

Massachusetts Educator Preparation and Licensure Study

First Year Results

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Introduction

Background

Research agenda

How do workforce outcomes vary for teacher candidates from different pathways and programs in Massachusetts?

- **Workforce outcomes**
 - Teacher value added to student achievement on state standardized tests
 - Summative performance ratings from educator evaluation
 - Teacher attrition
- **Pathways and programs**
 - Licensure pathway (preliminary, initial, and temporary)
 - Program type (undergraduate, postgraduate, and alternative)
 - Specific educator preparation provider (EPP) and teacher education program

Data

Teachers earning an initial, preliminary, or temporary license in Massachusetts between 2010 and 2014

- Include years *after* licensure or program completion
- For analyses of EPPs, we only consider *first-time* completers (those earning an initial license)
- Experience measured as the elapsed time since first teaching license.
- Sample includes 17,429 teachers (6,896 with preliminary license and 569 with temporary license), with about 4,500 teachers linked to student achievement data.
- Of these, we have records for 8,880 program completers with about 2,300 linked to student achievement data.

Key Findings

- The variability in teacher outcomes among providers in this study is toward the higher end of comparable analyses in other states
 - This implies that provider accreditation and support may be a more promising policy lever in Massachusetts than elsewhere.
- Individual programs within EPPs vary substantially in the measures of effectiveness of their graduates
- The providers and pathways that produce teachers with higher evaluations and student achievement gains are not always those whose teachers remain in the profession the longest

Research limitations

- Individual EPP outcomes should not necessarily be interpreted as an estimate of the effect of attending a particular teacher preparation program
 - Estimates combine impact of preparation plus *pre-existing* differences in skill or experience and any impact of placement in districts
 - Individual EPP outcomes may be most useful as a “flag” that prompts further investigation
- Many estimates of individual EPP effects in this report are sensitive to modeling decisions
 - Overall, the sensitivity of the results in this report suggests some caution when interpreting outcome measures for providers with low enrollment, highly concentrated groups of completers, or other atypical school staffing patterns

Key Findings

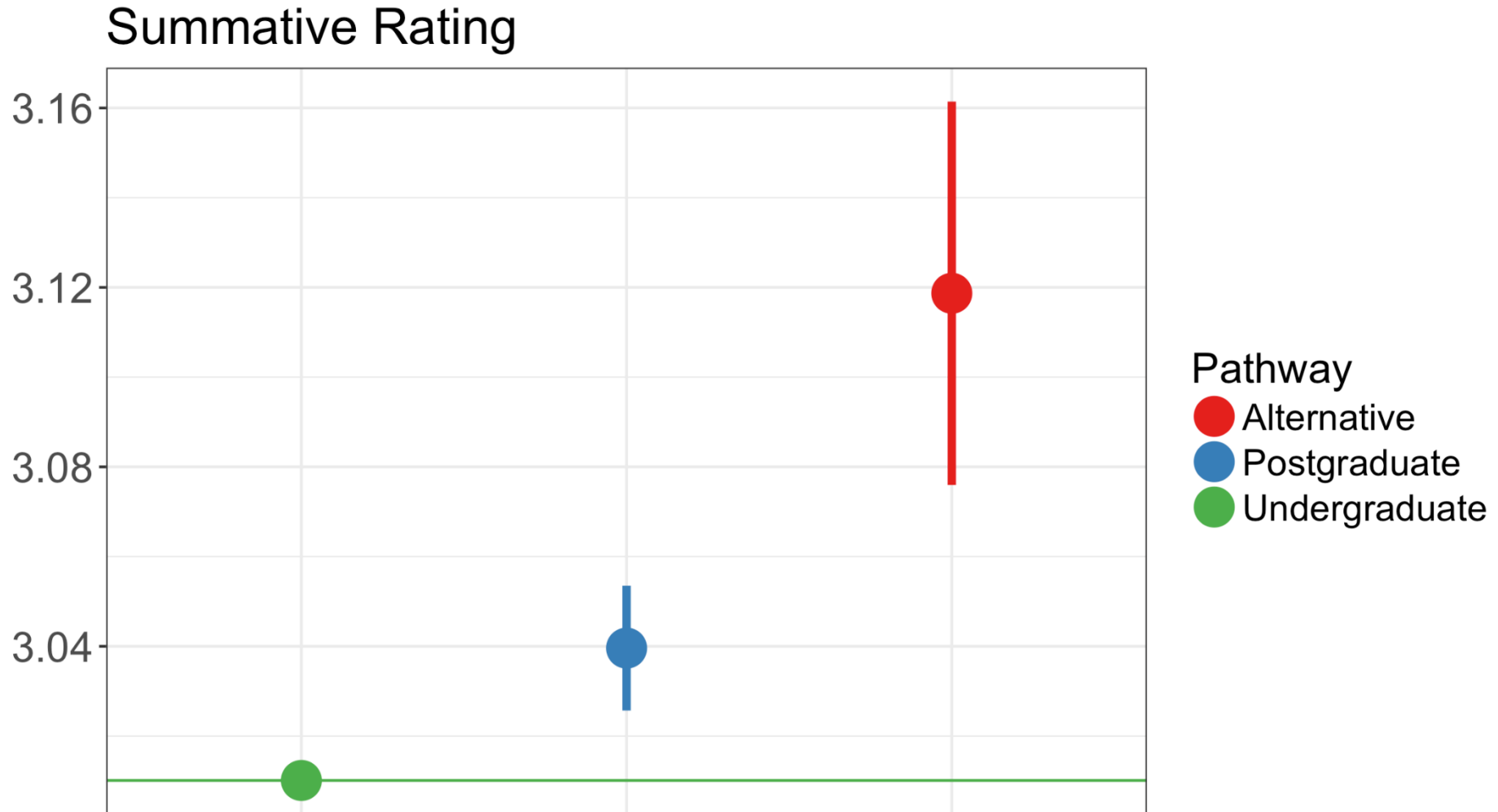
Key findings

1. Teachers from postgraduate or alternative programs tend to receive higher summative performance ratings than those from undergraduate programs
2. Teachers with temporary (out-of-state) licenses tend to receive higher summative performance ratings than teachers with initial licenses. Those with preliminary licenses tend to receive lower ratings than those with initial licenses, and they may also have lower value added in math
3. Teachers who enter the profession through alternative programs or with non-standard licenses are more likely to leave teaching than teachers from traditional, in-state EPPs
4. Outcomes for most EPPs in Massachusetts are not statistically different from the average, but the variation explained by individual EPPs in MA is high relative to other states
5. Teacher value added varies substantially across different programs within the same EPP

