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# INTRODUCTION

One of the many pieces of "consumer information" that the *Higher Education Opportunity Act* (HEOA) requires the National Center for Education Statistics (NCES) to post on its College Navigator website is a student-to-faculty ratio for institutions in the IPEDS universe with undergraduate programs.[1] NCES added the collection of this measure to the Integrated Postsecondary Education Data System (IPEDS) Fall Enrollment component for the 2008-09 data collection year and revised the methodology for the 2009-10 data collection year.

This paper explores the challenges related to collecting a meaningful student-to-faculty ratio while minimizing reporting burden imposed on institutions, and makes suggestions for improvement in future IPEDS data collections.

[1] The calculation and use of student-to-faculty ratios in higher education became popular in the latter part of the 20th Century with the growing market of college consumer guidebooks and college rankings. Institution level student-to-faculty ratios and related measures of class size appear mostly as "consumer interest" measures purportedly representing a proxy for educational quality and perhaps providing insight into the student experience at the institution. Several visible rankings, including the *U.S. News & World Report* "Best Colleges," feature this measure as such a proxy.

## CALCULATING A STUDENT-FACULTY RATIO

Initially, in the 2008-09 data collection, the student-to-faculty ratio was calculated in the IPEDS data collection system based on the data reported in the Fall Enrollment and Human Resources components and using logic based on that of the Common Data Set (CDS).[2] The only adjustment made to reported Fall Enrollment and Human Resources data was for the exclusion of students and faculty in stand-alone graduate or professional programs from the ratio calculation, as is done in the CDS.

Based on feedback from the IPEDS community, the methodology was revised for the 2009-10 data collection to afford institutions the flexibility necessary to provide an accurate and meaningful ratio for prospective students. The revised IPEDS methodology is still derived from the methodology used in CDS. Where the two methods primarily differ is with regard to allowable "exclusions," that is, which students and faculty are omitted from the numerator and denominator of the ratio. A comparison of the two methods appears in Table 1 below.

Table 1. CDS and IPEDS Student-to-Faculty Ratio Calculations

| **FULL-TIME EQUIVALENT (FTE) DEFINITION:** | **CDS** | **IPEDS** |
|---|---|---|
| Fall Full-time Headcount + 1/3(Fall Part-time Headcount) | ✓ | ✓ |
| **Exclusions:** | | |
| Faculty and students in stand-alone graduate or professional programs (programs such as medicine, law, veterinary, dentistry, social work, business, or public health in which faculty teach virtually only graduate level students) | ✓ | ✓ |
| Undergraduate or graduate student teaching assistants from faculty count | ✓ | ✓ |
| Instructors who teach exclusively non-credit courses | | ✓ |
| **Additions:** | | |
| Administrators and other staff not included in instructor counts who teach credit courses may be added to the part-time faculty count | | ✓ |

Within IPEDS, some of the exclusions and restrictions are inherent in the definitions employed in the Human Resources component which institutions are instructed to use as a basis. However, the student-faculty ratio instructions use vague language as to precisely which count of "instructional staff" to use. The Human Resources component has as a general category, "Staff whose primary responsibility is instruction, research and/or public service," which can be taken as an entire category to refer to instructional staff. However, within that broad category, individuals with "primarily research" and "primarily public service" roles from those with "primarily instruction" and "instruction combined with research and/or public service" are

[2] The Common Data Set is "a collaborative effort among data providers in the higher education community and publishers as represented by the College Board, Peterson's, and U.S. News & World Report…to improve the quality and accuracy of information provided to all involved in a student's transition into higher education, as well as to reduce the reporting burden on data providers." (http://www.commondataset.org/)

broken out and reported separately. Some completers of the student-faculty ratio may take a more stringent approach and only include the "primarily instruction" and "instruction combined with research and/or public service" numbers while others might use the larger, more encompassing category. Perhaps more importantly, there are large differences across institutions in how these categories are interpreted, with a number of institutions not having the data available to count separately individuals with specific roles related to teaching, research and service.

Like the CDS, IPEDS instructs data providers to exclude the faculty and students associated with "stand-alone graduate or professional programs." The intent of this exclusion is for the ratio to be closer to a student-to-faculty ratio for programs with undergraduates without overburdening institutions with reporting the level of instruction taught by each instructor. This statement is only true however, to the extent that stand-alone graduate or professional programs are much larger than programs that include both undergraduate and graduate instructors, which comprise the majority of programs at comprehensive (master's) and doctoral/research universities.

The IPEDS instructions cite another exclusion and an addition that are not part of the CDS calculation. Specifically, instructors who teach exclusively non-credit courses are excluded from the FTE Faculty calculation while administrators and other staff not included in the instructor counts who teach credit courses are added in to the part-time faculty count so that they contribute 1/3 each to the denominator. The intent of the exclusion of instructors who teach primarily non-credit courses is to better align the instructors as the denominator in the ratio with the students as the numerator which is limited to students enrolled for credit.

Although the worksheet provided in the IPEDS form for calculating the student-to-faculty ratio pre-fills the form with enrollment figures and performs all calculations, it is up to the institution to enter the instructor counts and to transfer the resulting number to the body of the survey for submission. The information included in the worksheet is not collected or saved in the IPEDS data collection system.

