

Undergraduate Research at a Research University: Multiple Meanings PW 3/15/05

Model #1) Professors import their research into the classroom. Some years ago, former Tech president (then engineering dean) Paul Torgersen observed that his best researchers tended to be his best teachers. Perhaps some people just tend to be better performers, or not, at both. Torgersen meant to rebut the commonplace notion of a trade-off—that most professors emphasized one or the other, and that a commitment to research correlated negatively with a commitment to teaching. We might hypothesize that what Torgersen observed exemplified Model #1, according to which people with active research agendas, creating new knowledge, naturally bring the excitement of their scholarly work, as well as their research findings, not to mention a general orientation toward both research and teaching, into their classrooms.

Model #2) Undergraduate research is often envisioned as something that takes place in a one-on-one context, as in independent studies. The rhetoric on Duke University's web site captures this view of the phenomenon, as does talk at Virginia Tech about increasing, by some specified amount, the proportion of Tech undergraduates obtaining a research experience. In this view, independent studies courses—alternatively, research dollars—provide a quantitative measure of the incidence of undergraduate research. This model almost necessarily results in a far-less-than-universal exposure to what, under the model, is conceived as undergraduate research. It also understates the incidence across the student population, while privileging (and likely often overstating the value of) the sorts of activities it chooses to include.

Model #3) Perhaps the most democratic formula, "Research across the Curriculum," is in fact fully consistent with Model #1, and may largely be a rephrasing of it. In this model, every academic course, even every class meeting, would entail research in the sense that it would embody the attitude, the premise, that knowledge is contested and constructed, and students at every level, from freshmen in surveys on up to honors seniors, would be immersed in courses in which this underlying premise pervaded all instruction.

Drawbacks/obstacles: (1) Many lower-division courses are not taught by active researchers; (2) This approach challenges the perception/premise that what goes on in survey classes must be governed by the notion that freshmen are not yet acculturated to a novel approach (they are looking for a grade-13 experience), or that these courses are best characterized and taught as content-driven, get-the-facts-across, don't problematize those facts; (3) Size—not necessarily a central issue here; but it does shape the context within which all instruction takes place.

Model #4) An upper-division version of Model #3, reflecting Model #1 as well, supplies the fullest version of undergraduate research at a research university, a potentially universal as well as group-based and joint version of Model #2. Here size does matter, a great deal. Undergraduate research becomes the basis, supplies the framework and rationale, of a course, whether its enrollment is 5 or 25. Students work at some point along a continuum stretching from, on the one hand, individual projects in a context of an academic community (not necessarily so different from Model #2) to, on the other hand, a fully developed collaborative variation in which the professor(s) and the students collectively generate a scholarly product.