult for young researchers whose main ambition is only to become a full-time scientist. The price to pay may be for research institutions to face up to their responsibilities and stop thinking short term and cheap labour. This would mean taking the risk of hiring permanent research staff, on the basis that they have the ability to attract their own funding.

References

1. Career path of physics post doctoral research staff. Policy paper, Institute of Physics, July 1999
2. 2002 Physics academic workforce report. Statistical Research Centre of the American Institute of Physics, August 2003

“POSTDOCTORAL STUDENTS PUT THROUGH RECURRING SHORT-TERM CONTRACTS OFTEN FACE A LACK OF CLEAR CAREER PATH”

