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Poor Performers in New Mexico Higher Ed: Budget Increases and Inefficiency

Per student cost differentials point at major savings for New Mexico

By Kevin D. Rollins[1]

In light of the state's ongoing budget crisis and the need for policymakers to search high and low in the budget for savings and palatable cutbacks, it may be useful to carefully consider higher education spending which accounts for more than $800 million of New Mexico's General Fund spending.

While higher education indeed took a hit in the recent budget battle, cost-saving possibilities remain. The question to ask is "where can we cut without damaging the future prospects of the state economy and New Mexico's next generation?" Two facts about post-secondary funding point that New Mexicans may be paying much more for higher education than they should because of uneven levels of efficiency among various state institutions.

Fact 1: The most expensive university and community college are *twice* as costly as the least expensive institution in their category on a per student basis.

The table below illustrates the spread of cost per student enrolled full time ($/FTE).

Table 1: 2009 Per Student Budgets for New Mexico Post-secondary Institutions[2]

1a. Universities	**2009 $/FTE**	**6-year graduation rates**
New Mexico Institute of Mining and Tech	22,030	~ 0.45
New Mexico Highlands University	14,127	~ 0.2
University of New Mexico	14,100	~ 0.45
Western New Mexico University	13,320	~ 0.2
New Mexico State University	13,012	~ 0.45
Northern New Mexico College	10,931	N/A
Eastern New Mexico University	10,901	~ 0.3

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[2] $/FTE are calculated from NM Higher Ed Dept documents. See Column J in Appendix 1: Calculation Spreadsheet and data references at end of this publication. Six year graduation rates are visually estimated from table on page 52 of 2009 NM Higher Education Department annual report.

1b. Two Year Institutions	2009 $/FTE
Luna Community College	13,515
Santa Fe Community College	12,486
New Mexico Junior College	11,818
UNM-Los Alamos	11,532
San Juan Community College	10,232
ENMU-Roswell	9,573
NMSU-Carlsbad	9,348
Clovis Community College	8,709
UNM-Gallup	8,563
NMSU-Grants	7,979
UNM-Valencia	7,601
Central New Mexico Community College	7,487
Mesalands Community College	7,372
NMSU-Alamogordo	7,211
UNM-Taos	7,147
ENMU-Ruidoso	6,923
NMSU-Doña Ana	6,796

Upon close inspection, it is striking that for both the universities and the community colleges, the highest cost provider spends twice as much on a per full time student as the lowest cost provider. Why is there such a dramatic spread? Higher cost schools may argue that their costs are due to providing a more expansive array of services. However, the public needs to know if these extras are worth the added expense. Data explaining this discrepancy is not publicly available. It is always possible to excuse a higher cost by more spending on additional features, but spending more is exactly the problem this article is addressing.

In the case of New Mexico Institute of Mining and Technology, the specialized and highly technical nature of the school may play a role in driving up per-student costs, but why would Luna Community College cost nearly twice as much as NMSU-Doña Ana? Additionally, how is it that 4 of the community colleges actually cost more than 2 of the four-year schools?

The inclusion of the six-year graduation rates shows that there isn't necessarily a correspondence between costs and degree production. New Mexico Highlands University, the second most expensive in the list has a pitiful 0.2 six-year graduation rate. That means after six years at the institution only 1 in 5 students graduated.

Taxpayers and legislators should demand answers from these high-cost providers to find out why they are so expensive. In the absence of compelling evidence of the impossibility or undesirability of doing so, these institutions should be forced to reduce costs and to emulate their thriftier counterparts.

To imagine how much money might be saved, let's consider if we could get the most expensive community college, Luna Community College, which costs $13,515 per student down to the level of the second most expensive, Santa Fe Community College, which costs $12,486. That's about a $1000 difference. Luna has around 900 students, making the savings by this slight

change nearly $1 million. If only $1000 could be shaved off the cost of the average college education for the 80,000 plus students at these higher-ed institutions, the overall costs could drop by over $80 million annually. Small savings per student aggregate very quickly when considering how many students are involved.

Fact 2: Between the school with the highest per student cost increase and school with the lowest cost increase there is *a nearly $6,000 difference*.

Once again, changes in per student cost have significant big picture consequences. Since 2004 per student cost increases have driven up total university costs by nearly $50 million[3] (accounting for 10% inflation).[4] What is even more interesting is that not all schools experienced these increased costs. See the table below.

