

# QUESTIONING THE CALCULATIONS:

Are Colleges Complying with Federal and Ethical Mandates for Providing Students with Estimated Costs?

**Penn AHEAD Research Brief – March 2019**

**Laura W. Perna, Jeremy Wright-Kim, and Nathan Jiang**

The Alliance for Higher Education and Democracy (Penn AHEAD)  
at the University of Pennsylvania Graduate School of Education

[ahead-penn.org](http://ahead-penn.org)



## Acknowledgments

This research was supported by a grant from Lumina Foundation. Findings and opinions are those of the authors and may not reflect the views of the funder. This brief draws from a research paper that was presented at the annual meeting of the Association for the Study of Higher Education, Tampa, Florida, November 16, 2018. The full research paper is in the final stages of review at *Educational Policy*. The authors are grateful to Jillian Johnston and Dorothy Villareal for the assistance they provided with a first round of data collection.

## About Penn AHEAD

**The Alliance for Higher Education and Democracy (AHEAD)** is dedicated to advancing higher education policy and practice that fosters open, equitable, and democratic societies. Drawing on the intellectual resources of the University of Pennsylvania and a global alliance of higher education and academic leaders, AHEAD achieves its mission by creating knowledge, improving practice, and building capacity. Through engagement with policymakers, institutional leaders, scholars, and practitioners, AHEAD produces research and applies research-based knowledge to address the most pressing issues pertaining to the public purposes of higher education in the U.S. and around the globe.

## Suggested Citation

Perna, L. W., Wright-Kim, J., & Jiang, N. (2019). *Questioning the Calculations: Are Colleges Complying with Federal and Ethical Mandates for Providing Students with Estimated Costs?* (Penn AHEAD Research Brief – March 2019). Philadelphia, PA: The Alliance for Higher Education and Democracy (Penn AHEAD), University of Pennsylvania Graduate School of Education.

## Address All Correspondence To

Laura W. Perna, James S. Riepe Professor  
Graduate School of Education, University of Pennsylvania  
3700 Walnut Street  
Philadelphia, PA 19104

[lperna@upenn.edu](mailto:lperna@upenn.edu)

# QUESTIONING THE CALCULATIONS:

## Are Colleges Complying With Federal And Ethical Mandates For Providing Students With Estimated Costs?

Colleges and universities are bound by legal and ethical obligations to provide prospective students with accurate information about the real cost of attending college — information they need to make informed decisions about college choice. Having this information early in the college-going process — without having to complete the FAFSA — is especially important to low-income students, first-generation college students, and individuals who do not have regular access to college and financial aid counselors.

Despite these obligations, we identified some institutions that, as of March 2018, are not in compliance with the federal law that requires colleges and universities to make available a Net Price Calculator (NPC) on their website. Other institutions are providing cost information that is misleading or incomplete. Some institutions used out-of-date data, ignored real costs of attendance (e.g., books and supplies, transportation, and living expenses), asked students to estimate their own costs, suggested that students can reduce costs by “spending conservatively” on food, and presented loans as no different than grants.

The study notes other limitations in the usability and usefulness of cost-related information that institutions are providing and offers recommendations to institutions for helping to ensure that prospective students have the usable and useful information they need, as well as steps federal policymakers may take to aid institutions in this endeavor.

### Why This Matters

To make important decisions about higher education, students and their families need accurate, individualized estimates of actual college costs. Students who do not expect to be able to afford college may be less likely to enroll, and students who draw this conclusion early in the educational pipeline may be less likely to engage in behaviors — such as taking college prep courses in high school — that will prepare them to succeed in college. Students who overestimate costs might not apply to schools they can actually afford, and students who underestimate costs may drop out of college for financial reasons before attaining a degree.

Recognizing the challenges that many students experience in obtaining accurate information about college costs, the federal government requires all colleges and universities participating in federal Title IV financial aid programs to have a net price calculator (NPC) on their website. NPCs allow prospective students and their families to receive individualized estimates of the costs they will pay if they attend the institution, without first needing to apply for admission, complete the Free Application for Federal Student Aid (FAFSA), or actually enroll. NPCs can help students and their families obtain needed cost-related information early in the college-going process so that they can identify colleges that they can afford to attend.

