

Cognia Psychometric Measurement Externship Program

Cognia (formerly Measured Progress) is granting up to three (3) externships (i.e., remote internships) for students working toward PhDs in appropriate graduate study programs. The primary focus of the program centers around an appropriate research project that each student chooses in consultation with Cognia psychometricians and researchers.

Two of the externships are targeted for students whose interests are focused on statistical issues such as equating, item calibration, statistical models, response time, dimensionality issues, and scaling. A large variety of projects are possible here. For example, recent years have included projects on evaluating raters of open-response items, diagnosing student misconceptions on open-response items, modeling response time behavior of students, detecting unusual item response behavior in alternate assessments, nonparametric modeling of nominal responses, and accuracy of Stage 1 routing in multistage tests.

The other externship is targeted toward a student who is interested in measurement issues that are about item content knowledge and skills and cognitive processing requirements. Specific projects that have already been identified include:

Translate item-difficulty modeling research into practical, actionable knowledge for item development. (a) Conduct item difficulty modeling reviews in math and other content areas, using the 100+ studies we have located, and modeled after a 2021 NCME paper that we are preparing for journal submission; (b) translate findings into actionable recommendations for item specification and development for one or more Cognia projects; and (c) build content into the pending item difficulty modeling website.

Evaluate item-ALD alignment for one or more Cognia programs. Evaluating the degree to which item response demands align with knowledge and skill expectations in ALDs; use matches to language in the ALDs and the IDM framework of item response demands; focus particularly on items that appear to be misaligned.

Evaluate misaligned items and items flagged for DIF from an equity point of view. Are there socio-cultural references that may exclude some student groups? What sort of framework could we induce from these items to guide equity reviews of items?

A project of the student's own choosing that is aligned with the above interests is also possible.

An additional important focus of the externship program is to help students gain an in-depth knowledge and understanding of the daily activities of Cognia psychometricians and research scientists via a series of seminars that give a systematic deep-dive into our psychometric practices.

The 16-week externship will encompass:

- A program designed around accomplishing a research project, eligible for submission for presentation at a national conference.

- Regular Zoom meetings with mentors around goal setting, monitoring progress, and ensuring project completion.
- A series of seminars from Cogna psychometricians to gain in-depth knowledge on how psychometrics is actually applied in a variety of ways in the educational testing industry.
- The 16-week externship starts February 7, 2022 and ends June 6, 2022. Externs would work on projects about 20 hours per week (some weeks more, some less).
- Externs will be provided access to all needed psychometric resources by use of FTP sites or by use of a Cogna laptop.

Paid Internship Information:

Cogna will pay \$8,000 over the 16-week period covering the externship.

Deadline for application: January 4, 2022

Eligibility:

Eligible candidates will be enrolled in a doctoral program (i.e. psychometrics, educational measurement, or appropriate discipline) of a fully accredited university/college, with at least two (2) years of full-time graduate study leading toward a Ph.D.