Table 2: $/FTE Increases since 2004

Institution	Increase (Decrease) in $/FTE
New Mexico Junior College	2,706
UNM-Los Alamos	2,314
NMSU-Carlsbad	2,030
Luna Community College	1,855
Clovis Community College	1,707
University of New Mexico	1,397
ENMU-Roswell	1,391
San Juan Community College	1,112
ENMU-Ruidoso	1,019
Western New Mexico University	882
Eastern New Mexico University	665
New Mexico State University	578
New Mexico Institute of Mining and Tech	328
New Mexico Highlands University	259
UNM-Gallup	184
Santa Fe Community College	48
UNM-Valencia	(30)
NMSU-Doña Ana	(346)
Northern New Mexico College	(448)
Central New Mexico Community College	(531)
NMSU-Alamogordo	(703)
UNM-Taos	(1,021)
NMSU-Grants	(1,503)
Mesalands Community College	(3,050)

[3] See cell M37 on the Calculation Sheet in Appendix I.

[4] Some might argue that 10 percent inflation is not appropriate for any or all of the state universities. But, the amount of inflation is irrelevant if we consider just the relative difference in cost changes between the institutions.

Interestingly while New Mexico Junior College had a $2,706 increase, Mesalands went in the opposite direction, saving $3,050. Out of the 24 institutions, 16 had per student increases while 8 had decreases.

Mesalands almost doubled its enrollment from 344 to 668 in this period. New Mexico Junior College went in the opposite direction, losing 255 students (about 14 percent of its population). If it is generally true that there are economies of scale for schools, centralizing campuses (or staff) may contribute to significant cost savings depending on how easy it is to move students and staff to a new location.

Cost-savings may also be found by combining tiny departments in the same subject with few students onto a single campus, creating specialized centers for those subjects. The concentration of faculty, graduate students, and undergrads may enable greater economies of scale in research facilities as well as drive greater synergy and quality from the program.

We should note that currently, the funding received by each institution (and thus the budget) is not governed by per student enrollment and therefore per student increases or decreases observed here may depend on financial allocations not within the control of the institutional leadership. If funding were based purely on how many students attended, we would be able to compare the services rendered based on a consistent measure. Such a scheme would also lend itself to disciplining the institutions by automatically reducing funding to less popular schools. I outline such a proposal at the end of this report.

Incentive problems in the cost-structure of higher ed

The connection between per student costs and accountability are important to consider. One of the chief difficulties for outsiders trying to evaluate what is going on in the academy is the interwoven layering of the cost and funding structure and the fact that none of the actors involved have strong incentives to allocate resources in a way that benefits always exceed costs.

Bob Samuels of University Council - American Federation of Teachers recently wrote an excellent piece describing the complexity of post secondary funding:

> As the Berkeley physicist Charles Schwartz has shown, the reasons why the numbers never add up in higher education is that universities and colleges use a false and misleading method to determine the cost of undergraduate instruction. Many institutions calculate this important figure by taking the total cost for all undergraduate and graduate instruction, research, and administration, and dividing that cost by the total number of students. Schwartz argues that this common method for determining cost is misguided because it assumes that all students will be taught by professors and that there is no difference between the cost of undergraduate and graduate education. In other words, when a university or state calculates how much it has to spend to educate each additional student, it includes in the costs, the full salary of a professor, but everyone knows that at research institutions, professors only spend a small percentage of their time teaching undergraduate students. According to Schwartz, parents are really paying for the cost of

> undergraduate instruction plus graduate instruction plus research plus administration. To be precise, undergraduates are subsidizing the cost of research and graduate education, and no one admits this fact.

Yet, even while undergraduate tuition dollars subsidize non-undergraduate education, undergraduate students themselves often do not directly pay the direct costs of their education and therefore they do not shop around for the best package of educational services given their personal budgets and future income aspirations. Students, in fact, often cannot tell what their education costs due to a variety of subsidies from federal and state government (not to mention their parents).

Individual academic departments and schools also do not act as, what we might call, "interpolators of preferences." For example, a restaurant owner might weigh the value of having patrons who prefer smoking versus a different group of patrons who dislike smoking and set the amount of smoking allowed according to what maximizes profits. In this sense, the restaurant owner interpolates the preferences of the actual and would-be customers.[5] It is as though the restaurant owner himself experiences the pleasure or displeasure of the smoking.

Since departments and schools are not funded on a per student basis, and the funding of one department might subsidize that of another, those in charge are not directly concerned with their costs and outputs. That is, they aren't directly concerned with matching the institutions policies to the needs and desires of their clients, the students.

The faculty members' desire for more research time (and therefore less focus on communicating with students) is accommodated by increased faculty size and more teaching assistants. It is not that research is undesirable. In fact, it is necessary for the advancement of knowledge in society to have some of society's most gifted intellectuals have time specialize and push the frontier.[6] Nonetheless, there are real tradeoffs between research and teaching. Failing to appreciate these tradeoffs makes it harder to evaluate what the true cost per education truly is.

