

Teaching vs Research: Moving the Debate Forward (Part 1)

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The perennial problem of the relationship between teaching and research has persisted in academia for generations, but with some new twists during the last two decades. Traditionally young faculty were mentored in such a way that they clearly recognized the priority attributed to research by institutions and if they sought tenure they knew exactly what they had to do. Nevertheless, recently teaching quality has gained respect and with a variety of accreditation boards and external evaluations faculty now find themselves pressured to devote time and energy to both teaching and research quality output and feel compelled that they must excel in both. The argument has now evolved in a manner that assumes that teaching and research are complimentary and that in some synergistic way each builds on and supports the other. Administrators, in particular, propagate this argument forcefully and most faculty reluctantly accept it as no one wants to be delegated to the teaching-only category in academia. The key question that has yet to be answered, however, is whether faculty who try to excel in both and do manage to integrate their research into the classroom actually enhance student learning as such?

Recent pedagogic research challenges the assumption that there exists some automated and assumed benefit for student learning when faculty do excel in both and do integrate their research into the classroom. For one, Michael Prince, Richard Felder and Rebecca Brent, argue that “*integrating research into the classroom in the way integration is normally conceived – i.e. instructors discussing the content of their research – has not been shown to occur frequently or to improve instruction*” (2007: 286). In fact, Prince, Felder and Brent argue in this extremely well researched article that the debate itself is misleading and that the two sides are actually debating different propositions. Administrators and proponents of the teaching/research nexus argue that high quality research does have the potential to enhance teaching, while the other side questions whether it has actually done so with regards to student learning as such and if there is pedagogic evidence of it doing so. In other words, the three authors challenge the proposition of whether faculty excellence in research and its integration into teaching is in itself sufficient for student learning to improve. Instead the authors focus on the student research-experience itself as compared to the research excellence of faculty who then integrate their research into the classroom. What they suggest is that inquiry-based approaches and problem-based learning that in fact exemplify the research process itself do enhance student learning. In such circumstances, they argue, “*a faculty member’s research provides experiences that have the potential to enrich instruction by introducing students to the research process and to important research skills.*” (2007: 285) Let me elaborate.

The three authors start by highlighting the fact that research and teaching have different goals and also require different skills. “*The primary goal of research is to advance knowledge, while that of teaching is to develop and enhance abilities.*” (2007: 283) Of course they argue that it is possible for faculty to have both sets of attributes and even to excel in both.

Nevertheless, it also has to be noted that “*first-class teaching and first-class research are each effectively full-time jobs, so that time spent on one actively is generally time taken away from the other. There should consequently be no surprise if studies reveal no significant correlation between faculty research and effective teaching.*” (2007: 283-4). The three authors then quote numerous studies and conclude that “*the likelihood that research productivity actually benefits’ teaching is extremely small...the two, for all practical purposes, are essentially unrelated.*” (2007: 284)

The authors do acknowledge, of course, that some faculty do excel in both, but are keen to emphasize that these are unique cases of individuals who are able to achieve both the goals of teaching and research. At an institutional level and from the perspective of allocating rewards and merits this is clearly not the case.

Nevertheless, academia is under pressure to enhance both teaching and research. On the one hand, research is what still brings in the prestige and the funds and accordingly plays a central role in promotions and tenure, while the wider community expects significant advances in teaching strategies and enhanced and visible learning outputs for students. Thus, faculty and administrators forced to respond to both sets of pressures assume that the teaching/research nexus is a given and it is only a matter of discovering the appropriate mechanisms by which it can be achieved. In fact, Prince, Felder and Brent suggest that academia seems to be searching for The Holy Grail which it assumes is there but just needs to be found. Their highly referenced article however indisputably concludes that there is no Holy Grail.

At the end of the day, however, academia is still accountable to their students and also seeks to excel in research status and funding. Thus, the teaching/research nexus is upon us irrespective. Prince, Felder and Brent recognize this and thus their suggestion that we need to move beyond the classic debate of finding the Holy Grail and instead find new ways of integrating teaching and research which can be seen to contribute positively to the goals set by academia: excellence in both teaching and research. It is here that the three authors make a critical suggestion which relates to what faculty bring into the classroom in the teaching/research nexus. They argue that what faculty need to focus on is the research **process** and not the **content** of their research, for it is the former that enhances learning and knowledge retention. The authors indicate from extensive pedagogic research that attempting to integrate research content into the classroom fails for a variety of reasons including the hierarchy of knowledge and the constraints of curricula which do not allow for new knowledge to be incorporated. The research process and research skills however are doable and there is also pedagogic evidence that it does enhance learning and stimulates undergraduates to pursue graduate studies.

Pedagogic research during the last two decades supports the Prince, Felder and Brent conclusions and highlights the centrality of inductive teaching strategies as the exemplar of enhancing learning for undergraduates. Learning is itself a process and does not derive from neatly pre-packaged syllabi which provide the questions and the answers for undergraduates to then repeat in exam questions. Learning requires solving problems and the skills to solve problems need to be taught. A research-active curriculum (to be discussed in the next issue) is the Holy Grail that we seek and faculty can adapt their teaching strategies to include such an approach. CLT can also help faculty who wish to do so. We can then all move the debate of the teaching/research nexus into a more productive terrain.

Prince, M J, Felder, R M and Brent, R (2007) *Does faculty research improve undergraduate teaching? An analysis of existing and potential synergies*, **Journal of Engineering Education**, 96 (4), 23-294.
