



WHAT WORKS - A PKAL ESSAY

INVESTING IN FACULTY: WAYS AND MEANS

Realizing a Return on the Capital Investment Made in People

If the current generation of efforts to achieve strong undergraduate learning communities in SME&T is to be sustained, colleges and universities must give attention to policies and practices that affect all facets of institutional life— from admissions standards to graduation requirements, curricular planning to campus planning. In the process of setting forth an institutional vision, primary attention must be given to the character and quality of the faculty. A clear understanding of the *why* and the *how* of investing in faculty must be an integral part of the strategic planning process.

We are convinced that as much diligence is necessary to realize a return on the capital investment made in people as is required to realize an appropriate return from an investment in a plant; thus we submit that it is essential to look at costs related to faculty not simply as a critical expense, but as part of an intentional investment strategy meant to produce an important and significant value-added benefit.

Supporting costs incurred in building and sustaining a strong faculty (individually and collectively exemplars of the scholarly tradition) should be part of a larger institutional budgeting and investing strategy. *When we make a tenure decision, it is a \$3 million+ capital investment...* is more than an idle comment. It is an alert that, as significant, long-term resources have been committed, there must be an accompanying commitment— on behalf of the institution and faculty alike— to ensure the highest and best use is made of that investment.

Considering Non-Fixed Asset Costs

These investments must cover both “*fixed and non-fixed asset*” costs. *Fixed asset* costs, those most often considered in the budgeting process, are substantial over the life of a faculty member. An investment over the thirty-year life of a science faculty member (whose initial base annual salary is between \$45,000 - \$60,000, augmented with an average 3-4% COLA adjustment) totals close to \$3,000,000. Institutional salaries differ, but the premise is still pertinent.

What is not often considered in the strategic planning process is the *non-fixed asset* investments in SME&T faculty. Opportunities to make *non-fixed asset* investments are numerous, including those for additional and differential merit awards and/or recognition for achievement; leadership development; scholarly growth and renewal opportunities (leaves, sabbaticals, workshops, mentoring, internal reassignments, etc.); and for a range of infrastructure needs.

A preliminary analysis suggests that very modest non-fixed asset investments are needed to ensure that the fixed asset investment in faculty is enabled to reach its full potential. On average, ‘non-fixed asset’ investments range between \$200,000 - \$500,000 over the life of an average science faculty member; this is only 20% of the fixed asset investment, but still a critical expenditure. Again, the character of scholarly activity expected and supported by different institutions will have an impact on the extent of such investments.

From the FIPSE-funded PKAL “Core Institution Project.” PKAL 2001.

RETURNS ON A CAREFULLY-TARGETED INVESTMENT IN FACULTY

- ◆ increased distinction and market share
- ◆ ability to provide a better education to students who then become satisfied alumni
- ◆ more productive use of resources (including time)
- ◆ identification of non-productive expenditures of limited resources
- ◆ a sense of community built on agreement about common goals and the means to achieve those goals
- ◆ an increased level of trust between the institution and faculty built on clearly communicated expectations
- ◆ recognition of distinctiveness, which comes from a visible commitment to building and sustaining a strong faculty, in the context of institutional mission and identification of changing societal needs.



INVESTING IN FACULTY: WAYS AND MEANS

The failure to provide the necessary support (non-fixed asset investments) throughout a career is not a realistically cost-effective or sensible investment strategy for colleges and universities seeking to build and sustain strong programs in mathematics, engineering, and the various fields of science.

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Key investments, made at different career stages, can affect the return on an investment in faculty.

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Experience demonstrates that a productive return on this modest non-fixed asset investment can make the difference between maximum productivity and returns (as measured in student learning outcomes, quality of scholarly productivity and societal service) and more modest returns on the initial investment made through fixed asset costs.

In many instances non-fixed asset investments are proportionally greater in pre-tenure years, as institutions direct more attention to this stage of faculty careers. In the posttenure period, where institutions make 80 % of the overall fixed asset investment in faculty, the trend is toward only about 10% investment in the “non-fixed assets” portion. This is puzzling.

Key investments, made at different career stages, can affect the return on an investment in faculty, especially if it is understood that faculty at all career stages have responsibility for:

- ◆ remaining current in his/her discipline and visibly active in their scholarly community

- ◆ providing access for all students to a rigorous and captivating engagement with mathematics and the various fields of science.