A recent article in *Inside Higher Ed* has suggests that universities could adopt a better separation between teaching and research goals by allowing faculty to be judged for tenure by their strength as a teacher or as a researcher but not necessarily both.

> [Ohio State University] wants to pay attention to questions of impact -- for both teaching and research. The concept in play would end the myth that candidates for full professor (and maybe, someday, candidates for tenure) should be great in everything. Why? Because most professors aren't great at everything.
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> Using a religious analogy in an interview, [Ohio State president E. Gordon] Gee said that there should be "multiple ways to salvation." Associate professors should be able to find "their real callings" and to focus on them, not fearing that following those passions will

[5] David Henderson makes this point extremely clear in his paper on smoking externalities, "Smoking in Restaurants: Who Best to Set the House Rules?" *Econ Journal Watch* 4(3): 284-291.
[6] F.A. Hayek makes this case in his chapter on Education and Research in *The Constitution of Liberty*

> doom their chances of promotion for deviating from an equal balance between research, teaching and service.[7]

This is a helpful suggestion, as it would allow auditors of the cost structure to count research costs separate from teaching costs. Having first-class researchers on campus (who perhaps run a research seminar class) would be akin to having a winning football or basketball team. Their presence would draw students and funding to the school. But nonetheless, these could be seen as distinct from the cost and quality of the institution's pedagogical activities. In our forthcoming book on controlling college costs, William Patrick Leonard and I will make the case for chartering bare bones universities that save on frills and research and focus on teaching.

The Value of Education – Cost of Education = Net Benefits

No evaluation of the costs of post-secondary school is complete without controlling for the output values. A policy report from the Iowa-based Public Interest Institute warns that although median incomes are higher for the more educated, taking longer in school and getting the wrong degree can be net losers for students.

> The most important idea to take away after reviewing a variety of calculator scenarios is that for a college degree to be financially rewarding over a lifetime of work, a student must be aware of both the time frame needed to complete the degree, the cost of the degree, and the value of the job resulting from the degree.
> Earning a degree that leaves you with a large debt, takes an extended period to acquire, and provides little workplace value is not economically wise.(27)[8]

Greater outputs can justify greater costs. Still, we have the problem of comparing different degrees (by subject and by institution) and associated grade performance. In comparing costs, how should we compare two educations that vary in several dimensions? For example, what is the value difference in a B-minus GPA in engineering at New Mexico Tech compared to an A+ GPA in English at Highlands?

At least four comparisons are necessary to evaluate the value of an education: a) the wage potential of a particular field of study compared to others, b) the effectiveness of different institutions in building knowledge in skills in this subject, c) the strength of the signal sent by the overall quality of the faculty and student body, d) the demand for certification in this area versus others (by students and employers).[9] What should students seeking these be willing to pay and how much should New Mexico taxpayers be willing to subsidize them?

To evaluate this, we need more data about how much value is added to students' human capital by different departments. To do this, a uniform measure of incoming skills and knowledge must

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[7] "Different Paths to Full Professor". 2010. *Inside Higher Ed.* March 5. http://www.insidehighered.com/news/2010/03/05/osu

[8] Thornton, Deborah D. 2009. "A College Education, But at What Cost?" Public Interest Institute Policy Study 09-10. http://www.limitedgovernment.org/publications/pubs/studies/ps-09-10.pdf

[9] A is different than D in the sense that A is the comparison an individual looking at the marketplace might observe wages for different careers and D is how an analyst at the Bureau of Labor Statistics would evaluate the wage forecast given the number of people entering that field for somewhat fixed number of openings.

be compared to a similar uniform measure upon exit. A general writing and problem analysis test could be required for entrance and exit to all state universities and community colleges. Moreover, standardized subject tests could be incorporated for students in a particular discipline in order to remove the vagueness inherent in grade point averages between different departments.

However, this scheme will likely be opposed by students and faculty alike, who can claim that standardized exams inhibit academic freedom while providing only a false-certainty of performance. In the absence of a true credentialing market, standardized testing may be the best bureaucratic alternative for measuring performance.

Another way to achieve uniformity in reporting would be to put the schools on a common managerial accounting system, both in terms of the database used and the accounting methodology employed would enhance accessibility and comparability. Additionally, such a system could include by department data on graduation rates, GPA, job placement, and student satisfaction. Abstracting and publishing this data (with personally identifiable information of students scrubbed) to the web in real time would allow policy makers and the public to see more clearly what is happening in NM higher education.