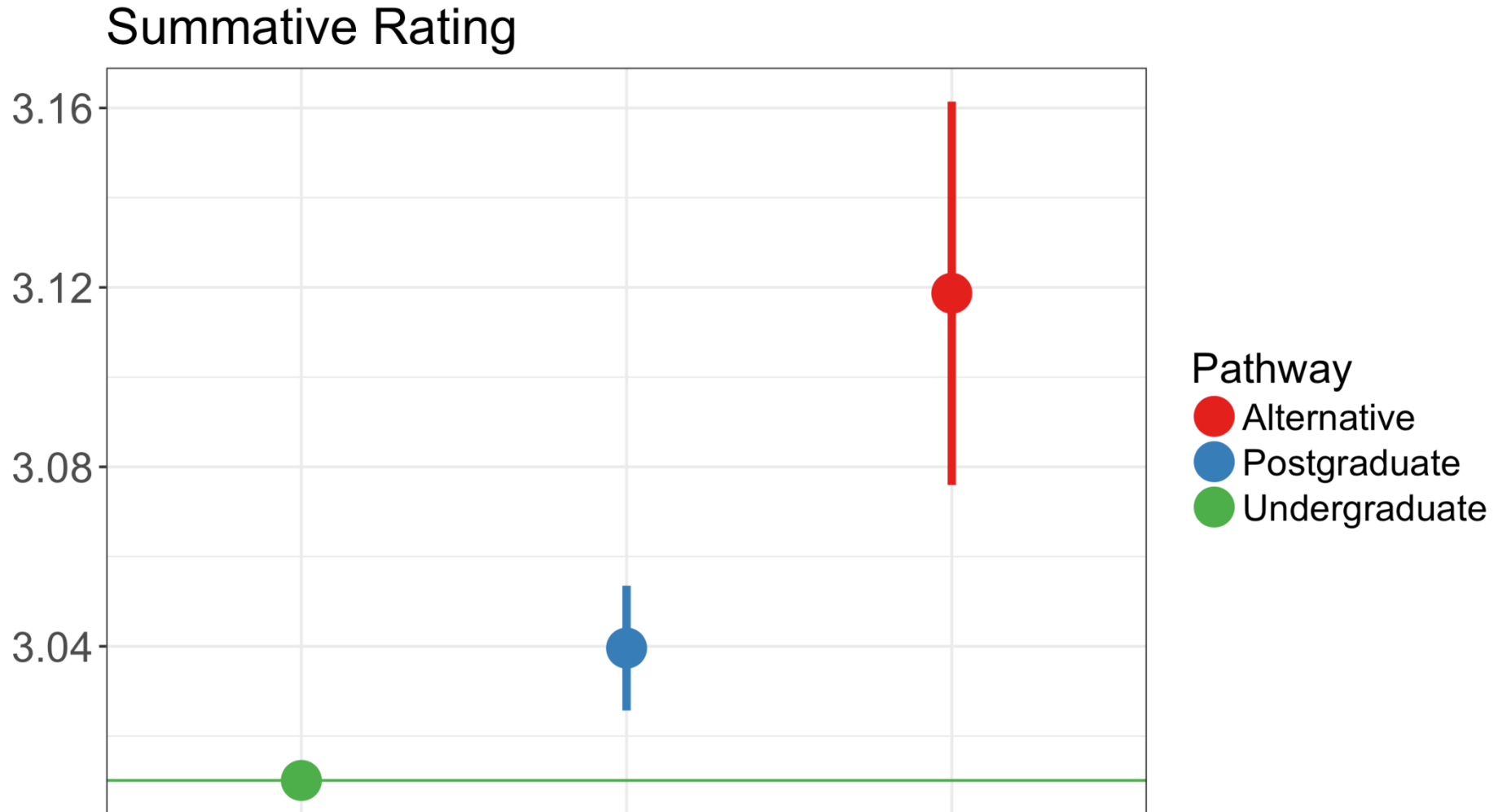
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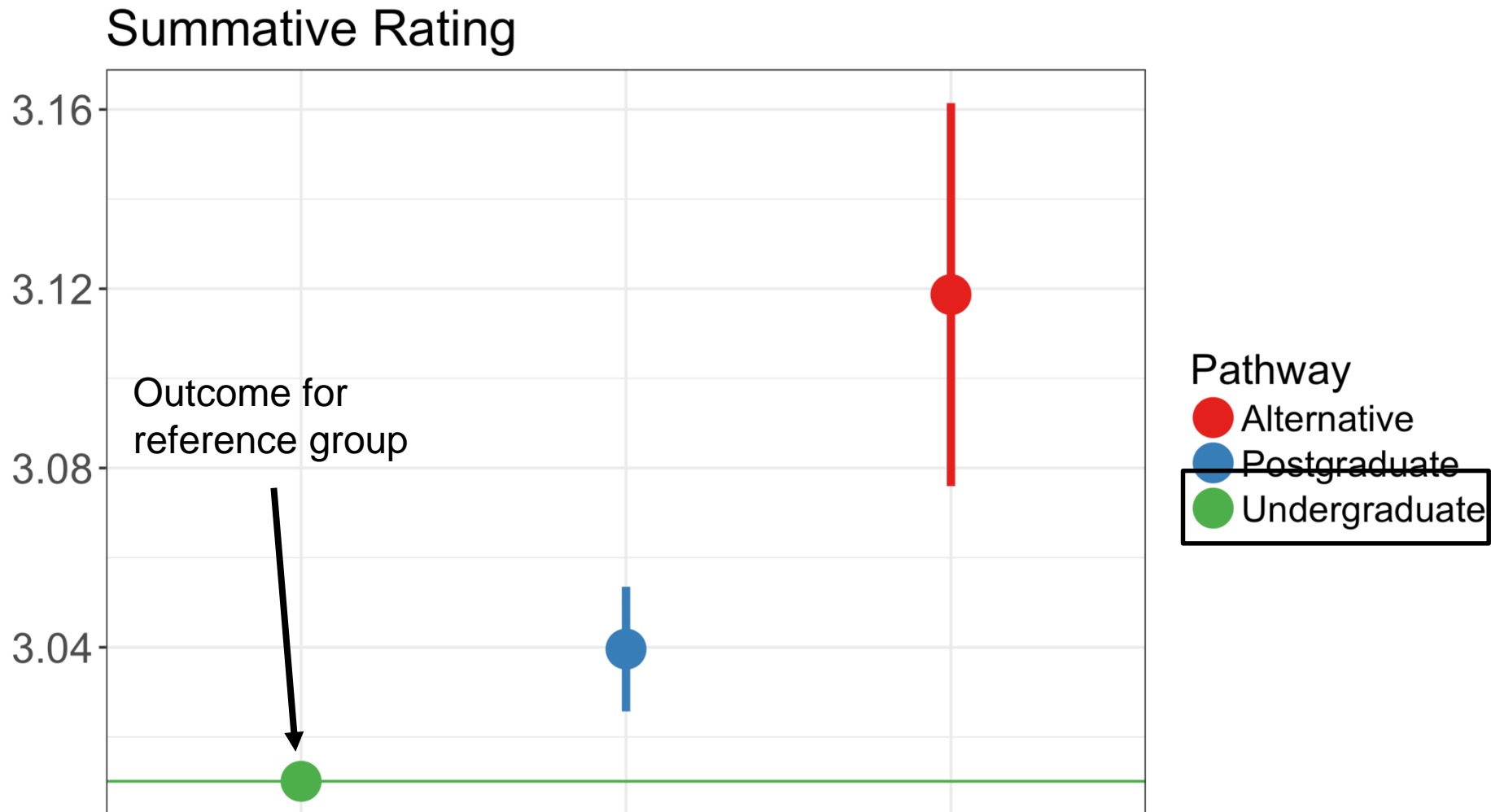
Performance ratings by program pathway