In addition to meeting federal mandates, NPCs and other institutional cost-related websites are a mechanism that institutions can use to meet their ethical responsibilities to, as noted by the National Association of College Admission Counseling, “provide complete, factual, and readily accessible information that will allow students and their counselors to make informed college comparisons and choices.”<sup>1</sup>

## About The Study

This study examined the usability and usefulness of net price calculators and other cost-related information provided by selected colleges. Data were obtained from the websites of 80 public and private, not-for-profit, four-year institutions that serve relatively high numbers of Pell Grant recipients (at least 25% of enrolled students) and that have a competitive admissions index (category 4 of Barron’s index).<sup>2</sup>

We attempted to obtain cost estimates from the selected institutions’ net price calculators using profiles of four low-income students that vary in academic achievement (GPAs of 2.5 and 3.5) and financial dependency status (dependent and independent). These estimates were obtained in spring 2018. To assess the NPC output and other aspects of institutional websites, we used rubrics of usability and usefulness. We developed the rubrics to reflect federal mandates, recommended changes in federal mandates, and recommendations from previous research on net price calculators and communicating information to students about college costs.<sup>3</sup>

---

<sup>1</sup> National Association for College Admissions Counseling. (2017c). Statement of principles of good practice: NACAC’s code of ethics and professional practices. Washington, DC: Author. [https://www.nacacnet.org/globalassets/documents/advocacy-and-ethics/statement-of-principles-of-good-practice/2017\\_spgp\\_cepp\\_final.pdf](https://www.nacacnet.org/globalassets/documents/advocacy-and-ethics/statement-of-principles-of-good-practice/2017_spgp_cepp_final.pdf)

<sup>2</sup> Barron’s classifies institutions based on indicators of admissions selectivity, with 1 representing “most competitive,” 2 “highly competitive,” 3 “very competitive,” 4 “competitive,” 5 “less competitive,” 6 “noncompetitive,” and 7 “special.”

<sup>3</sup> We define usability in terms of ease in finding and completing the net price calculator. We define usefulness in terms of the completeness of information provided. For both categories, we rely heavily on Cheng et al.’s (2012) examination of the net price calculators of 50 institutions: Cheng, D., Asher, L., Abernathy, P., Cochrane, D., & Thompson, J. (2012). *Adding it all up 2012: Are college net price calculators easy to find, use, and compare?* Oakland, CA: The Institute for College Access & Success. Retrieved from [http://www.ticas.org/files/pub/Adding\\_It\\_All\\_Up\\_2012.pdf](http://www.ticas.org/files/pub/Adding_It_All_Up_2012.pdf)

## Net Price Calculators

Through the Higher Education Opportunity Act of 2008 (Pub. L. 110-315), Congress mandated that, to participate in federal Title IV financial aid programs, institutions must have a net price calculator (NPC) on their website.

### The NPC must:

- Provide individualized estimates of the total cost of attendance, total grant aid, and net price (defined as total cost of attendance less grant aid).
- Specify estimated costs of tuition and fees; room and board; books and supplies; and other expenses.
- Report the percentage of students receiving grant aid.
- Specify that estimates are non-binding and that students must complete the FAFSA to receive aid.
- Provide links to the U.S. Department of Education's website.

### Proposed legislation would require institutions to:

- Standardize the location of the NPC and ensure that the link to the NPC matches "in size and font" that of other prominent links.
- Make the federally defined net price the most visually prominent figure in the NPC output and calculated using data less than two years old.
- Identify differences in costs by major and disaggregate grant awards by source.

Although the U.S. Department of Education provides a free NPC template, institutions can use templates from vendors or create their own calculator.