An Investment Roadmap

Consider where and how to invest in faculty from the point of recruitment through pre-tenure years. The first step is to recruit faculty who meet the mission of the program and institution and then— in the process of hiring— to clarify departmental expectations for long-term success in the institutional context and to set forth clear and well-articulated measures of success.

Consider the non-fixed asset costs at this stage, which can include:

- ◆ establishing physical infrastructure to support research activity
- ◆ providing mentoring opportunities
- ◆ providing support for pedagogical development
- ◆ reducing teaching loads for pretenure faculty
- ◆ reducing service expectations in the first year
- ◆ providing a pre-tenure leave program, possibly competitive, to undertake full-time research or gain new pedagogical or technical expertise.

Colleges and universities must develop policies and practices that recognize the long-term contribution that each individual faculty member makes to the education of students and the service of the institution over the long-term. Thus, the same attention and support should be available for mid-career and senior faculty as for those at the pre-tenure stage.

Thus, regular interviews concerning institutional expectations must continue for faculty at all career stages with the chair, deans, mentors, colleagues, etc. Requirements for recognition and reward, promotion and tenure must be developed and promulgated widely. Sabbatical leave programs must exist, with faculty held accountable for articulating both their professional needs for a leave and how that professional leave will make a return on the institutional investment

Support must be available to explore and initiate new approaches in research and teaching. This might include:

- ◆ internal small grants programs for pilot, high-risk projects
- ◆ internal endowment funds for faculty renewal efforts
- ◆ administrative structures and personnel to advise and facilitate career planning
- ◆ staff support for non-faculty duties in laboratories
- ◆ centers for faculty development/ improvement of teaching
- ◆ internal funding opportunities, mentoring programs, proposal writing workshops, internal “retooling” grants
- ◆ laboratories, offices, and equipment adequate to pursue scholarly endeavors
- ◆ travel to professional meetings and workshops related to research and teaching.



INVESTING IN FACULTY: WAYS AND MEANS

Ways to Finance this Investment

Securing resources adequate to make a critical investment of faculty at all career stages requires instituting policies and practices that use current resources in a more targeted fashion, reallocating existing resources, and increasing designated gifts and grants.

Strategic planning must recognize investing in faculty as a priority of the institution, not merely an item on the cost side of the budget. This must then lead to an appropriate allocation and reallocation of resources to meet those expectations.

Periodic evaluations of resource allocations must be made to make certain that expenditures have the greatest impact on faculty careers, and on institutional goals. Early planning and institutional conversations must occur if operational funds are needed, and if development campaigns are to support new and increased investments. Such conversations should consider:

- ◆ multi-year rather than annual budget planning
- ◆ the expectation of 3-5 year faculty career plans
- ◆ faculty grants, technology enhancements and capital equipment matching funds as standard budget items
- ◆ establishing endowments for programs elements outlined in this investment strategy.

Strong and continued interactions between development officers and faculty must be encouraged. The development office must be included in the planning process for programs and must work with faculty (and vice-versa) in proposal writing and in alumni outreach effort. Faculty should be expected to write proposals to secure external support for their individual scholarly needs as well as for departmental and institutional needs.

Assessing the Return on an Investment in Faculty

There are several means by which to measure the return on investment in faculty:

- ◆ high retention of vital and committed faculty results in continuity and continued strengthening of the program, and recognition of quality programs brings distinction to the institution
- ◆ visibility as an institution of distinction aids in attracting and retaining subsequent generations of good faculty
- ◆ this visibility also attracts increasing support from alumni, foundations, extramural agencies, industries, etc. (strong faculty are more competitive in the search for external support)
- ◆ good students are attracted, admissions and retention goes up, and the bottom line is strong.

Because of all this, the institution enjoys increasing distinction and market share, and is able to provide a better education to students who then become satisfied alumni. There are other, equally beneficial returns on a carefully-targeted investment in faculty. These include:

- ◆ more productive use of resources (including time)
- ◆ identification of non-productive expenditures of limited resources

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- ◆ a sense of community built on agreement about common goals and the means to achieve those goals
 - ◆ an increased level of trust between the institution and faculty built on clearly communicated expectations
 - ◆ a visible commitment to building and sustaining a strong faculty, in the context of institutional mission and identification of changing societal needs, brings recognition of distinctiveness.



