### Compiled resources for QSSI working group

#### QUBES sites

Serenity project--focused on assessing quant skills: [shiny app](https://mdllama.shinyapps.io/serenityviz/)

<https://github.com/serenity-r/serenity>

Scientist spotlights - <https://qubeshub.org/publications/2496/1>

Best practices in highlighting diverse scientists - <https://qubeshub.org/publications/2465/1>

#### Quantitative skills instruments

1. Grappling with graphs: ([Stephanie Gardner's poster](https://qubeshub.org/community/groups/summer2021/forum/biome-launch/7-posters--wips/12366) ([link to poster](https://qubeshub.org/publications/2469/1)) & <https://simbio.com/>\_)
2. BioSQuaRe consortium: <https://www.macalester.edu/hhmi/biosquare/>
3. SERC: <https://serc.carleton.edu/NICHE/ex_qr_assessment.html>

<https://d32ogoqmya1dw8.cloudfront.net/files/NICHE/qlar.pdf>

#### Self-efficacy for quantitative skills instruments

1. Article about theory underpinning math self-efficacy instruments.Note that these authors have a published instrument on self-efficacy in math skills (<https://www.mindgarden.com/118-mathematics-self-efficacy-scale#horizontalTab2>) but it seems lengthy--34 item in a dissertation and 52 item when first published in 1983: <https://journals.sagepub.com/doi/pdf/10.1177/1069072705281347>
2. BIOMAAP anxiety instrument (May have tasks that we want to measure self-efficacy for): <https://docs.google.com/forms/d/15TNNPp41IF-VO5pjO2M8OnPfTh3ch3ZEth308XF2kaQ/edit>
3. **From Laurel Lorenz,** [**https://www.frontiersin.org/articles/10.3389/feduc.2020.00019/full**](https://www.frontiersin.org/articles/10.3389/feduc.2020.00019/full) **(intention, motivation, self-efficacy and self-regulation)**
4. **From Rob Furrow,** [**https://www.lifescied.org/doi/full/10.1187/cbe.17-03-0043**](https://www.lifescied.org/doi/full/10.1187/cbe.17-03-0043) **(has interest, value, and perceived cost)**
5. **From Rebecca McHugh,**
   * Achievement Goals Questionnaire article: Elliot, A. J., & McGregor, H. A. (2001). A 2×2 achievement goal framework. Journal of Personality and Social Psychology, 80, 501–519. doi:10.1037//0022-3514-80.3.501

#### Science identity and/or sense of belonging instruments

1. [Self-Efficacy Questions // Evaluating Psychosocial Mechanisms Underlying STEM Persistence](https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.ncbi.nlm.nih.gov%2Fpubmed%2F28572178&data=04%7C01%7Cr.n.hartnett%40msmary.edu%7Cddf17c2ecfa140b493e708d98d089c5d%7C1094034b6e0e4eb3a3bdfa55ae99b718%7C0%7C1%7C637695890408837018%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=q929n94dfpywaVzyZNSDNa%2BMmVUIqr4MOHvLVEQUzgw%3D&reserved=0)
2. [The Development of a College Biology Self-Efficacy Instrument for Nonmajors Baldwin JA 1997](https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fonlinelibrary.wiley.com%2Fdoi%2Fabs%2F10.1002%2F%2528SICI%25291098-237X%2528199907%252983%253A4%253C397%253A%253AAID-SCE1%253E3.0.CO%253B2-%2523&data=04%7C01%7Cr.n.hartnett%40msmary.edu%7Cddf17c2ecfa140b493e708d98d089c5d%7C1094034b6e0e4eb3a3bdfa55ae99b718%7C0%7C1%7C637695890408847014%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=e9P6FLCh0Uxs3zWM4qWZTNPbyG2f8XlxNEwEfTmP%2FNc%3D&reserved=0)
3. [A Manual for the use of the Motivated Strategies for Learning Questionnaire (MSLQ)](https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Feric.ed.gov%2F%3Fq%3Da%2Bmanual%2Bfor%2Bthe%2Buse%2Bof%2Bthe%2Bmotivated%2Bstrategies%2Bfor%2BLearning%2BQuestionnaire%26id%3DED338122&data=04%7C01%7Cr.n.hartnett%40msmary.edu%7Cddf17c2ecfa140b493e708d98d089c5d%7C1094034b6e0e4eb3a3bdfa55ae99b718%7C0%7C1%7C637695890408956964%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=2hm%2FbRiYTfZbQRh5D90DWc%2FgDv2w2hjbKu%2B18V%2BTWJ0%3D&reserved=0)
4. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3940464/> (example statements to measure self-efficacy, sense of belonging, and science identity)
5. Free tool from Ascend project 5-10 min survey (pulled from one of the other discussion pages in BIOME): <https://docs.google.com/document/d/1zHlJjWDZopaAnmPpKtFgz3-JXjIwONhcgflDroAzh_c/edit#>
6. Inclusion of Other in the Self (venn diagram) origin article: Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. Journal of Personality and Social Psychology, 63, 596–612. doi:10.1037/ 0022-3514.63.4.596.
   1. Modifications for women in STEM fields: London, B., Rosenthal, L., Levy, S. R., & Lobel, M. (2011). The influences of perceived identity compatibility and social support on women in non-traditional fields during the college transition. Basic and Applied Social Psychology, 33, 304–321. doi:10.1080/01973533.2011.614166
   2. Modifications for women in STEM fields: Rosenthal, L., London, B., Levy, S. R., & Lobel, M. (2011a). The roles of perceived identity compatibility and social support for women in a single-sex STEM program at a co-educational university. Sex Roles, 65, 725–736. doi:10.1007/s11199-011-9945-0.
7. Measure of belonging origin article: Mendoza-Denton, R., Downey, G., Purdie, V., Davis, A., & Pietrzak, J. (2002). Sensitivity to status-based rejection: Implications for African-American students’ college experiences. Journal of Personality and Social Psychology, 83, 896–918. doi:10.1037/0022-3514.83.4.896.
8. Role model origin article: Lockwood, P., & Kunda, Z. (1997). Superstars and me: Predicting the impact of role models on the self. Journal of Personality and Social Psychology, 73, 91–103. doi:10.1037/0022-3514.73.1.91.
   1. Role model update article: Wohlford, K. E., Lochman, J. E., & Barry, T. D. (2004). The relation between chosen role models and the self-esteem of men and women. Sex Ro l e s, 50, 575–582. do i :10. 1023 /B:SERS.0000023076.54504.ca.

#### Miscellaneous

Resource to pull out data from published graph: <https://apps.automeris.io/wpd/>

Case studies : <https://www.learngala.com/>