# KEY FINDINGS

**Some four-year public and private institutions that enroll high numbers of Pell Grant recipients do not meet minimum federal requirements for providing net price calculators on their websites.** To be used, an NPC must be locatable and have a consistently functioning link. We were able to navigate by clicking from the institution's home page to the net price calculator for 88% (69) of selected institutions. For two institutions (one public, one private), a functioning net price calculator could not be located.

## Other Challenges That Limit The Usability Of NPCs:<sup>4</sup>

- **More than one price calculator.** Creating potential confusion and thus limitations on usability, 22% (17) of institutions with functioning NPCs had additional stand-alone scholarship and/or tuition calculators. These tools often used cost and/or aid data for different academic years than the NPC. One institution's NPC used 2014–2015 data, whereas its "cost estimator" used 2018–2019 data. Another institution specified different tuition costs on its NPC, cost calculator, and college cost website.
- **Failure to clearly and prominently display the correctly defined net price.** A third of institutions (26 of 78) did not prominently highlight the federally defined net price in the calculator output. Two institutions

---

<sup>4</sup> We were unable to navigate to the NPC by clicking from the home page for 11 institutions. We were able to find the NPC by entering "net price calculator" into an institution's search function for nine of these 11 institutions. The numbers reported in the remainder of this report are based on the 78 of 80 NPCs that we identified using both approaches.

used “net price” to refer to a figure that does not meet the federal definition of net price (costs of attendance less grants).

- **Absence of easy-to-use mechanisms to obtain answers to questions.**<sup>5</sup> About a fifth of institutions (17 of 78) listed the names and contact information (telephone and email) of staff. Less than a fifth (14 of 78) included statements that might encourage students to contact institutional staff with questions (e.g., statements beyond “students should refer to the financial aid office”).

## Challenges That Limit The Usefulness Of NPCs:

- **Inclusion of only some of the costs in the “net price” estimate.** While all selected institutions included the requisite cost information somewhere in the NPC output, some institutions presented a net price estimate based on only “direct costs” (tuition and fees, plus room and board).
- **Out-of-date data.** To be useful, cost and aid estimates must be current. About a third of institutions (29 of 78) reported estimates on their NPCs for what (at the time of data collection) was the current (2017–2018) or upcoming (2018–2019) academic year. About 12% (9 of 78) made net price calculations based on data that were two years old (2016–2017), 31% (24 of 78) used data that were three years old (2015–2016), and seven used data that were four years old (2014–2015). Six institutions did not specify the year.
- **Limited information about sources of grants.** About half (41 of 78) of selected institutions reported grant aid disaggregated by source (e.g., Pell, state, and institution). No institution indicated on the NPC output that grant aid may vary based on program of study. About a fourth (21 of 78) of institutions stated eligibility criteria for institutional grant aid (e.g., financial need and academic merit).
- **Ambiguity about to whom the estimates do and do not apply.** To be useful, cost estimation tools should provide estimates that reflect a student’s circumstances.<sup>6</sup> Less than half of the selected institutional NPCs (34) provided different cost or aid estimates for the dependent and independent student profiles. More than half (45 of 78) of institutions in the sample asked students to enter academic achievement information in the NPC. Twenty-eight (of 45) institutions estimated a higher grant award for the dependent profile with the higher GPA, and 23 (of 45) institutions estimated higher grant aid for the independent profile with the higher GPA.

---

<sup>5</sup> Coker, C., & Glynn, J. (2017). *Making college affordable: Providing low-income students with the knowledge and resources needed to pay for college*. Washington, DC: Jack Kent Cooke Foundation. [https://www.jkcf.org/assets/1/7/2017\\_JKCF\\_Making\\_College\\_Affordable\\_Web.pdf](https://www.jkcf.org/assets/1/7/2017_JKCF_Making_College_Affordable_Web.pdf)

<sup>6</sup> Anthony, A. M., Page, L. C., & Seldin, A. (2016). *In the right ballpark? Assessing the accuracy of net price calculators*. *Journal of Student Financial Aid*, 46(2), 25–50.