INVESTING IN FACULTY: WAYS AND MEANS

If the assessment reveals that the current investment strategies are not achieving desired (or desirable) goals, then institutions must be creative and tenacious in realigning resources so that goals are met. To visualize a strategy, one must understand that it is the institutional strategic planning that leads to financing strategies.

Financing strategies then identify funds for investment from several places including:

- ◆ operating budgets that receive money from gifts and grants
- ◆ endowment income
- ◆ partnerships and joint ventures
- ◆ tuition and fees.

As raising new funds through sponsored projects and fundraising for current and capital expenditures, cost-increases and partnerships are strategies already being pursued at most institutions, it may be that significant restructuring and reallocation is in order. ■

SEE ALSO:

- ◆ Worksheet to Determine the Cost of Investments to Sustain Quality Faculty (p. 5)
- ◆ Worksheet to Chart Expectations, Timing, and Impact of Investing in Faculty (p. 6)

WHAT WORKS - A PKAL WORKSHEET

WORKSHEET TO DETERMINE THE COST OF INVESTMENTS TO SUSTAIN QUALITY FACULTY

Salary Considerations

Initial Salary: _____ increased at _____ % per year for _____ years = _____

Enrichment and Renewal Considerations

Pre-tenure

Recruitment _____

Start-up Costs _____

Internal Development Grants _____

Release Time (including replacement costs) _____

Travel (6-7 trips) _____

Special Development Costs
(i.e., F21 meetings, mentoring programs, etc.) _____

Pre-tenure Sabbatical Costs (if appropriate) _____

Matching Grant Costs
(calculate for 1 or more grants as appropriate) _____

Other _____

Subtotal (pre-tenure) _____

Post-tenure

Release Time (include replacement costs) _____

Sabbaticals (include replacement costs) _____

Matching Grant Costs
(calculate for 2 or more grants as appropriate) _____

Travel (24-30 trips) _____

Retooling Costs _____

Other _____

Subtotal (post-tenure) _____

TOTAL (non-institutional expenditures) _____

WHAT WORKS - A PKAL WORKSHEET

WORKSHEET TO CHART EXPECTATIONS, TIMING AND IMPACT OF INVESTING IN FACULTY

Career Stage	Startup Years 1-2)	Pre-Tenure (Years 3-6)	Post-Tenure (Years 7-30)
Targets			
Responsibilities and obligations expected of faculty:	<ul style="list-style-type: none"> ◆ Teaching ◆ Research lab established ◆ Course development ◆ Proposal preparation ◆ Publication preparation 	<ul style="list-style-type: none"> ◆ Teaching ◆ Research ◆ Course development ◆ Grants ◆ Institutional service ◆ Proposals ◆ Publications 	<ul style="list-style-type: none"> ◆ Teaching ◆ Mentor ◆ Professional development ◆ Sabbaticals ◆ Disciplinary leadership ◆ Departmental service ◆ K-12 Outreach ◆ Course development ◆ Grants ◆ Institutional service ◆ Proposals ◆ Publications ◆ Research
Support expected by faculty:	<ul style="list-style-type: none"> ◆ Workload adjustments ◆ Staff support (clerical, etc.) ◆ Consulting ◆ Start-up funds ◆ Facilities for research ◆ Student assistants ◆ Summer assistants ◆ Science mentors ◆ Proposal-writing guidance 	<ul style="list-style-type: none"> ◆ Matching grant funds ◆ Administration of grants ◆ Release time (leave) ◆ Staff support (clerical, etc.) ◆ Consulting ◆ Start-up funds ◆ Facilities for research ◆ Student assistants ◆ Summer assistants ◆ Travel ◆ Publication fees ◆ Special development 	<ul style="list-style-type: none"> ◆ Replacement faculty ◆ Matching grant funds ◆ Administration of grants ◆ Additional release time ◆ Staff support (clerical, etc.) ◆ Consulting ◆ Start-up funds ◆ Facilities for research ◆ Student assistants ◆ Summer assistants ◆ Travel ◆ Publication fees ◆ Special development
Assessment			