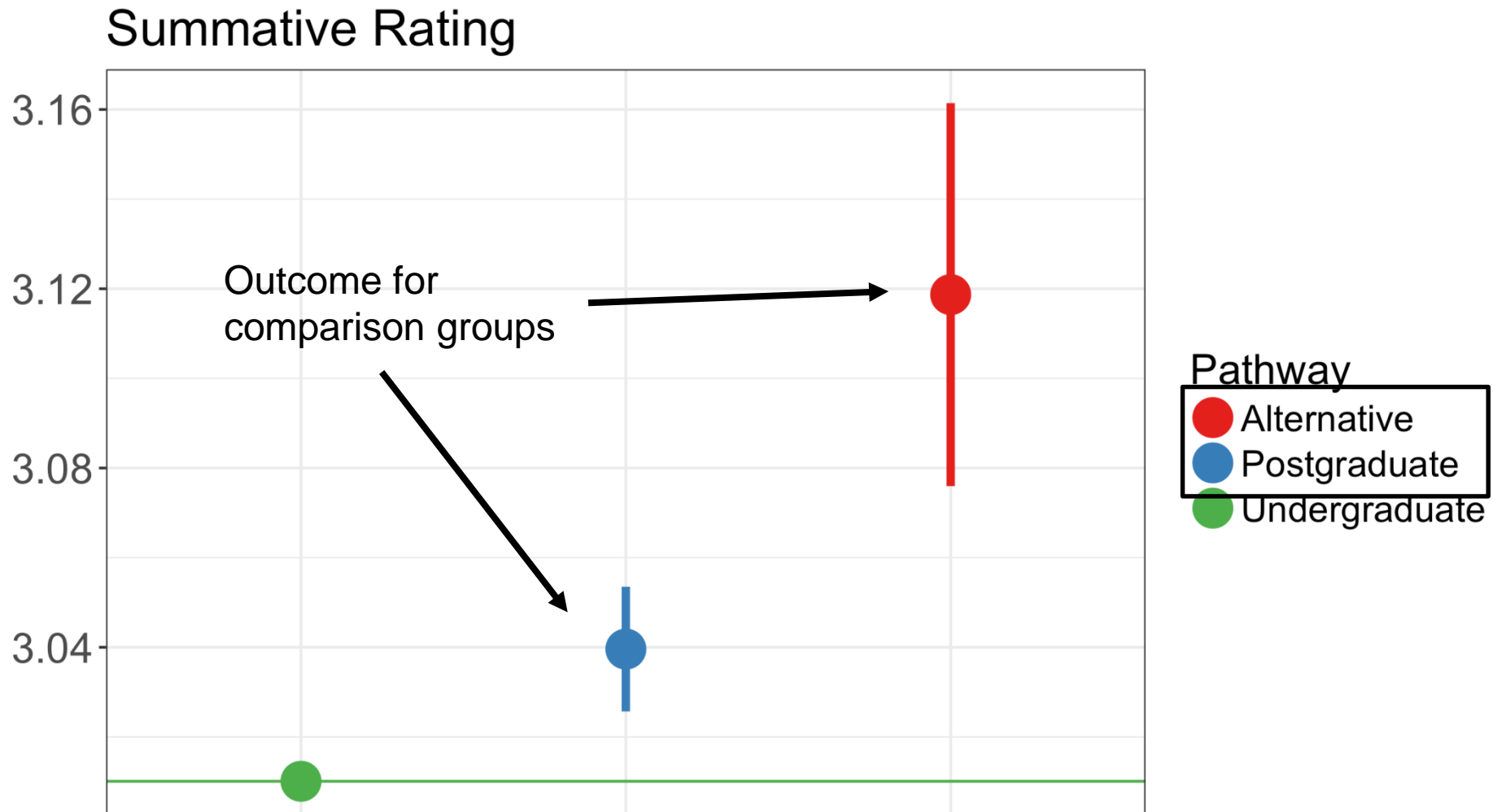
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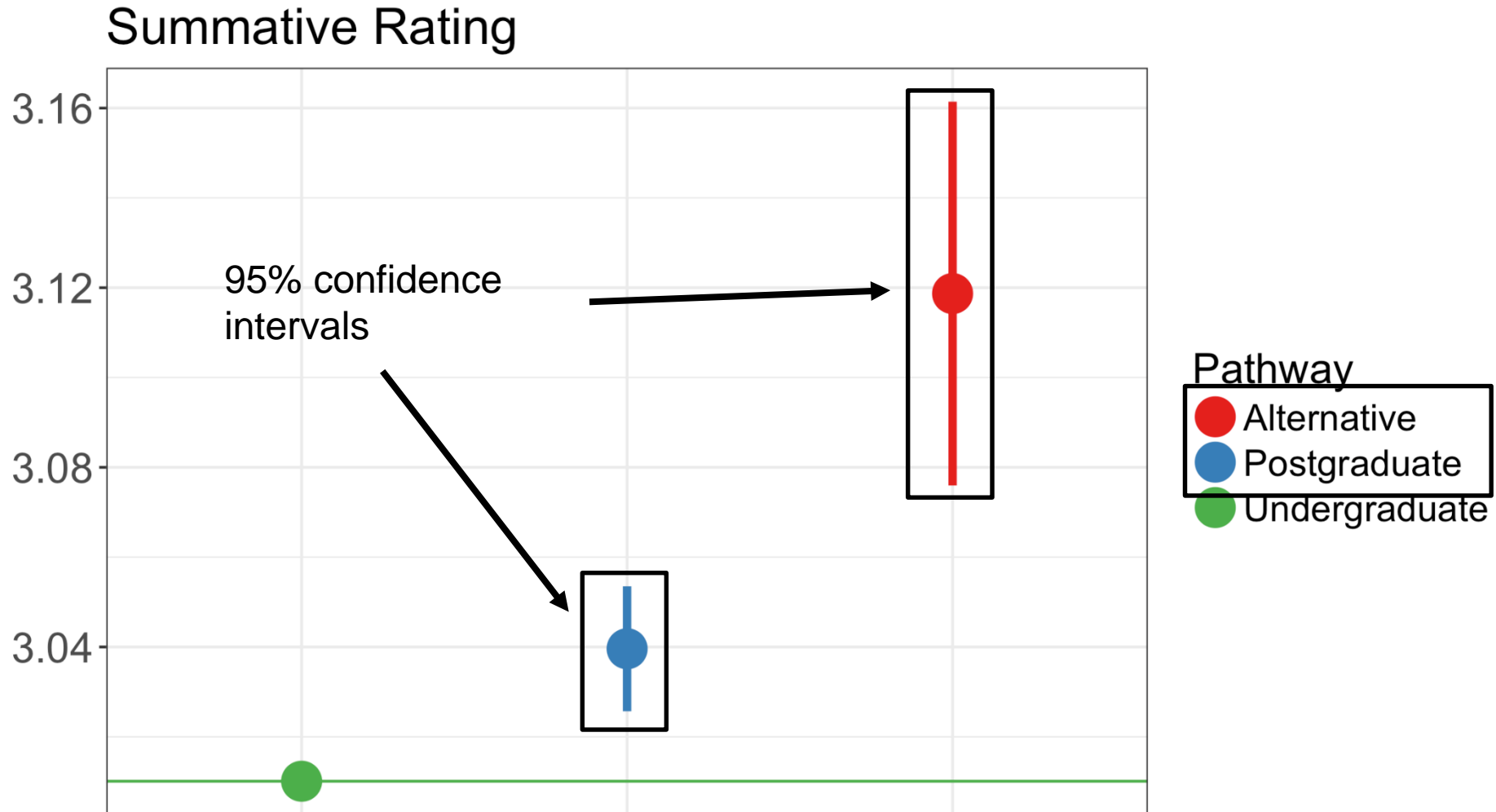
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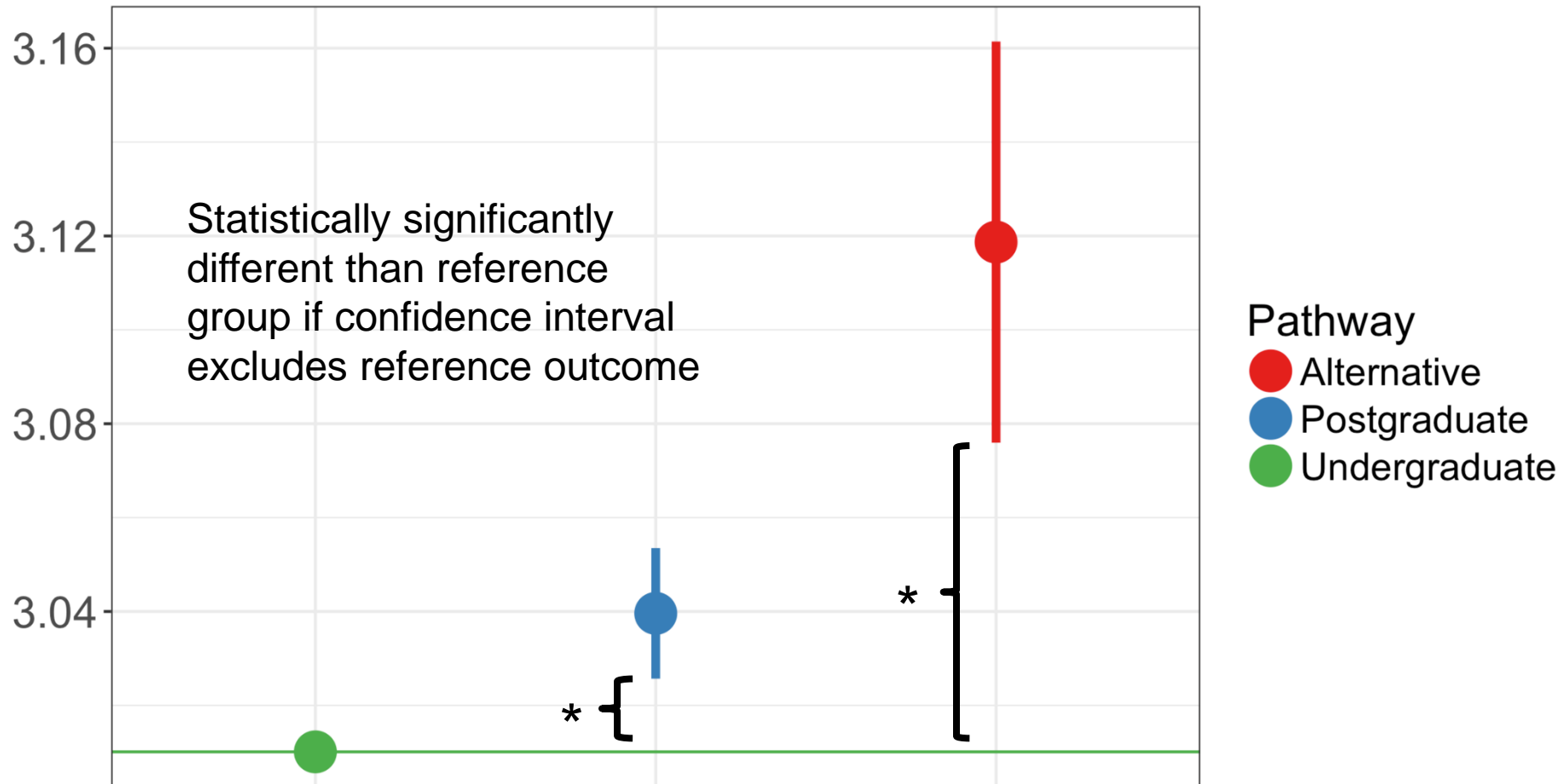