- **Lack of clear differentiation between grants and loans.** Of the 44 NPC outputs that included a line item for loans, 12 listed loans as “aid” and did not clearly differentiate loans from grants and scholarships. Fewer than half of institutions that listed loan awards (17 of the 44) stated on the calculator output that loans must be repaid.
- **Little information about how to obtain the aid.** Few institutions provided information about requirements for either initially receiving or renewing different types of grants, even though the absence of information about aid eligibility and renewability requirements may limit students’ ability to accurately forecast net costs.<sup>7</sup>

## Public Vs. Private Institutions

**Public and private four-year institutions differ in their approaches to presenting information about college costs.** Public institutions were less likely to encourage students to seek additional information; provide cost estimates using current data; disaggregate grant aid by source; ask about academic achievement and provide estimates for institutional merit aid based on that information; and provide information about loans.

These patterns may be explained by the tendency of public and private institutions to use different NPC templates. More than half of public institutions in our study used the template provided by the federal government, compared with less than a quarter of private institutions. NPCs that used the federal template consistently met requirements in the current law, but less frequently met other usability indicators (especially mechanisms for obtaining more information), as well as most indicators of usefulness. Institutions that used templates from third-party vendors less consistently met the federally mandated requirements, but more frequently met our indicators of usefulness.

---

<sup>7</sup> Coker, C., & Glynn, J. (2017). *Making college affordable: Providing low-income students with the knowledge and resources needed to pay for college*. Washington, DC: Jack Kent Cooke Foundation. [https://www.jkcf.org/assets/1/7/2017\\_JKCF\\_Making\\_College\\_Affordable\\_Web.pdf](https://www.jkcf.org/assets/1/7/2017_JKCF_Making_College_Affordable_Web.pdf)

# RECOMMENDATIONS

## Recommendations For Federal Policy

- **Federal policymakers should consider how to ensure that institutions are meeting their responsibility to provide usable and useful cost-related information.** Especially worrisome are inaccurate and misleading presentations of the costs of attendance (with some institutions including only “direct costs” of tuition and fees and room and board in the most prominently displayed calculation of net price) and not clearly differentiating loans from grants.
- **The U.S. Department of Education should eliminate its own inconsistencies with regard to reporting cost-related information.** Terms like “net price” should be consistently defined and applied across different tools (e.g., net price calculator and guidelines for financial aid offer letters).
- **The U.S. Department of Education should revise the free NPC template to bolster the usefulness and usability of information provided.** In the tool for customizing the free NPC template,<sup>8</sup> institutions should be prompted to report average grant awards disaggregated by source and costs disaggregated by major.

Rather than offering institutions the option to add “explanation and caveats,” the tool should prompt institutions to specify the groups to whom the estimates do not apply, contact information for the institutional financial aid office, parameters used to calculate costs (e.g., number of credits, place of residence, and included fees), other potential costs, and requirements for obtaining and renewing different grants. The customization tool should also encourage common language for the “welcome message,” including disclosure of the year of data used for the net price estimates. Such changes may be particularly beneficial for low-income students exploring the net price of public institutions, as public institutions tend to utilize the federal template.

---

<sup>8</sup> U.S. Department of Education, Office of Postsecondary Education (2018). Net price calculator quick start guide. Washington, DC: Author.

## Recommendations For Colleges And Universities

**Institutions can – and should – do more to ensure that prospective students have the useful and usable cost information they need.**

**Institutions should ensure the usability and usefulness of cost-related information.** Providing misleading information through any form of communication is a violation of professional standards and ethical principles. Using out-of-date data, ignoring real costs of attendance (e.g., books and supplies, transportation, and living expenses), asking students to estimate their own costs, suggesting that students can reduce costs by “spending conservatively” on food, and presenting loans as not different from grants does not meet an institution’s obligation to provide students and families with the information they need to make informed college-related decisions.

