

# Rethinking Departmental Rewards: A proposal to encourage departments to take the lead in improving undergraduate retention, time to degree, and educational outcomes at CU Boulder.

Mike Klymkowsky, Ph.D.

Professor, Molecular, Cellular & Developmental Biology

Summary: At CU Boulder departmental faculty establish the course requirements that students must complete to earn a degree. At the same time, the funding of departments, the institutional reward structures for faculty and staff, and inter-departmental status, is largely independent of the department's success in terms of educational outcomes, by which I mean students' retention in the major, their time to degree, and the knowledge and skills they acquire. All too often, it is research productivity and prestige that is the sole criteria considered as important within a department. This is a situation that leads to the benign (and perhaps not so benign) neglect of effective course and curricular design and delivery, and the objective assessment of learning outcomes.

To address the discrepancies between the roles and rewards of teaching and research, and its malign influence on departmental culture<sup>1</sup>, I propose that the campus administration introduce a significant change in the way departments and their faculty are rewarded. The purpose of this change is to make explicit, in a highly visible, relevant, and impactful way, the importance the University places on a department's undergraduate educational effectiveness. Since departments differ in what matters to them, I propose two (among a number of other) possible reward mechanisms, both based on defined and objective measures of educational effectiveness (e.g. retention, time to degree, objective measures of learning outcomes.) The first involves faculty salary supplements (rewards) based on a departments' success or improvements in undergraduate educational outcomes. The second, perhaps more important type of support relevant to research-centric departments, involves the number of graduate students supported. The critical point is that these rewards are not automatic, but are based on a department's success in terms of pre-established measures of effective courses and curricula, and the removal or redesign of ineffective or irrelevant courses. The goal is to reinforce the importance of effective instruction in how departments are evaluated.

---

<sup>1</sup> see: [Balancing research prestige, human decency, and educational outcomes](#)

A plausible Implementation strategy:

1). Require departments to develop a preliminary “undergraduate education efforts” document: As an variation of the “coherent curriculum” proposal I made to the Boulder Faculty Assembly and various administrators ~5 years ago, all departments would be required to generate a “undergraduate education efforts” document. This document would provide i) the justification for ALL courses required of departmental majors, together with a summary of what students are expected to have learned from each such course; ii) any data currently available to the department that speaks to what students have actually learned in these courses; iii) an analysis of where students enter or leave the major, and where they move to (other majors, other colleges, etc); iv) time to degree and retention data for the last 5, or even better 10 years; and v) any data currently available on the post-graduation careers of the department’s students.

In a separate document, each department would be asked to present a five-year curricular plan aimed at addressing and

improving deficiencies (if any) in its current educational program, this could include improving its retention rate, reducing the time to degree for its majors, and improving learning outcomes through independent measurements. For this latter goal, campus resources associated with the design, administration, and interpretation of learning outcomes assessments could be called upon by a department.

A similar exercise in the evaluation of the costs and benefits of course requirements, in terms of retention, time to degree, and learning outcomes should also be mandated at the college level.<sup>2</sup>

2). Defining educational success in terms of learning and post-graduation outcomes. Generating objective measures of the efficacy of a degree program in terms of what students come to learn, master, and are able to apply is perhaps the most difficult aspect of this proposed reformation. We expect that the preliminary departmental assessment (see above) will lead to a more focused discussion on the core learning goals for each major, and that these can be used to develop objective assessments of student learning that can be used to monitor program effectiveness. A second measure of program effectiveness involves collecting data on what students end up doing after graduation; do they move to professional post-graduate education (Ph.D., M.D., P.A., etc), do they come to work in jobs reflecting their major, and/or other measures of program effectiveness.

3) Measuring of undergraduate educational success: To insure an objective and meaningful measurement of student educational (learning) outcomes is difficult or impossible for departments on their own, given their vested interest in such outcomes. I therefore recommend that faculty members with expertise in learning evaluation (faculty with research interests in DBER and related subjects) in various departments be included in a “Center for Monitoring Educational Outcomes” that will work together to suggest or to develop and implement the learning outcomes evaluations. This Center will need to be supported adequately to carry out its mission, namely to evaluate whether programs lead to the educational outcomes that department aspire to.

4) Development and Administration of Educational Success rewards: Given the differences between departments, departments should be asked how they would prefer to be rewarded for achieving their educational goals. Examples of rewards could include educational success salary bonuses to faculty and staff, or campus support of a greater number of graduate students. To incentivize departments through a degree of competition, annual rewards will go to the top performing departments. Within the administration, a specific person within each college and school will be charged with handling this process, with campus activities coordinated by a committee (answering to the Provost) composed of these “outcomes” monitors. I suspect that the redistribution of job descriptions /

**Coherent Curriculum Resolution:**

*The Faculty and University Administration recognizes and is committed to the premise that students can expect that each department's common core degree requirements represents a thoughtfully considered, realistic, and effective course of study **and** that producing and maintaining such a “coherent core curriculum” requires an administrative commitment to provide faculty and departments with the necessary pedagogical resources.*

*This implies*

- ~ that each required core course be justified in terms of explicit learning objectives and performance expectations;*
- ~ that these same standards are applied to on-line courses;*
- ~ that periodic audits be carried out to insure that a department's curricular goals can and are being attained by the majority of students; and*
- ~ that the results of outcome audits are used by departments to reconsider, and where necessary, revise their core course requirement to optimize student learning outcomes.*

From January 2013 - proposed BFA resolution.

<sup>2</sup> As an aside, the impact of required laboratory courses at the departmental and college level

responsibilities could lead to a reduction in the number of administrative positions tasked with undergraduate educational programs; such cost savings could be used to fund the departmental support and rewards aspects of the program.

Summary: Given i) our responsibility to our students to deliver the most cost and educationally effective experience possible and ii) need to recognize the increasing importance of student tuition dollars to the well-being of the campus, I would argue that while initially requiring a significant investment of resources, the establishment of a Center for Monitoring Educational Outcomes and the implementation of departmental rewards to incentivize improvements in undergraduate outcomes will, in the end more than pay for themselves by rendering a number of extra-departmental programs redundant and through improvements in the University's reputation as an institution committed to reducing costs and optimizing educational outcomes for students. By moving the responsibility for effective degree programs back to the departments, where it belongs, I believe we will incentivize departments to become aware of effective strategies for improving instruction, inclusion, and student success. Funds for departmental rewards will come from savings associated with increased retention and improved graduation rates.