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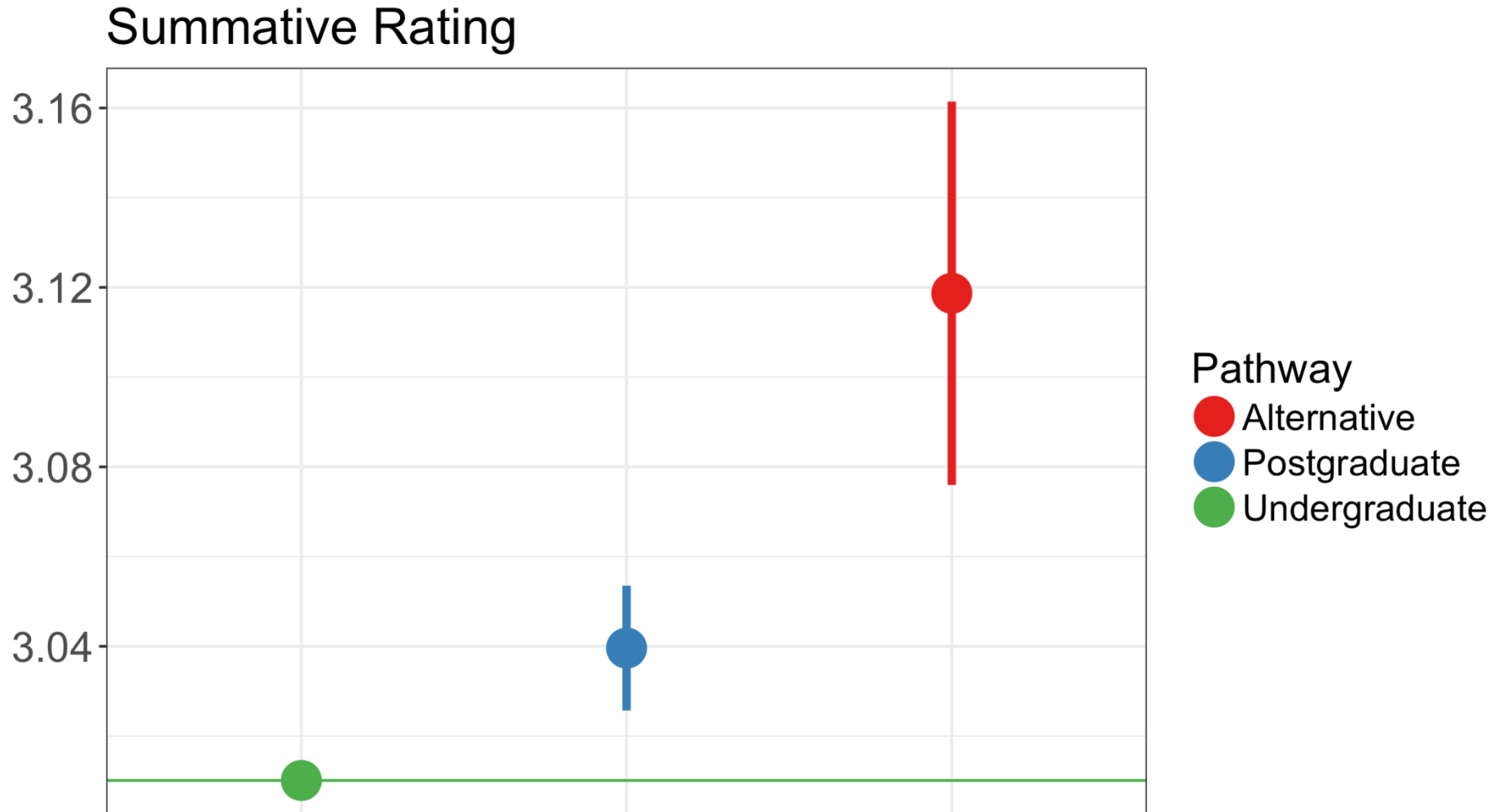


Performance ratings by program pathway

Summative Rating



Performance ratings by program pathway

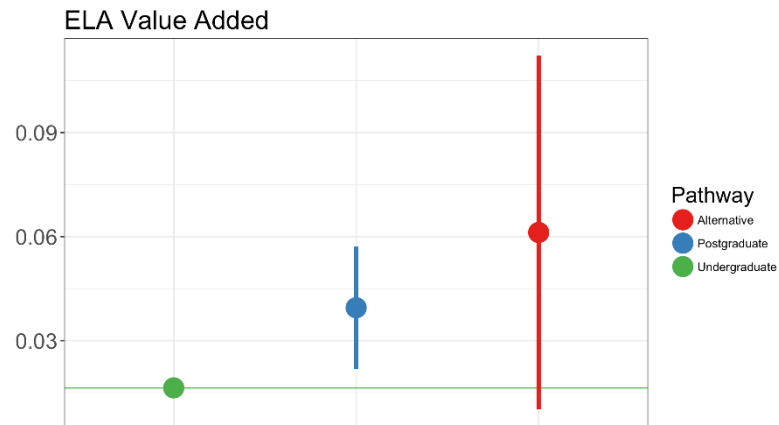


Context for program pathway estimates

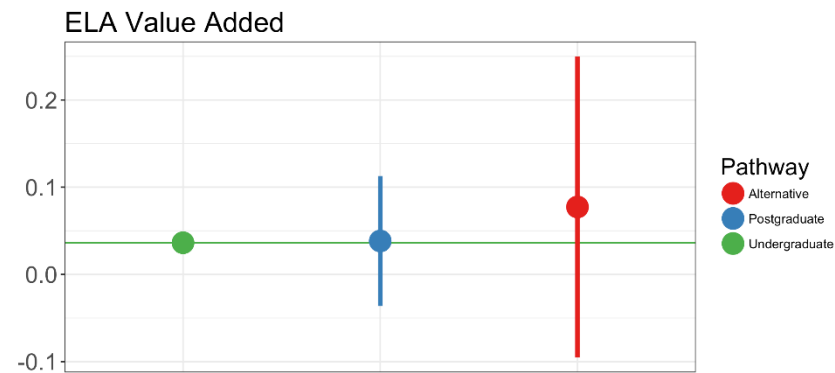
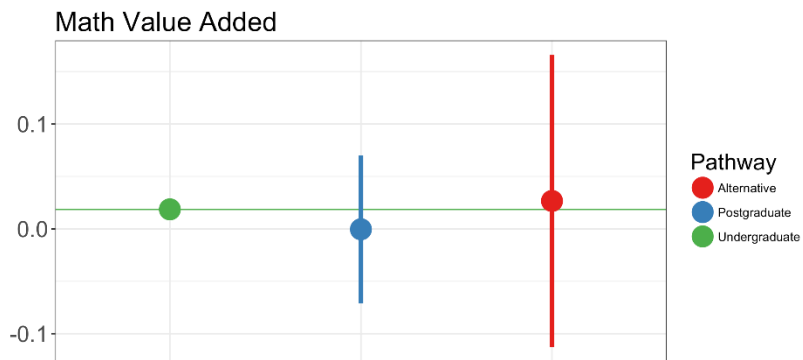
- **Summative performance ratings indicate differences across program pathways.**
 - Teachers from postgraduate programs earn ratings about 0.03 points higher than those from undergraduate programs, while teachers from alternative programs earn ratings about 0.11 points higher
 - Difference between undergraduate and postgraduate programs is nearly as large as that between a novice and second year teacher
 - Difference between undergraduate and alternative programs is similar to that between a novice teacher and a teacher with five years of experience

