Findings from a Study of Multilingual Learner Reclassification and Science Achievement

Policy Brief

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Multilingual learners (MLs) – students who are learning English alongside another language – are a growing population in the United States. Many of these students receive formal English learner (EL) services at school. This policy brief highlights findings from a recently published study that examined the relationship between reclassification out of EL services and subsequent science achievement for ML students. Analysis of nationally representative data shows that MLs who are reclassified out of ML services continue to perform on par to similarly situated students who were not reclassified, suggesting that reclassification is neither harming nor promoting their subsequent science achievement. This suggests that educators' decisions around the timing of reclassification may be appropriate for most students, though the study finds some evidence that there are differential relationships depending on MLs' prior educational settings and achievement levels. The brief concludes with recommendations for educators, policymakers, and researchers interested in promoting successful trajectories of science learning for MLs.

Reclassification and Multilingual Learners' Science Achievement

According to the National Center for Education Statistics (2022), approximately 20% of students in US public schools speak a language other than English or are multilingual learners (MLs). About 5.1 million of these students are further identified for language supports services at school and referred to as English Learners (ELs). Sometimes recognized as emergent bilinguals, ELs refer to students who are in the process of learning English as an additional language and receive formal language services in schools.

1 in 5
public school students in the US come from multilingual households

Across states and districts, there are varying criteria that determine when and how ELs

transition away from receiving services—a process known as *reclassification*. This process may include criteria based on scores on language proficiency exams, as well as input from teachers and parents, and students' overall academic progress (Mavrogordato & White, 2017). After reclassification, students no longer receive mandated linguistic support, and teachers are expected to "treat them as native English speakers" (de Jong, 2004, p.5).

This policy brief summarizes findings from a recently published research study that examined how different mechanisms within the reclassification process can influence MLs' opportunities to learn (OTL) and their science test performance. Umansky (2016) explains how EL classification encompasses more than receiving or not receiving linguistic support. Students who retain their EL status may experience unique OTLs that include developing their home languages alongside English (Serafini, Rozell, & Winsler, 2022), participating in supportive learning environments (Lee & Buxton, 2013), and engaging with content with the aid of instructional scaffolds (Llosa et al., 2016). However, this same EL classification may also limit certain OTLs by constraining interactions with non-ELs (Gifford & Vald´es, 2006), isolating ELs within schools (Estrada et al., 2020), and fostering negative teacher perceptions of student capabilities (Thompson, 2015). To date, however, the effects of reclassification have not been examined in relation to science achievement.

The study, *Reclassification and Multilingual Learners' Science Achievement*, which was published in *TESOL Quarterly*, drew on the Early Childhood Longitudinal Study of 2010-11 (ECLS-K:2011), a nationally representative, panel data set that tracks approximately 18,000 students who were kindergartners in 2010-2011 through fifth grade (2015-2016). The study examined the relationship between reclassification and MLs' science achievement and how the variation in contextual factors such as family, school, and individual characteristics, shapes this relationship.

What Happens to MLs' Science Achievement After Reclassification?

Among students who begin school in the US in kindergarten, the vast majority of students receiving EL services in elementary school are identified in kindergarten or first grade, with about 10% of students receiving EL services in these grades. There is a consistent trend of smaller percentages of students being identified as ELs in upper elementary grades, with around two thirds of students experiencing reclassification out of services by fifth grade. By fifth grade, 4.8% of all

65%
of students receiving EL services experienced reclassification out of services by 5th grade

students who began school in the US as kindergartners remain classified as an EL. The highest percentage of students are reclassified out of services between third and fourth grade, with 23.1% of the students receiving EL services being reclassified out of EL services in that year.

Theoretically, such reclassification could impact students in different ways. If reclassified ELs' scores increase after reclassification relative to what would have happened if they continued receiving EL services, it could imply that students remained classified beyond the point of

usefulness. Conversely, a decrease in scores might suggest that students could have benefited from ongoing linguistic, academic, and social support within an English learner program.

Reclassification was not significantly related to science achievement once accounting for prior differences in the groups.

The primary findings of the study indicated that reclassification was not significantly related to science achievement once accounting for observable differences in those reclassified and those not, such as their prior test score performance. Though reclassified students tended to have higher science test scores than those not reclassified, this variation in subsequent test performance between those who were reclassified and those who were not can be attributed to differences in MLs' prior academic achievement. This difference can be attributed to the fact that reclassified students are typically identified for reclassification because of their stronger academic performance. Overall, the study found that reclassification neither positively nor negatively related to students' science performance, suggesting that English learners transitioned from receiving services at an appropriate time.

Though the study found that reclassification was not significantly related to science achievement after controlling for prior factors, there was some evidence that the lack of a relationship could vary based on students' prior performance and academic setting. In particular, students who had lower prior test scores and those who were in a two-language program model tended to experience more positive relationships between reclassification and subsequent science achievement. Such variation in science achievement outcomes among subgroups of MLs necessitates attention to the unique characteristics and settings of those experiencing reclassification.

Implications and Policy Recommendations

Reclassification from EL services in elementary school appears to be occurring at an appropriate time for most ML students. On average, reclassification out of EL services does not appear to disrupt their academic trajectory in science. Yet, the findings of the study suggest nuance in this relationship between reclassification and science learning, with certain subgroups and students moving out of certain classroom settings experiencing differential relationships. The results suggest continuing to provide support mechanisms and considerations for the range of ML subgroups is important both before and after reclassification. While further research will continue to explore the reclassification process, the recommendations below draw on best practices for optimizing the reclassification process and enhancing academic achievement among all MLs in science education.

Implications for Policymakers

- **Monitoring of Reclassification Criteria:** Periodic reevaluation of reclassification standards and how they account for diverse ML subgroups' academic needs can help ensure fair and comprehensive evaluation protocols.
- **Resource Allocation:** School districts may consider allocating resources to support MLs post-reclassification through tailored interventions that sustain academic progress

across varied subgroups. This could include targeted professional development that prepares all teachers—and not just language specialists—to support ML learning in content classrooms.
- **Supporting Scientific Language:** To ensure broad access to science and engineering practices, it is imperative that educational policies and practices prioritize making the complex and often unfamiliar language used in these practices accessible to all students, irrespective of their ML status. This approach will facilitate active participation in scientific inquiry, problem-solving, and explanation construction both before and after reclassification.

Implications for Educators

- **Targeted Support:** Educators may consider implementing targeted interventions post-reclassification, considering the nuanced needs of different ML groups to sustain and enhance academic gains in science education.
- **Collaborative Approach:** Practitioners may engage in collaborative efforts with linguistics specialists and content area teachers to develop interdisciplinary support strategies.
- **Professional Development:** Professional development initiatives for teachers can focus on effective strategies for teaching science to ELs and reclassified ELs. These strategies should aim to bridge gaps between EL students and their non-EL peers.
- **Continued Support:** Reclassified ELs continue to benefit from using their first language within instruction. This suggests the importance of continuing support for linguistic and academic development, even after reclassification.

Full Study

The full study highlighted in this policy brief can be referenced and found at:

Pacheco, M. B., Curran, F. C., Boza, L., Deig, A. W., Harris, K. T., & Tan, T. S. (2023). Reclassification and Multilingual Learners' Science Achievement. *TESOL Quarterly*.

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