

**CLIME CONCLUSION!**  
**SURVEY DESIGN**

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Center for Learning and Innovation in Medical Education ([CLIME](#))

All interested in growing as educators in the health professions welcome!

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for the 2022-2023 CLIME Teaching Scholars Cohort

*Survey design is a foundational skill for the medical educator. Surveys are used for program evaluation, quality improvement, teaching, and assessment, as well as in medical education research and scholarship. A thoughtful, evidence-based approach to survey design has potential to impact the educational environment on many levels.*

*Key survey design points include:*

**Define your Construct:** What is the idea or phenomenon you are hoping to assess? According to [Jones et al. 2013](#), a clear idea of what you aim to measure will result in a more focused survey, and likely a higher response rate. Surveys are best suited to measure constructs that are not directly observable and usually require more than one question to evaluate. As [Agarwal 2011](#) notes, “construct validity” is a central goal of survey design and refers to whether your survey questions accurately measure the construct you have chosen to study.

**Be Systematic:** Use a standardized approach to ensure adequate planning as you create your survey. [Artino et al. 2014](#) describe a 7-step approach to survey design: 1) literature review, 2) interviews/focus groups, 3) synthesis of literature reviews and interviews/focus groups, 4) item development, 5) expert validation, 6) cognitive interviews, and 7) pilot testing. This stepwise approach emphasizes validity and synthesizes best practices from multiple sources.

**Avoid Common Design Flaws:** Avoid negatively worded questions, double-barreled questions, and statements within question stems. Be mindful of including too few or too many response anchors and using terms like “agree” or “disagree” for response options. [Artino et al. 2011](#) share more detail about these common pitfalls. Following best practices for survey visual design, as highlighted by [Artino and Gehlbach 2012](#), can prevent misinterpretation of your survey questions.

**Boost Response Rate:** [Phillips et al. 2022](#) recommend use of personalized salutations to engage each survey recipient. Consider employing more than one medium – such as paper and electronic surveys – to maximize your reach. When possible, incentivize responses with a small cash reward or gift card. [Cho et al. 2013](#) recommend sending your survey invitation at least three times, and caution to expect diminishing returns after that.

It can be tempting to rush the design and distribution of a survey. Thorough and thoughtful planning is key to obtaining valuable, useful, and trustworthy data. This is especially important if you intend to report the results of your survey in the scholarly literature.