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PhD training: exposing obstacles to reform

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Training for a PhD must be reformed if it is to meet society's expectations (see [Nature 613, 414; 2023](#)). At Lehigh University, we investigated the feasibility of implementing a model solution known as the Pasteur Partnership PhD, which hinges on use-inspired research and professional development in partnership with industry (see go.nature.com/3jo7pfz).

More than 70% of the students admitted to our science, technology, engineering and mathematics PhD programmes in the past year were interested in this option but only 3% enrolled, because industry partnerships are hard to organize. Governments should help to meet this training challenge, which is driven by societal needs.

Senior faculty members often see no need to change the system. Younger researchers are willing to adapt but are constrained by tenure, promotion and funding expectations that reward conventional research output. Academic performance criteria need to be revised to allow training time and to incorporate innovative research.

University leaders are too often preoccupied with intellectual property and an open research ethos. And short-term profitability by publicly traded companies takes priority

over industrial research and its associated financial commitments. To 'turn the PhD tanker', these misalignments must be addressed.

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COMPETING INTERESTS

The authors declare no competing interests.

