Peter Courtney: Research Statement
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I am a development economist working on education and economic history in South Africa. My research asks how school systems can raise learning under constrained budgets. Evidence on whole school systems often rests on proxies for learning: enrolment, grade progression, teachers per student. I start by measuring that which we wish to improve, learning. My job market paper, "Making School-Set Assessments Comparable: How School Assessments Hide Learning Inequality", puts schools' own assessments on a common scale, using records the state already keeps. Two further papers exploit this new scale of learning to understand why resources do not reach the classroom and improve learning. I came to economics through a degree in Philosophy, Politics and Economics, and Rawls's maximin, making the worst-off as well off as possible, still directs much of my research, such as how to raise learning in the poorest schools.

Measuring learning

Assessments improve learning system-wide where results are comparable (Bergbauer, Hanushek and Woessmann 2024), yet at most a quarter of countries test every primary student on a common instrument (Gustafsson 2019). Elsewhere, 60% at one school may mean far more learning than 60% at another.

Without fielding a new test, I place primary schools' grades on a common scale by following 1.2 million South African students from primary to secondary school. To illustrate: two students at different primary schools receive different grades. Soon after arriving at the same secondary school, they sit identical assessments and receive the same results, revealing, in expectation, the same latent learning. To have earned a higher grade, the student must have faced easier assessments in primary school (an assumption I test). Chained across the network of transitions, these within-learner comparisons put almost every primary school on a common scale. To my knowledge, this is the first paper to use a two-way fixed-effects design to make school-set assessments comparable where neither stage has a common test or a shared grader.

On raw grades, the learning gap between rich and poor schools halved between 2018 and 2022, from 0.48 to 0.23 SD in mathematics. On the common scale, it did not narrow: 0.72 SD in 2018, 0.77 in 2022. By 2022 raw grades showed only about a third of the gap, because the richest schools set the hardest assessments. The method works wherever students from many schools move into shared ones. It also gives each secondary school a comparable measure of its intake, so I can estimate descriptive value added for 1,135 schools.

Why inequality persists

"Invisible Borders, Living Institutions: How Apartheid's Bantustans Still Shape Schooling" asks whether the former KwaZulu Bantustan border, abolished in 1994, still disadvantages children, and why. Part of any gap at an old border is sorting: who moves in and who moves out. I use a within-child difference-in-differences among children moving schools within 30 km of the border. To my knowledge, this is the first movers design to separate sorting from place at a historical border.

Sorting explains one-half to two-thirds of the gap in grade repetition. The rest is place: crossing into the former Bantustan raises a child's risk of repeating a grade by about 10%, and crossing out lowers it by about 13%. Across 21 birth cohorts, the border gap has not narrowed. The teacher payroll points to a reason. All teachers are on one national pay scale, yet schools inside the border pay 9.2% less

per teacher, because theirs are more junior. The common scale now lets me ask the same question of learning.

What a teacher post buys

The homelands work also showed me how unevenly the state deploys its teachers, the largest item in any education budget. The state allocates teachers by formula and monitors staffing by the pupil–teacher ratio, 32.8 on average, rather than by class size. "Provision Not Deployment: What a Teacher Post Buys in South African Schools" uses a novel reconstruction of school timetables from national records and finds that the average student sits in a class of 43.3. The gap between the pupil–teacher ratio and class size is widest in the poorest schools, probably exists in most school systems, and has barely been measured.

Because provinces allocate posts on last year's enrolment, I can causally show that only about half of a newly provisioned teacher reduces class size; the rest is absorbed into free periods. With the teachers they already have, schools could cut the average student's class by up to a fifth. Free periods might still help teaching, but testing that needed a comparable measure of learning. None existed, so I began one in an appendix; it became my job market paper. Where schools absorb the most teacher time, I cannot detect a return in learning.

Research and policy

I collaborate closely with both provincial and national governments, ensuring I am sensitive to not only the supply of policy advice, but also the demand. I advise the Western Cape Education Department on reading-assessment data as testing scales to about 200,000 students, and I work on Gates Foundation projects in Kenya and West Africa.

I additionally have a Nuffield Foundation grant application with Frank DiTraglia in the Oxford Economics Department to work on housing and tax issues in the UK, another deep interest of mine. In Cape Town, I am building a machine-learning valuation of more than 800,000 land parcels for a land value tax, funded by the Lincoln Institute of Land Policy and Emergent Ventures.

Next projects

In 2027 I will submit the three thesis papers to journals. My first new project follows learning into the labour market. South Africa's National Treasury, Revenue Service and UNU-WIDER have linked school-leaving examination results to tax records. South Africa has experienced strong learning improvements on international tests without growth or employment gains. I will investigate why.

The second project asks how to identify brilliant students and ensure they do not go to secondary schools with low value added. The common scale can both identify them and show which schools appear to add the most. I will test one remedy, targeted transport and support to get them to the high value-added schools. The Gates Foundation and Western Cape policymakers have shown interest in a randomised trial of this programme.