**Possible Alternatives**

In interviews conducted with five members of the IPEDS community representing a range of institution types and systems (see Appendix A), the institution level student-to-faculty ratio was generally not viewed as a useful measure for benchmarking purposes. The two system-level representatives mentioned using the student-to-faculty ratio primarily because it is available, but they did not find it particularly informative. One noted that it would be more useful if the components of the ratio calculation, which are entered into a worksheet but not included in the published data, were made available. One individual who worked closely with both graduate-professional and undergraduate programs noted that the student-to-faculty ratio is becoming less useful, and a student-to-support staff ratio more useful, for programs that employ clinical

training, problem-based learning, distance education, and other such increasingly popular teaching innovations. Colleagues from research universities described the ratio of tenured and tenure track faculty to FTE students and the percent of classes taught by tenured and tenure track faculty as a more important institutional benchmark. Others focused more on class size and measures like those from The National Study of Instructional Costs and Productivity (Delaware Study) that more accurately reflect faculty workload and may be more informative for prospective students.

## SUGGESTIONS FOR IMPROVEMENTS

The interviews and literature reviewed for this paper suggest that the institution level student-to-faculty ratio is not a particularly useful measure for institutional benchmarking and especially not for resource allocation studies and financial resource allocations. However, developing a more useful benchmarking measure of this kind for IPEDS would require considerable burden and not likely produce great benefits. Different types of institutions have varying interests regarding such benchmarks and there are several national, consortia and regional data sharing projects that can provide such measures for institutions.

As a consumer information measure, however, the ratio may give some idea as to the instructional climate and student experience; undergraduate class size might be even more directly relevant to those interests. NCES must collect and publish a student-to-faculty ratio to comply with the 2008 Higher Education Opportunity Act and the method employed within IPEDS is a reasonable approach. However, prospective students, researchers and policy makers could be better served if the instructions in IPEDS were improved and there was more transparency with respect to the specific elements used to calculate the ratio.

**1. Further clarify the language in the instructions.**

The institutional community should be consulted regarding the types of faculty and students for which inclusion or exclusion in the student-to-faculty ratio is not entirely clear. Though inherent in the instructions for reporting on the Human Resources component, the instructions for the student-to-faculty ratio on the Fall Enrollment component should be more explicit regarding how to treat faculty on leave (with or without pay) and visiting faculty and which human resources figures should be employed (i.e., that primarily research and primarily service faculty should not be included).

**2. Increase transparency around the data elements used in the calculation.**

Information regarding student and faculty exclusions from an institution's ratio calculations should be made transparent. Specifically, data regarding the number of faculty and students excluded from an institution's ratio should be collected and made available, so that users of the data can understand what percent of an institution's total activity is reflected in the figure and if programs are being excluded.

**3. Align the elements used in the ratio with other IPEDS data.**

An alternative way to collect the student-to-faculty ratio data would be to request that the institution's total full- and part-time student and instructor counts as reported in the Fall

Enrollment and Human Resources components be disaggregated into four categories. Specifically, the student headcounts could be disaggregated according to students who are enrolled in:

1) Undergraduate "stand-alone" programs
2) Graduate/professional "stand-alone" programs
3) Undergraduate in all other programs
4) Graduate/professional in all other programs

The categories for disaggregating full- and part-time instructional staff counts would be slightly different, specifically, those associated with:

1) Undergraduate "stand-alone" programs
2) Graduate/professional "stand-alone" programs
3) All other programs that offer credit bearing courses
4) Exclusively non-credit instructional programs

If these figures were collected separately in the Fall Enrollment and Human Resources components, then the calculation of student-to-faculty ratios could be accomplished through a set of rules for combining these data in ways that are more suitable to institutions that have similar proportions of student and faculty within these groups. For example, for institutions that have a notable majority (say two-thirds) of students and faculty in undergraduate stand-alone programs, just these two figures could be used to generate the ratio. If the ratio of graduates to undergraduates in the "all other programs" categories is particularly high (>75%), then all students and faculty associated with these programs could be excluded from the ratio (unless the number of undergraduate stand-alone program enrollments was particularly small). Regardless of whether simple or complicated rules were used to calculate the student-to-faculty ratio, having these figures would make the calculation transparent and provide to the public, researchers and policy makers, much richer information for a variety of uses without increasing the reporting burden significantly from its current level.

**4. Consider including average undergraduate class size or other similar measures in IPEDS to provide more context for the student-to-faculty ratio.**

NCES must collect and publish the student-to-faculty ratio, but perhaps average undergraduate class size would be more useful as consumer information. The average undergraduate class size could be added to IPEDS and published on College Navigator to provide additional context for the student-to-faculty ratio and offer additional information about the student experience at the institution.

## REFERENCES

Campbell, D. T. (1975). Assessing the impact of planned social change. In G. M. Lyons (ed.) *Social research and public policies*. Hanover, NH: The Public Affairs Center, Dartmouth College, 3-45.

Goodhart, C. A. E. (1975). Monetary relationships: A view from Threadneedle Street. *Papers in Monetary Economics*, Vol. 1, Reserve Bank of Australia.

# APPENDIX

The following individuals were interviewed for this paper:

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