

QUESTION 1

In order to better understand how the weights were established by discipline cluster as shown in Appendix A, please provide a copy of the report or other work product the National Center for Higher Education Management Systems (NCHEMS) prepared for the NSHE on the discipline-instructional matrix, which forms the basis for calculating the Weighted Student Credit Hours (WSCH).

RESPONSE

Outlined below is the response provided by NCHEMS concerning the development of the instructional matrix utilized in the new funding model prepared by NSHE.

SCH Weighting Matrix

1. Philosophical Underpinnings

Historically the funding formulas used by states to allocate resources to institutions of higher education could be characterized as being

- a. Retrospective not prospective – they have been based on historical practice and data rather than on current and future priorities. As such they have been instruments for institutionalizing the status quo rather than instruments of change.
- b. Activity-based rather than outcomes-based – they have rewarded effort not results, motion not progress.
- c. Cost reimbursement models – the formulas were designed to replicate institutional cost structures. This essentially assumes that what was is what should be. In reality, historical costs reflect the accumulation of institutional decisions based on internal preferences and choices. For example, cost studies invariably yield the result that upper division courses cost more (often much more) than lower division courses. This is a result of course proliferation (and therefore smaller classes) and assignment of high cost faculty to these smaller classes rather than any inherent pedagogical necessity. The point is that history is not an infallible guide to the future.

- d. Overreaching – there are very few instances of states fully funding the formulas that have been put in place. More common are situations in which formulas are funded at much less than 100% (often in the 50-70% range) and institutions continue to function and pride themselves on providing a quality education.
- e. Contributors to blurring the lines between state policy and institutional operations. To be effective and efficient, institutions have to be in a position to utilize available resources in ways that reflect their unique circumstances and professional judgments about most beneficial uses of those resources. A resource allocation model that potentially makes such decisions a matter of state policy can both restrict institutional freedom and misplace the focus of state policy.

It is this latter point, as much as any, that is fostering the move away from purely cost-based models to allocation approaches that treat institutions fairly while simultaneously linking the use of resources to state goals and priorities – putting the emphasis on what states are buying rather than on the activities in which institutions are engaging. This shift is made manifest in the rapidly growing interest in performance funding. Carried to its logical conclusion, this shift would result in all funds being allocated on the basis of outcomes produced. To date, only Tennessee has moved this far along the continuum; in other states that are implementing performance funding the portion of the allocation based on performance is in the 5-25% range.

Within the general framework of the legacy cost-based models, there are two modifications that can be made that better reflect a state policy perspective on the allocation of resources. First, SCH completed rather than SCH for which students enrolled can be made the drivers of the calculations. This reflects a focus on completion at the most micro level, but it is reflective of the broader goal; degree completion cannot be achieved if the constituent courses aren't completed. Nevada has already taken this step.

The second entails a philosophic shift regarding the meaning attached to the weights that populate the SCH matrix. Historically these weights have been based on cost calculations (in some instances calculations made in the distant past and not indicative of current conditions). It is reasonable to view these weights as policy variables rather than cost factors. This is not to suggest that the factors be completely divorced from cost considerations. However, it does suggest that establishing weights need not be a strictly technical exercise; for example, a policy decision can be made to increase the weights for fields aligned with workforce or economic development priorities. This blended approach, one that combines cost-based values with policy judgments – is the approach being suggested for Nevada

2. The Assignment of Numerical Values

Nevada has not conducted a cost study in recent years that can provide a basis for assigning weights to the cells in the matrix. Several other states, however, do conduct such studies on a regular basis, among them Florida, Ohio, Illinois, and Texas. These studies:

- Are conducted using generally similar procedures, procedures documented by NCHEMS in the early 1970's.
- Are used to varying degrees in the resource allocation processes of the respective states – in Illinois not at all, in Texas about 50% of the allocation is formula based, in Ohio more so.
- Yield cost patterns that are similar but with specific weights that vary considerably. For example, all have psychology and several other liberal arts fields weighted at or near 1.0 at the lower division level. All have doctoral engineering weighted much more heavily but with considerable variation – weights vary from less than 5 to more than 16.
- Yield results that lack credibility in some instances – in nontechnical terms, they don't pass the smell test. Examples are doctoral programs in business that carry weights in excess of 20.0. While this may be the cost as calculated (because of small program sizes), cost factors twice as high as engineering or the sciences are hard to justify or reconcile with public policy priorities.

The suggestions for Nevada borrow from the cost studies in the states listed above. The basic architecture is drawn more from the Texas model than other states in that it is based on “clusters of disciplines of generally similar natures rather than treating each discipline separately. Beyond that, the values were established by referencing those from other states but not borrowing wholesale – other states' values were adapted not adopted. The adaption process involved

- Rounding – not including values to two decimal places
- Reducing values for those that are clearly outliers – those that strain credibility
- Reflecting policy priorities attached to STEM and healthcare fields, those that can be argued on the basis of adopted goals.

The proposal should be viewed as a starting point for discussion. Judgment is necessarily involved. The caveat is that changes should be entertained only if a case can be made that the change reflects a policy judgment concerning relative importance to the state.
