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Y750

Reflection

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I signed up for this advanced seminar knowing that it would be challenging and I was right. I am still glad about my decision because other than the content knowledge, I learned how to learn a new method, which is important and valuable for my future self-learning. I also felt more “connected” to the new trends and methodologies in educational research. Below are some reflections upon my experience.

*Process of learning new methods*

Working with a small group of intelligent and motivated people is an effective way of learning. More importantly, it helps me to “streamline” my own process of learning new methods. The topics for both presentations I was part of did not have much empirical research or a “handbook” that could guide us through the learning process. For example, the first one, alignment in measurement invariance, my group had to research the literature, digest the theory behind it, understand its advantages and disadvantages identify the type of dataset it could be used upon, and clarify what research questions it could answer. This process, painful as it is, is applicable in learning any theories or methods.

*Thoughts on software*

For my previous study and current work, I use mostly SPSS and a little SAS. I appreciate that I had the opportunity to use R intensively in this class. However, although R is a great open-source (and free) software and is used more and more in educational research, I still feel the need to learn Mplus because R still has its limitations. For example, for our group presentation on alignment method, Mplus could have executed the codes with ease and provided detailed output that identifies the “non-aligned” groups. R output does not provide as much detail.

The other group presentation I was part of, multilevel cross-classified SEM, also seems that it could be done relatively easily with Mplus (although it is also a relatively new feature). We were able to find the “xxM” package in R that was designed to run n-level SEM with complex data structure (e.g., non-perfect hierarchies). We contacted the owner of the package, who generously shared with us a newer version of the package with detailed instructions on how to install it. For example, we were instructed to install an older version of R and use it as default (can be change in “global option” setting). Interestingly, the package could run without changing the version on some students’ laptops but not others’. In addition, we realized that the package would not install on Mac computers and extra steps were needed to solve that problem. Finally, although the built-in example in the package was helpful to understand the method, we felt that many more questions were not answered by the output. Overall, I still have high expectations on R and I am sure the smart people out there are developing powerful packages as I am writing this paper. However, for the moment I am considering purchasing an Mplus license.

One limitation I found with all software I encountered is the incapability of generating nice-looking complex graphs. I wish a package on graphic visualization would be invented soon.

*Community and outreach*

Finally, I was excited to learn about Github and the concept of open source repositories in general. I do believe in open access and open science and having a community that is willing to share and improve each other’s work is wonderful. I personally benefited a great deal from the generosity of the instructor and the classmates. In addition, as mentioned above, we reached out to Professor Paras Metha at University of Houston for help, which is something students and scholars should be encouraged to do more.

*Real world impact*

As someone trained in the Inquiry program, I am always eager to learn new methods and try to apply them to my work. However, as our guest lecturer pointed out, there is a huge gap between the world of methodologists and that of the practitioners or policy-makers. I sometimes find myself stuck in between. While I do not think it is realistic to train all practitioners to become methodologists, I do hope the methodology experts in the field can communicate the importance of their work better (without Greek notations, preferably) and therefore can have more impact on real-world policies.