### TO ENSURE THAT PROSPECTIVE STUDENTS ARE WELL SERVED, COLLEGES AND UNIVERSITIES SHOULD VERIFY THAT:

- **The NPC is available.**
  - The NPC is easily found on an institution’s website.
  - The NPC link is consistently working.
  - There is only one cost calculator and it is labeled a “net price calculator.”
- **The NPC provides usable and useful information about the net price.**
  - The NPC output presents only one bottom-line calculation of net price and this figure is prominently displayed.
  - The calculated net price meets the federal definition: cost of attendance less grants and scholarships.
  - The calculation is based on data from the current or previous academic year.
  - NPC estimates are consistent with, and easily reconciled with, cost information presented on other institutional websites.
- **The NPC provides usable and useful information about the cost of attendance.**
  - All components of the cost of attendance are identified and estimated.
  - Students are not asked to provide their own estimates of how much they will spend.
  - The output states the potential for variations in costs based on course load, residence hall, meal plan, and major field of study, but not decisions about “spending conservatively” on food or clothes.
- **The NPC provides usable and useful information about mechanisms for paying costs.**
  - Grants are disaggregated by source (federal, state, and institutional) and are defined as not requiring repayment.

- Criteria for receiving and renewing each grant are disclosed.
- Student loans are presented separately from grants, identified as optional, and defined as requiring repayment.
- Parent PLUS loans are not included in the NPC calculation or output.
- **The NPC estimates reflect a prospective student’s circumstances.**
  - The populations to whom the estimates apply (e.g., first-time and full-time students) are specified.
  - The NPC can provide estimated costs for particular populations (e.g., financially independent students, non-U.S. citizens, part-time students, and transfer students).
- **The NPC and related websites encourage next steps.**
  - Contact information for the institution’s financial aid office (email and phone number) is included in the NPC output.
  - Students are informed of requirements and deadlines for receiving aid (e.g., FAFSA must be completed annually) and each specific form of aid.
- **Cost related information is aligned across institutional websites.**
  - Information about costs on other institutional websites align with, or are reconcilable with, estimates provided by the NPC.

Websites can be efficient mechanisms for giving prospective students — especially students from low-income families and other underserved groups — the cost-related information they need to make informed college-going plans and choices. The results of this study illustrate the need for institutions to review whether and how they are providing students with usable and useful cost-related information.

# APPENDIX

**Table 1.** Numbers of Selected Public and Private Not-For-Profit Four-Year Institutions that Meet Selected Indicators of USABILITY for their NPCs by Institutional Performance in Graduating Pell Grant Recipients and NPC Template

Indicator of Usability	Public		Private		NPC Template		
	High (n = 19)	Low (n = 20)	High (n = 19)	Low (n = 20)	Federal (n = 30)	Institution (n = 10)	Vendor (n = 38)
NPC is locatable (i.e., can be found by navigating from the institution's home page) <sup>1</sup>	15	18	18	18	24	9	36
NPC is labeled "Net Price Calculator"	19	20	19	19	30	10	37
Net price estimate is most prominently displayed figure on output	12	14	12	14	30	5	17
Net price is defined (cost of attendance less grants)	16	16	16	13	30	5	26
Net price is correctly calculated and estimated	19	19	18	19	30	8	37
Students can provide contact information for follow-up	3	2	14	14	0	1	32
Student contact information is not required to complete NPC	19	19	13	15	30	10	26
NPC output provides contact information of financial aid staff (e.g., e-mail, phone number)	3	2	10	2	5	3	9
Language encourages student outreach (e.g., "please reach out")	0	2	5	7	3	0	11
Average number of total questions asked on the NPC (dependent)	13.1	15.5	24.7	21.4	8.5	15.9	27.5
Average number of questions required to receive an estimate	11.5	14.7	19.7	16	8.5	13.7	21.5

<sup>1</sup> "Locatable" refers to our ability to navigate (via "clicking") from an institution's home page to the NPC. Some calculators were not locatable (by clicking from an institution's home page), but were found by entering "net price calculator" into an institution's search function. We completed all other indicators of usability and usefulness except this "locatable" item using the identified NPC regardless of how we found it.