Teacher value added by program pathway

Baseline Models



Student Fixed Effects Models



Context for program pathway estimates

- Results from value added models do not provide consistent evidence that teacher effectiveness differs across program pathways
 - Some models indicate teachers from postgraduate programs are more effective than those from undergraduate programs, but these are not robust to most rigorous controls for student background

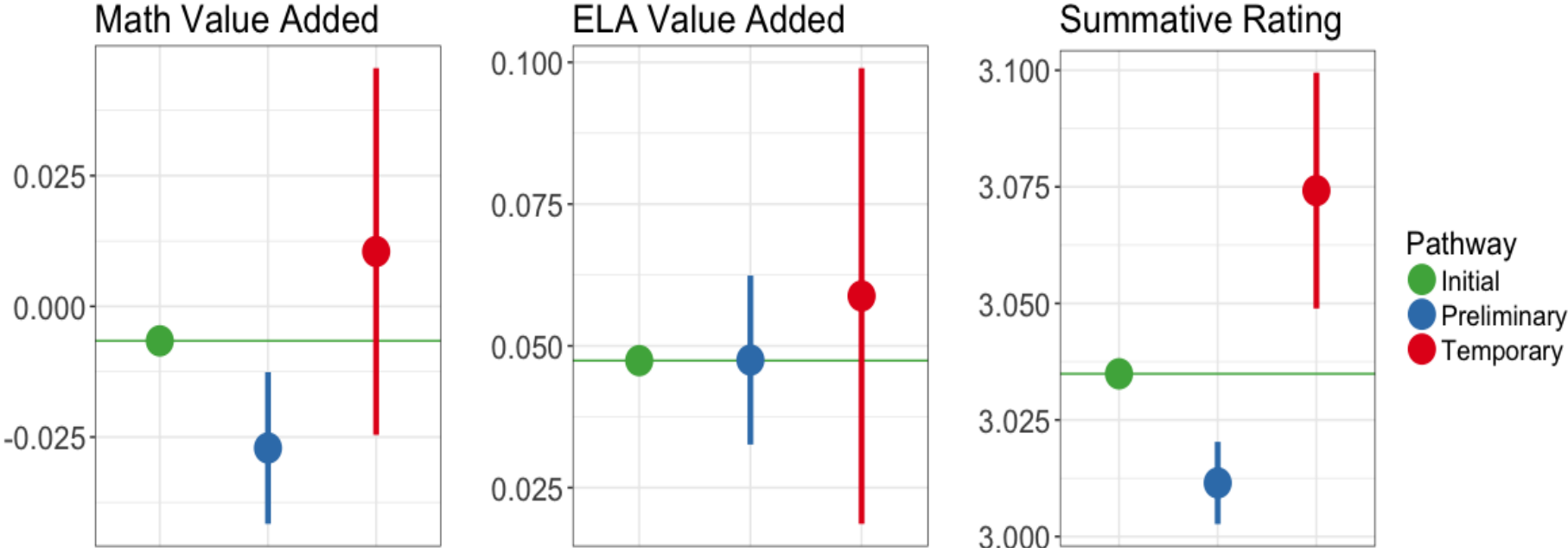
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Context for licensure pathway estimates

- **No clear differences in value-added by licensure pathway**
 - Teachers who enter with a preliminary license tend to have students with lower math achievement gains than teachers who enter with an initial license, although the difference is modest (less than one month of student learning in these grades)
 - We do not observe differences across licensure pathway in ELA value added
- **Differences in effectiveness are again more apparent in the summative ratings data**
 - Teachers with preliminary licenses tend to receive lower summative performance ratings, and teachers with temporary licenses receive higher ratings, than new teachers with initial licenses
 - The difference between teachers with preliminary and temporary licenses corresponds to about 0.06 points or the difference between a novice and third-year teacher.

Teacher effectiveness by licensure pathway



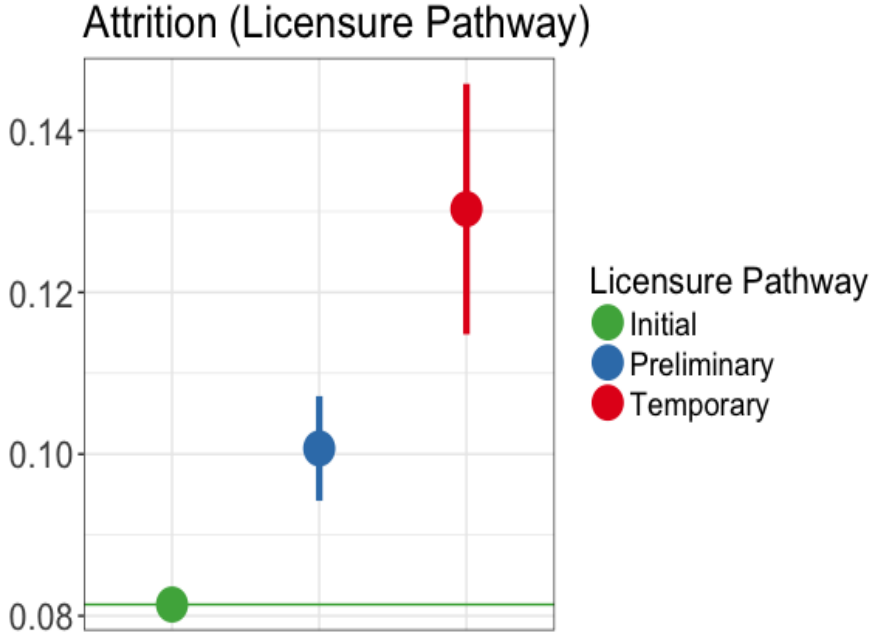
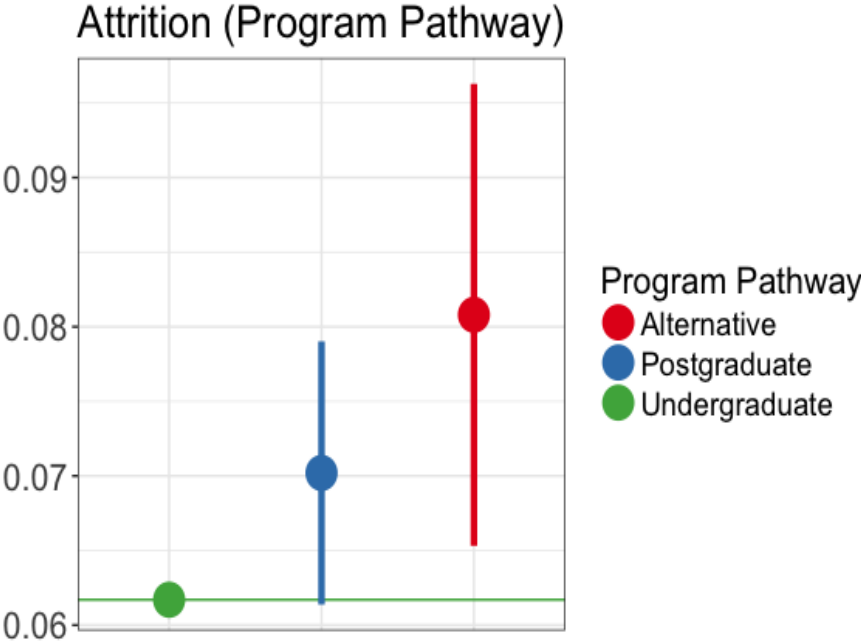
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Context for teacher attrition findings