The Rio Grande Foundation has made a cursory attempt to gather some of this department-level data. This effort was not successful due to the unavailability/inaccessibility of the information. In at least one case, our student researcher Corey Davis was rudely rebuffed by a state university official. Following the publication of this paper, we will continue to develop a clearer picture of New Mexico post-secondary institutions by developing a dossier on each school with whatever data can be assembled from publicly-available sources.

Greater clarity about what schools are actually achieving will make it easier for students to choose and for employers to hire. Several possibilities for bureaucratically achieving this openness including standardized testing, uniform data collection and transparency have just been mentioned. But we should not forget the greatest information processor available is the market's price mechanism. It matches productive capacities, investment services, and individuals' preferences in time, quantity and location. The following proposal is offered in light of the capabilities of the market.[10]

Higher Ed Vouchers

The strongest reform that New Mexico legislators could make to drive down per student costs would be to fix the amount of funding per student and place the funds into an account controlled by the Department of Higher Ed. These funds would be available to the state-funded school when a student enrolled. The money thus follows the students. The power of this solution is that it makes both the student and the school more accountable for choosing bundles of education services that generate benefits greater than costs. The student becomes a shopper, looking for the best deal available and the school must compete both on price and quality, since schools that cost more than the dollar amount of the voucher will charge the student tuition.

[10] Those unsure of the market's capacity should carefully consider the writings of two Nobel Prize-winning economists: Milton Friedman's *Free to Choose: A Personal Statement* and F.A. Hayek's "Use of Knowledge in Society."

To allocate education resources most productively, the dollar amount of the voucher could vary based upon a student's entry test scores and high school grades, with the best prospective students getting the most funding. Therefore the school with the best students would also be the most well-funded and thus most able to invest in top-notch talent and facilities. Rather than beginning with a high price tag and using grants and subsidized loans to lure students, the students would be in a stronger bargaining position.

To strengthen the incentive to tamp down on prices, if the voucher was greater than the cost of attendance, the student could receive part of the difference upon receiving a certain GPA. Incentives toward graduation could be applied in a similar manner.

The combination of the differential funding levels and the vouchers would help solve the information problems generated by the current murky cost-structure. It would address the matching problem of students to programs and therefore contribute to greater student success in school and in the job market afterwards.

While the word "vouchers" conjures up battles between K-12 school choice proponents and teachers unions, this may be the most peaceful (least political) way of controlling costs in higher education. It requires no dictates from the legislature other than to set the amount of money available for vouchers.

A more radical version of this proposal would be to allow students to use the vouchers at any school in the country, including Ivy League institutions such as Harvard and Yale. Such liberalization is unlikely to ever be acceptable because it would require the state government to seriously ask itself whether it really has a comparative advantage in the provision of education services. While this is indeed radical, it does point at the underlying economic choice that faces policy-makers: Do politicians and bureaucrats take tax dollars and provide a certain package of educational opportunities or do they merely provide the funding and let students decide what is best?

Moving Forward

There are rumblings[11] that the New Mexico Legislative Finance Committee will look into the finances of UNM and NMSU and while this is laudable, it is hardly sufficient to tackle systematic problems throughout the state university system. In fact, the investigation should consider the whole educational process and how these education dollars work as investments later to be reaped in increased tax dollars.

This article suggests the scale of the savings to be realized and points at where to look. But to actually discover opportunities for savings will require a deeper investigation. The mechanisms of transparency and testing offer more information about state university practices and outcomes. But to implement these changes will require state universities to self-assess and be forthcoming

11 Beale, Pat, and Andrew Lohmann. 2010. "Committee: UNM, NMSU funds need evaluation." DailyLobo.com. http://www.dailylobo.com/index.php/article/2010/01/committee_unm_nmsu_funds_need_evaluation

with the public about what drives costs and what expenses could be reduced. The public and legislators need to think carefully about what we want when we purchase education and consider alternative funding mechanisms such as having tuition dollars follow the student rather than making budget allocations directly to the institutions.

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Appendix 1: Calculation Spreadsheet for Tables 1 & 2.
http://kevinrollins.com/file_download/1/costperstudentcomparison.xls.

Data References for Cost Comparisons

"The Condition of Higher Education in New Mexico 2004-2005." 2005. New Mexico Higher Education Department. December. (see Table 19: Analysis of Instruction and General Expenditures, p. 34).

"Helping Students Succeed. New Mexico Higher Education Department Annual Report 2009." 2009. New Mexico Higher Education Department. (see Analysis of Instruction and General Expenditures, p. 4