**Table 2.** Numbers of Selected Public and Private Not-For-Profit Four-Year Institutions that Meet Selected Indicators of USEFULNESS OF INFORMATION for their NPCs by Institutional Performance in Graduating Pell Grant Recipients and NPC Template

Indicator of Usefulness	Public		Private		NPC Template		
	High (n = 19)	Low (n = 20)	High (n = 19)	Low (n = 20)	Federal (n = 30)	Institution (n = 10)	Vendor (n = 38)
NPC reports minimum costs (i.e., tuition and fees, room and board, books and supplies, other costs)	19	20	19	20	30	10	38
NPC output notes actual costs will vary based on student choices (e.g., meal plan)	3	2	2	2	2	2	5
NPC reports estimates using 2018/19 or 2017/18 data	3	4	13	9	1	2	26
NPC output classifies grants and scholarships as gift aid requiring no repayment	12	13	16	11	29	1	22
Estimated grant and scholarship aid is disaggregated by source (e.g., state versus federal)	5	7	14	15	1	6	34
NPC asks student’s citizenship status	3	2	12	1	0	0	18
NPC asks questions to assess eligibility for merit-aid (e.g., GPA)	8	7	15	15	1	6	38
NPC estimated additional aid for dependent profile with higher GPA	4	3	10	11	1	3	24
NPC estimated additional aid for independent profile with higher GPA <sup>2</sup>	2	3	9	9	1	3	19

<sup>2</sup> We were unable to calculate estimates for independent profiles at six institutions, resulting in a sample of 72 for independent-specific variables (high-public, 17; low-public, 19; high-private, 16; low-private, 20; federal, 27; institutional, 9; vendor, 36)

<sup>3</sup> We omitted three institutions from the cost analyses for dependent students because the estimates were clearly inaccurate (e.g., reporting all \$0 values); all three of these institutions used the federal template.

**Table 2, continued.** Numbers of Selected Public and Private Not-For-Profit Four-Year Institutions that Meet Selected Indicators of USEFULNESS OF INFORMATION for their NPCs by Institutional Performance in Graduating Pell Grant Recipients and NPC Template

Average difference in aid between dependent profiles	\$1,900	\$4,821	\$8,336	\$3,922	\$9,462 <sup>4</sup>	\$1,633	\$5,592
Average difference in aid between independent profiles <sup>3</sup>	\$1,950	\$4,821	\$8,929	\$3,548	\$9,462 <sup>4</sup>	\$1,633	\$6,121
NPC output includes estimates for federal loans	9	6	15	14	1	6	37
NPC does not classify loans as aid (if the output included an estimate for loans)	6	4	10	12	0	5	27
NPC specifies that loans must be repaid (if the output included an estimate for loans)	1	0	6	10	1	1	15
Output includes references/estimates for work study, including a definition	1	0	6	2	0	1	8
NPC specifies FAFSA must be completed to receive aid	17	18	14	16	30	5	30
NPC specifies FAFSA must be completed annually	1	0	1	1	0	0	3
NPC provides FAFSA deadline	1	1	0	0	0	1	1
NPC specifies renewability grants and scholarships	2	1	6	2	1	0	10
NPC output includes maintenance requirements for grants and scholarships	0	0	1	0	0	0	1

**Notes, Tables 1 and 2:** Indicators of usability and usefulness were derived from a review of the following sources: Anthony et al., 2016; Cheng et al., 2012; Coker & Glynn, 2017; H.R. 4508; Pub. L. 110-335; and S. 889. “High” and “low” performing refers to institutional performance in graduating Pell Grant recipients. N’s exclude the two institutions (one high-performing public and one high-performing private) that had non-functioning NPCs. Full rubrics are available from the authors upon request.

<sup>4</sup> Only one institution using the federal template awarded merit aid; these dollars report the differential, not an average.



Graduate School of Education  
**Penn GSE**



Alliance for Higher Education & Democracy  
**Penn AHEAD**

---

[ahead-penn.org](http://ahead-penn.org)