- Among program pathways, teachers from undergraduate institutions have the lowest rates of attrition
 - The average early-career attrition rate for teachers completing in-state programs is about 6%
 - Teachers from alternative programs are about 2 percentage points – or about 33% – more likely to leave teaching in Massachusetts schools in a given year than teachers from undergraduate programs.
- Among licensure pathways, teachers from out of state leave Massachusetts schools at significantly higher rates
 - Teachers from outside of Massachusetts are nearly 60% more likely to exit than those entering with initial licenses

Teacher attrition by pathway



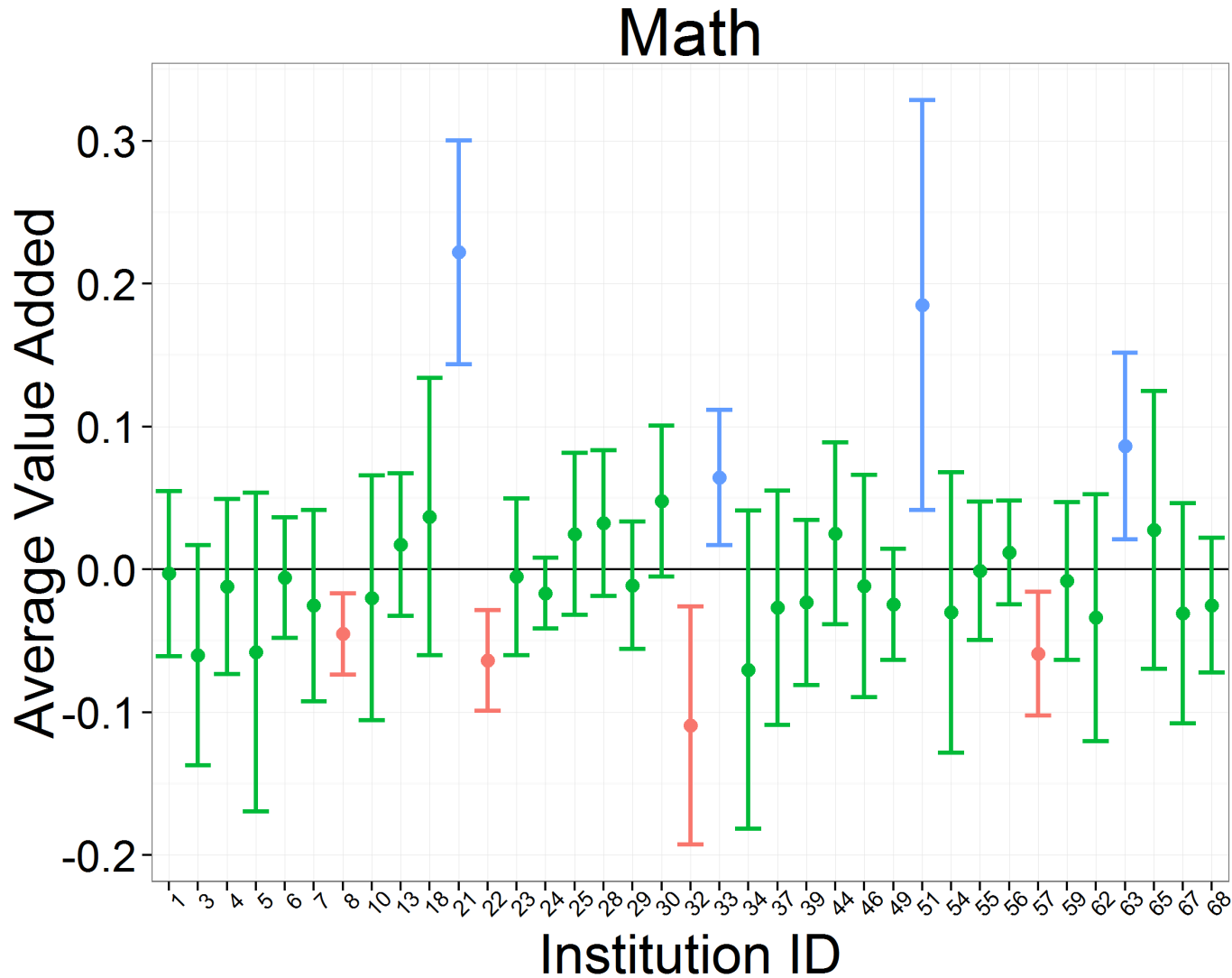
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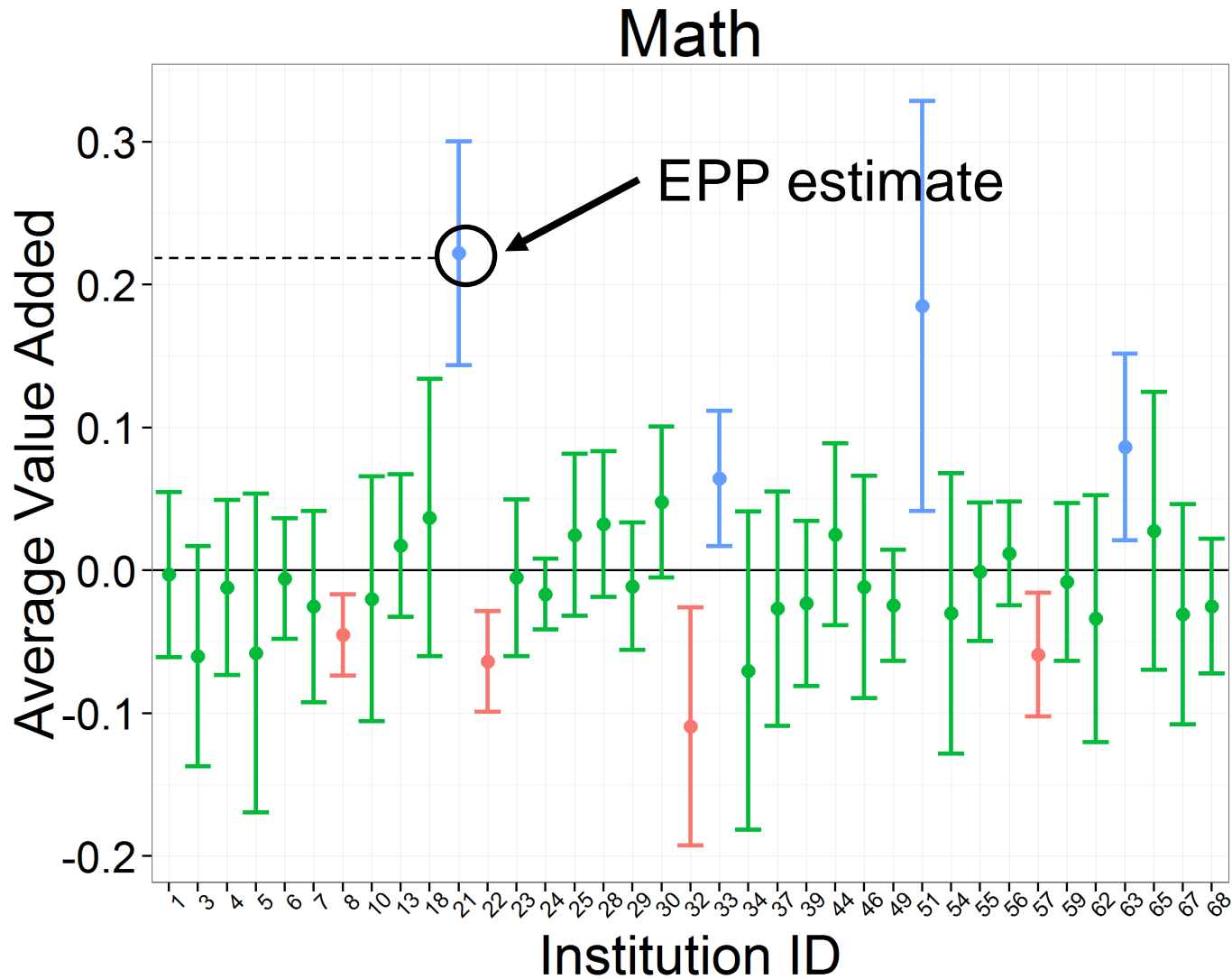
Variation in EPP outcomes

- We see educationally significant differences across providers
 - Relative to the state average, the highest value-added EPPs add 5 to 20 weeks of learning in math and 9 to 36 in ELA.
- EPPs and their individual programs combined explain about 10 to 25% of the variation in teacher value added and about 2% of the variation in summative performance ratings.
 - On the high end relative to other states
 - Similar to the variance in teacher value added explained by other measures that can be collected during the teacher recruitment process
- However, most individual EPPs are not statistically different from one another on value-added in ELA or mathematics.

