AAUDE
Association of American Universities Data Exchange

Charlotte Kuh
The National Academies
500 Fifth Street, NW WS533
Washington, DC 20001

January 3, 2011

Dear Charlotte,

We write on behalf of our colleagues in the AAU Data Exchange (AAUDE) in support of the regular collection and publication of data about graduate education that are needed to inform policy discussions nationally, program improvement locally and the selection of graduate programs by prospective students. Through the active involvement of our membership we have compiled a number of suggestions about resolving methodological problems, simplifying the data collection process, and thus shortening the time between data collection and report production. We hope you will find these ideas helpful as you continue your dialog regarding the recent NRC Assessment and begin to consider potential next steps.

Before we offer our specific suggestions we feel that it is important to note that there are a number of issues related to the stewardship and maintenance of the data that need to be addressed if we are to achieve a sustainable data collection model. Since an on-going data collection is fundamentally different from the episodic data collections employed in the three NRC assessments to date, we suggest that careful consideration be given to issues of data stewardship early in any discussions of future data collections as these issues will help shape future data collections and will help address the methodological issues described below.

Despite its flaws, the NRC Assessment resulted in a considerable amount of potentially very valuable data. Its long term value will come as programs use the information from the spreadsheet as a resource to evaluate their status and identify areas for improvement. So, it would be worthwhile for data collection to continue on a limited basis to provide an assessment tool for program improvement. By providing the raw data to other organizations, like PhDs.org, the study provides the population of incoming students with a tool to compare programs. We applaud this collaboration and encourage it to continue.

Our focus in this letter is to identify and describe the methodological and definitional shortcomings from the AAUDE perspective and to provide suggestions for how those problems might be remedied if and when the assessment is repeated. This letter is not intended to be a comprehensive assessment, but a starting point.

The Institutional Coordinators spent an inordinate amount of time preparing and reviewing data, because of the confusing definitions and the large scope of data collection. In our opinion, this project is not sustainable, and is unlikely to be supported, if the amount of effort required is not decreased significantly.

If the assessment is done again, we encourage you to:

- *Eliminate production of rankings; publish only data*.
  The stated mission of the NRC is to "improve government decision making and public policy, increase public education and understanding, and promote the acquisition and dissemination of knowledge in matters involving science, engineering, technology, and health." The publication of data serves this mission better than rankings. The competitive nature of higher education will virtually ensure that rankings will lead to questions about data validity rather than ideas about using the data for program improvement.

Because the rankings were too complex and the ranges too wide, the raw data were the real value of the assessment. If NRC focuses solely on collecting and providing data, other organizations – like PhDs.org – can use those data to create tools for potential graduate students and others. Institutions would be more likely to develop measures that are meaningful to them, which is exactly what NRC stated as its goal of this assessment.

This focus on publication of data would:

- Require fewer data collection steps,
- Allow programs to be listed in multiple fields,
- Allow publication of measures that can't be readily included in a ranking,
- Avoid the need to impute data where values are missing for some programs ,
- Allow publication of measures not linearly related to quality (e.g., percent of students who are international), and even measures with comparability issues, as long as those were explained,
- Provide valuable data for comparison and program improvement,
- Avoid the controversy involved in ranking methodology.

- *Pilot the assessment*.
  Many of the data issues that emerged would have been uncovered in a pilot of the data collection that used penultimate versions of the surveys. NRC's early pilot of the previous assessment yielded information useful to the initial design. Working out the kinks in the surveys with a small group of schools as a pilot would have been considerably more efficient than debating definitions and issues via the institutional coordinator listserv.

- *Collect and publish institutional comments on the measures.*
  Because data don't always speak for themselves, we recommend that NRC allow and encourage institutions to comment in public on the measures. This facility will allow institutions to provide context or explanation for numerical data, allow comment on which measures are more highly valued in their discipline/program. For example, a program could report on the assumptions behind graduation rates, such as "many of our entering students already have a master's degree from elsewhere" or "our students enter the master's program here as part of their path to their doctorate."

- *Eliminate as many data elements and data collection instruments as possible*.
  Fewer data collection tools with fewer data elements will make the process simpler and less time-consuming.

- *Use public data sources to a greater extent*. The changes associated with this and the previous recommendations might result in these steps:

  1. Get lists of PhDs granted by federal CIP codes and institution from IPEDS. IPEDS distinguishes research doctorates from other types of doctoral degrees, making this possible. This would also allow expanding the universe of programs to include research doctorates in fields previously excluded, such as business and education.
  2. Work with institutions to turn these into program lists, with new programs added, names of programs attached, level of granularity aligned, and primary and secondary fields attached.
  3. Get faculty lists for each program from institutions.
  4. Collect data on programs from IPEDS (degrees, gender and race/ethnic breakdowns of degrees), perhaps from commercial services matching faculty names to productivity measures, perhaps from or using definitions from ongoing data exchanges such as CGS or AAUDE, and directly from institutions if no other sources exist.

5. Occasionally – every 10 years or so – survey samples of faculty and samples of students, with the data used in separate studies.

- *Simplify the faculty list definitions and publish the lists.*
  The instructions for developing the faculty lists were confusing. Even institutions that tried to follow the instructions in good faith had differences in their understanding, and implementing the definitions was an ordeal for many. As it stands now, institutions have incentive to minimize their faculty counts in order to have higher per capita numbers. As Stephen Stigler wrote in the Chronicle, "it is wrong to think of counts of faculty members, publications, students, citations, awards, and so forth as simple objective numbers where there is a 'right' answer." (This is yet another reason to shift away from the production of rankings.)

  Furthermore, users of the data routinely assume that "the faculty" in a program means the tenured and tenure-track individuals in the department housing a program – all of them, and no one else. This is "the faculty" that users – both prospective students and institutions -- want to know about. Thus, the complicated definitions were not only onerous, but unnecessary and counterproductive. Simplification would eliminate the core-new-associate distinction, and the allocation concept. Individuals with multiple tenure loci would be counted as full members of each program. In this report, the inconsistently-prepared faculty lists were used in calculation of all the faculty productivity metrics, thereby bringing all the resulting data into question.

  The transparency resulting from the publication of the detailed faculty lists (with name and rank) would provide users with a better understanding of and more trust in the metrics, as well as more information about each individual program. If research specialties are collected from faculty again, publish those as well.

- *Publish all data collected with definitions and sources explicitly identified.*
  In particular:
  - Publish <u>both per-capita and raw values</u> of the metrics involving faculty productivity.
    Many users are interested in totals – total publications, citations, honors/awards, etc. While per-capita values are meaningful, so too are the totals.
  - Publish <u>both numerators and denominators for all rates and percentages</u> (e.g., for completion or graduation rates).
    These additional data would both expose the (sometimes very small) N's on which rates are based and allow recombination of smaller programs for more flexibility in comparisons. For example, an institution could combine all its foreign language programs for comparison with others.
  - Publish <u>examples of all calculations</u>.
  - As was done with the honors and awards, provide a <u>listing of journals</u> included in the publication and citation indices.

- *Allow programs to be listed in multiple fields.*
  If no rankings are produced, then programs could be listed in multiple fields and the problem of listing programs in a single field will be eliminated. Some programs simply do not fit in one field only. For example, "Chemistry and Biochemistry" at the University of Colorado at Boulder is squarely in two slots of the taxonomy.

  Secondary fields were collected for every program when program lists were done initially, but these data were never used. While nine secondary fields is probably excessive, two or three would yield an easy method of listing programs in multiple fields.

Another problem with the fields is that the level of program granularity differed by institution and some NRC fields contain widely varying programs. For example, about 60% of the 236 programs in "Psychology" are straight comprehensive psychology departments; others are subdisciplines (e.g., clinical or social psychology) or programs not even in psychology at all (e.g., Communication Sciences and Disorders at University of Texas-Austin; Human Development and Family Studies at Pennsylvania State University).

- *Allow for interdisciplinary programs.*
  Programs outside tenure-granting departments would not fit into the simplified faculty-list definition above, but should be accommodated as well.

- *Publish material allowing users to select, group, and even combine programs in ways useful to them*.
  In the current study, only primary field and program name were provided, with primary field determining rankings and normalized values. Other variables that might help users form good comparison groups include secondary fields, program assessments of the relative importance of journal and book publishing, and research specialties.

Finally, because of our long history and deep understanding of the development and use of comparable data, we encourage future studies to explicitly allow AAUDE representatives (or other IR professionals) to have a seat at the table for all decisions. Thank you for your attention to these suggestions for how the NRC Assessment could be improved if the study is repeated.

Sincerely and on behalf of the AAU Data Exchange,

Roberta Bell
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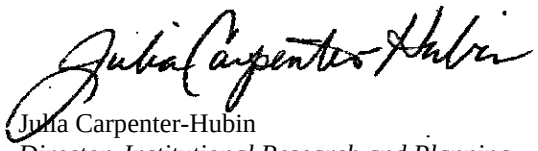
and Council Chair, AAU Data Exchange



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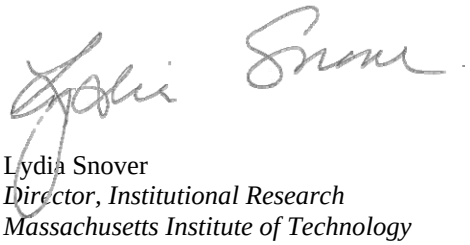

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