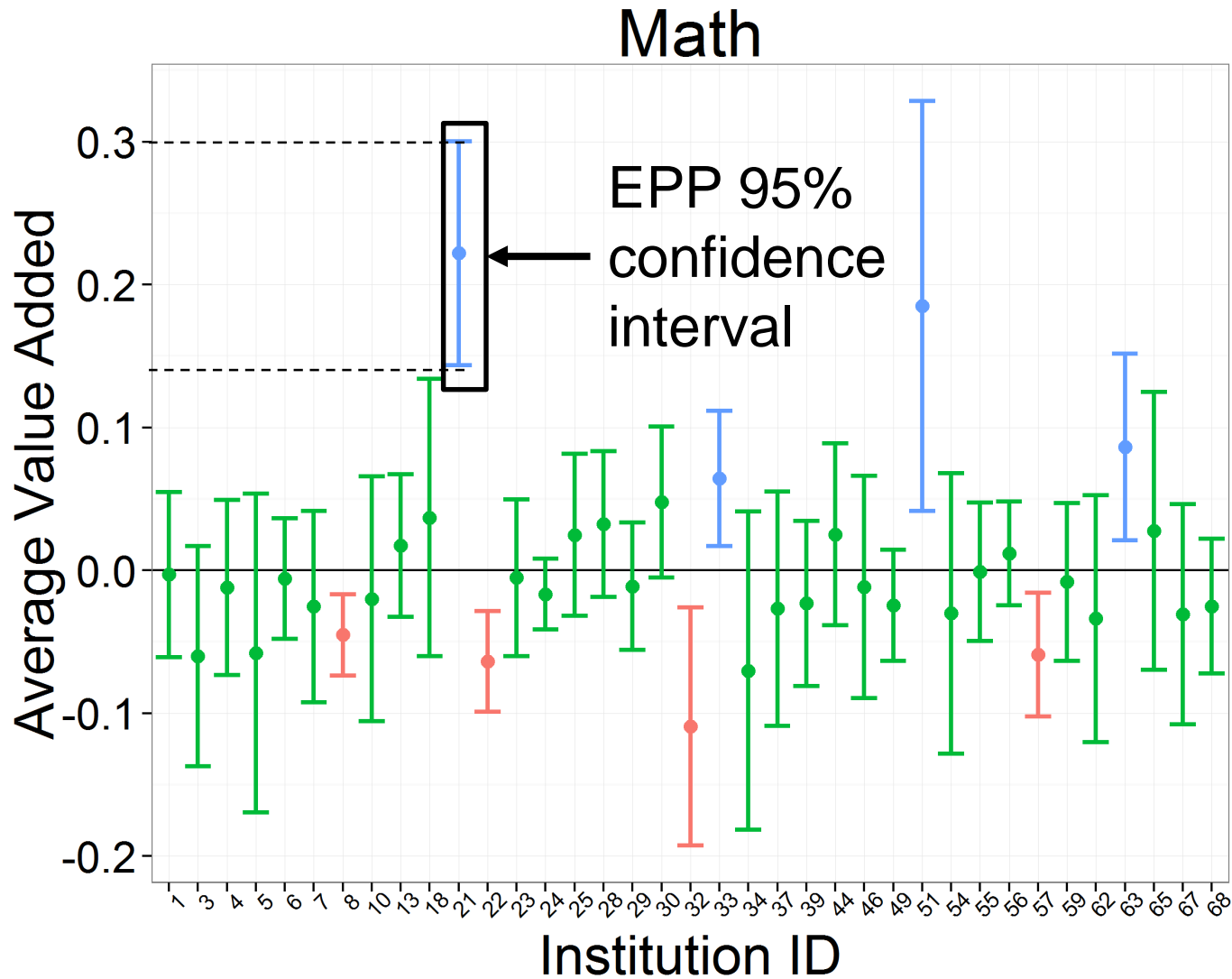
Example of average value added by EPP (math)



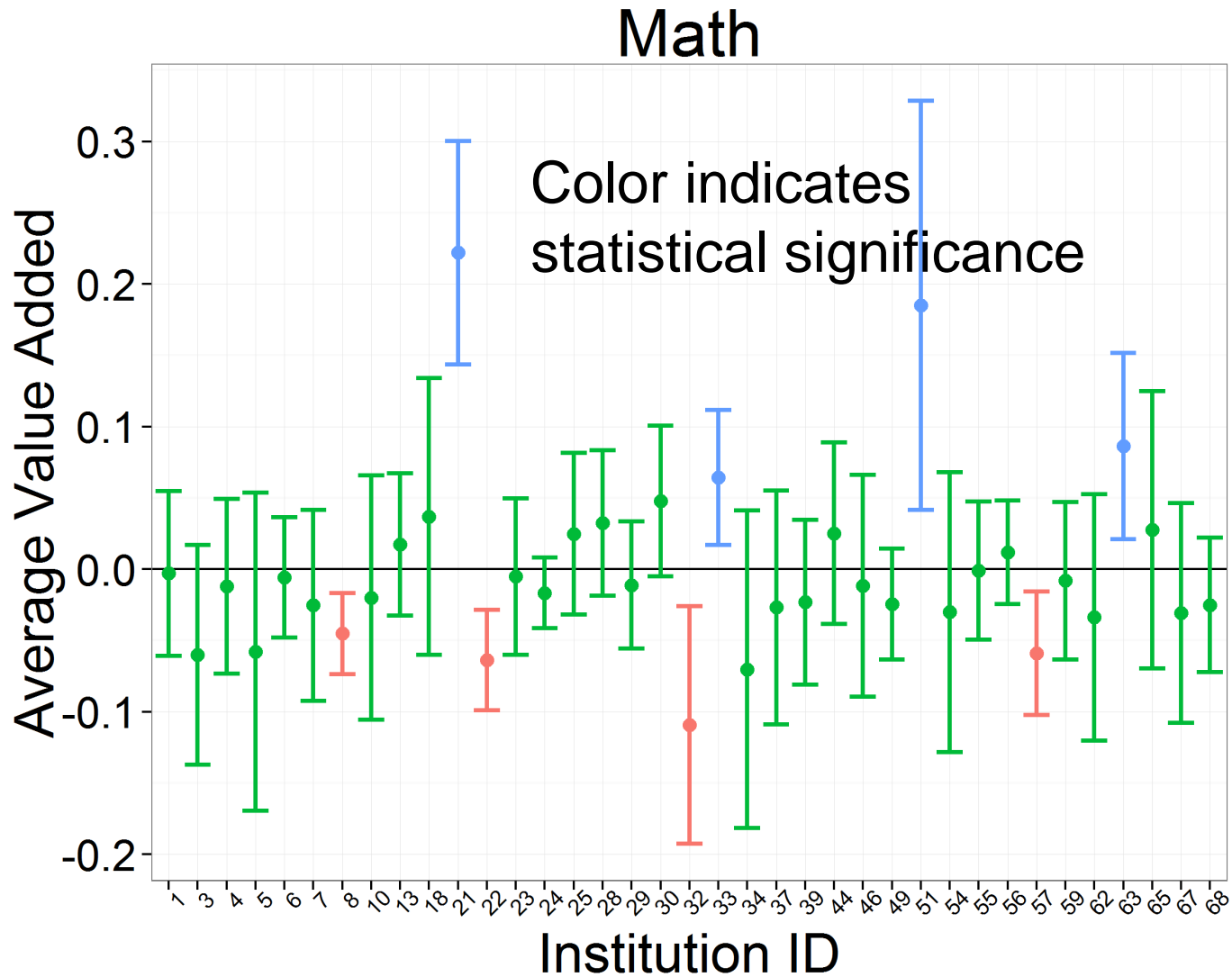
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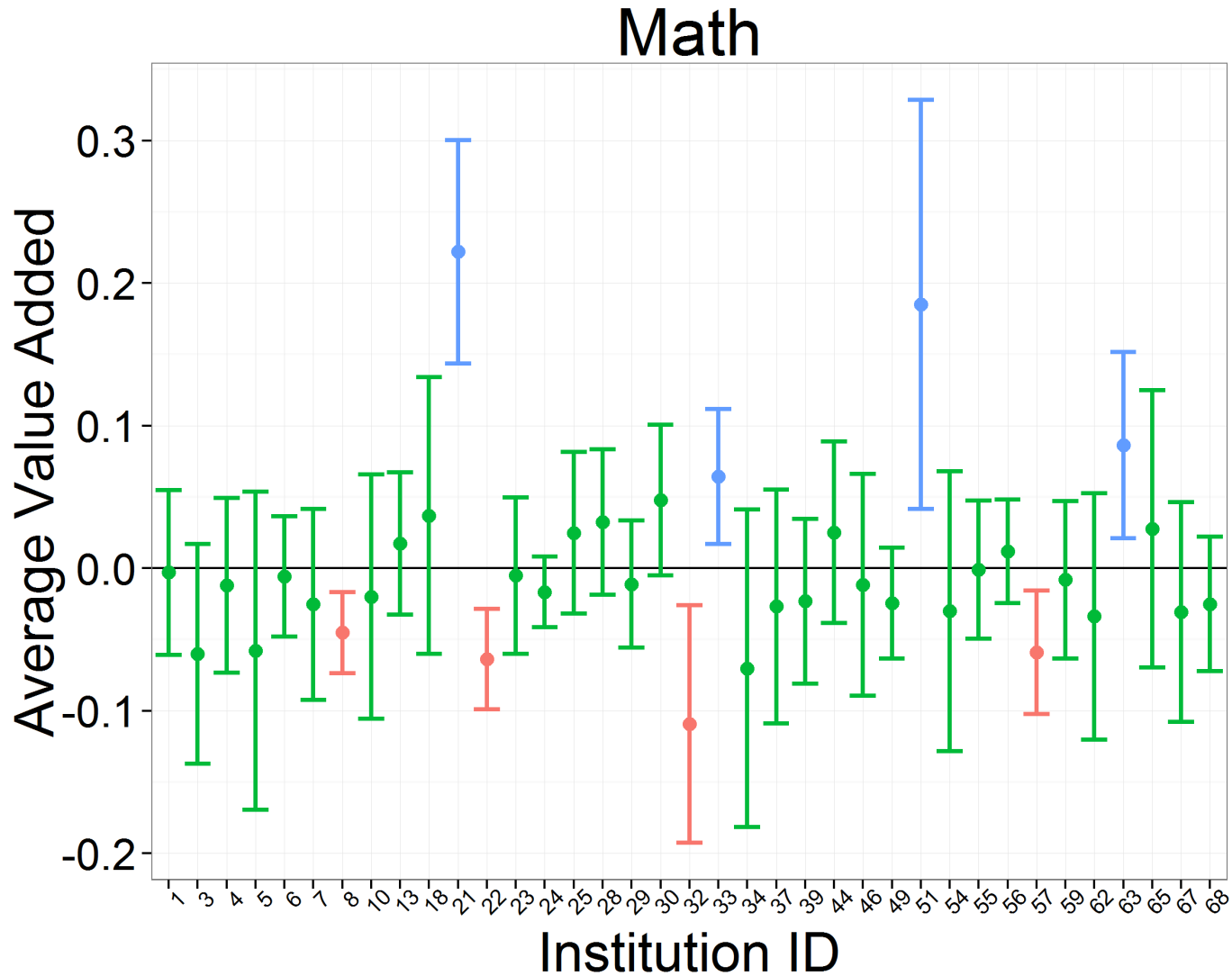
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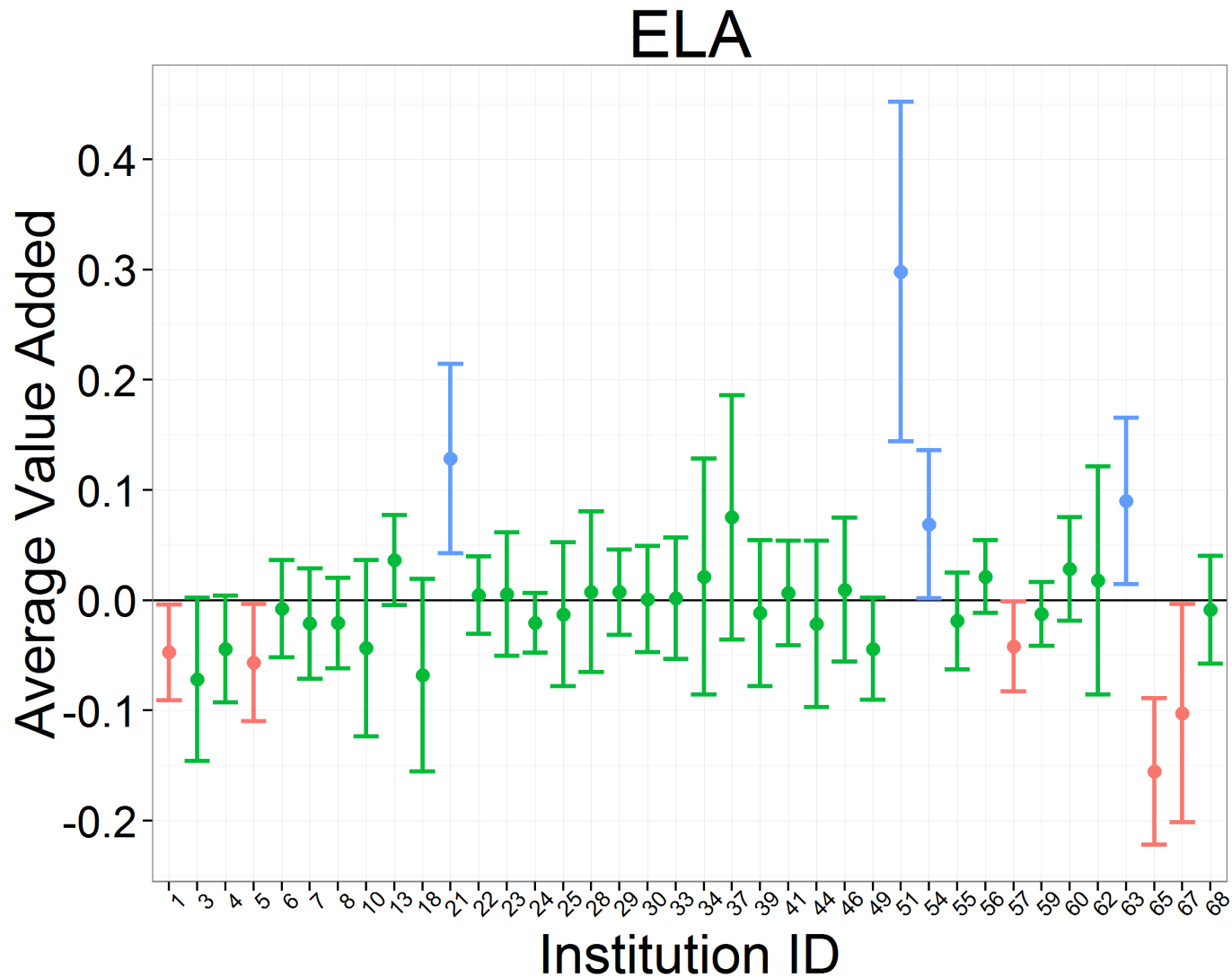
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Example of average value added by EPP (math)



Example of average value added by EPP (ELA)



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Program-level variation

- Differences in teacher effectiveness among programs within an institution are larger than the differences across EPPs
- Recruitment, preparation, or placement factors that differ among programs within an institution may be more consequential for teacher effectiveness than those that are fixed for all programs

Conclusion

Implications for ESE

- Maintain multiple measure approach
- Report and monitor program variation
- Consider the pathway

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