



Failing to catch up in reading in the middle years: The findings of the impact evaluation of the Reading Catch-Up Programme in South Africa



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ABSTRACT

In many developing countries, children are far behind the grade-specific curriculum. This article reports on an impact evaluation of one promising initiative, the Reading Catch-Up Programme, which was designed for a subset of South African schoolchildren, who are known to be behind the grade-specific English (second language) curriculum in the middle years. Overall, despite the promising findings of a preliminary non-experimental evaluation, the cluster randomised control trial study found no substantial or educationally meaningful programme impact. However, the study has identified two important secondary findings. First, for those schoolchildren with a stronger initial English proficiency, there was a moderate positive impact. This is despite the fact that the programme substituted the grade-level curriculum with remedial concepts that should have been covered in earlier grades. This suggests that the schoolchildren in the study may have been even further behind than was anticipated. A further finding from the impact evaluation relates to the effectiveness of instructional coaching as a component of the combined intervention model. The study found that the effectiveness of one-on-one instructional coaching may be dependent on the personal and professional characteristics of individual coaches. This finding complements existing research on the importance of the quality of the institutions implementing programmes.

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1. Introduction

Over the past decade there has been growing recognition that a substantial proportion of schoolchildren in low-income countries struggles to read and do basic mathematics. In India, for example, the 2014 ASER report suggests that half of the Standard V learners surveyed were reading at or below a Standard II level, and about one in five children were reading at a pre- or partial alphabetic level (ASER, 2014). Schoolchildren that are academically behind by the middle years of schooling are likely to fall further and further behind their counterparts as they progress up the school system. The high proportion of schoolchildren that are falling behind suggests that this is not just a problem of a small subset of children with specific organic or developmental barriers to learning, but is a challenge for the system as a whole. The widespread learning

backlogs are systemic, affecting most students in the majority of schools in many poorly performing education systems.

How can education ministries and departments address these systemic learning backlogs? Although the achievement gap often starts in preschool and the early grades, the scale of the problem is only identified in the middle years, when the learner performance of education systems is benchmarked against that of other countries. And while there are a growing number of programmes designed to address early-grade reading and mathematics instruction, there are fewer programmes that have been developed specifically to address the systemic problem in the middle years of compulsory education. One exception is a system-wide initiative developed by the provincial government in the Gauteng province of South Africa. An eleven-week system-wide remedial programme targeted at Grade 4–6 students in over 1000 schools (about 70% of all public schools) aimed to *reteach* reading and writing in English as a second language. An interval evaluation of this system-wide initiative (Hellman, 2012) suggested that it was highly effective in helping the majority of underachieving Grade 4–6 students improve their basic English-literacy proficiency.

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Although these results were clearly encouraging, the design of the evaluation was not rigorous. The internal evaluation was undertaken by the service provider that had designed the intervention, the pretests and the posttests were administered by the teachers involved in the initiative, and the study contained no counterfactual.¹

Given the need for evidence of cost-effective system-wide catch-up or remedial programmes, particularly in low-income countries with uneven levels of academic performance, the research team decided to retest the impact of the Reading Catch-Up Programme (RCUP), using a cluster randomised control trial design. Although positive evidence generated from small-scale studies (such as Pretorius, 2014) has contributed to the knowledge base on effective interventions, the design features of many of these types of studies have limited the generalisability of the findings of the studies. Cluster randomised control trials, by design, have the advantage of strong internal validity, and they are able to provide robust estimates of effect sizes.

Against this backdrop, this article describes the background, context, design, and findings of the Reading Catch-Up Programme. We do this in six sections. Following this brief introduction, which situates the study in an international context, the second section provides a detailed description of the research method, with an explanation of the intervention, the cluster randomised control trial (RCT) methodology, the rationale for the selection of the study site, and the data-collection processes. This is followed by a presentation of the major findings of the study, which draw on baseline and endline testing, as well as an analysis of the 2014 Annual National Assessments for the treatment and the control school groups. We also present disaggregated findings, which point to the differential effect of the intervention, and what we have come to call a “coach effect”. The article concludes by contextualising these findings within the growing body of knowledge about early-grade reading and system-wide change.

The primary aim of the study was to address the question about the relative effectiveness of the Reading Catch-Up Programme and the model that it represents, but it also included sub-questions that allowed the researchers to understand more nuanced aspects of the programme.

The main research question in the pre-analysis plan was:

1. *Does the RCUP have a positive average impact on Grade 4 learners' endline evaluation scores (literacy test)? Was this positive average impact consistent across all subtasks of the literacy test?*

The sub-questions included:

1. *Are students, teachers and schools with varying characteristics likely to experience differences in the magnitude of impact of the RCUP on learning outcomes?*
2. *Will the effect of treatment differ depending on the individual doing the coaching?*²

¹ Counterfactual is a central concept in the evaluation of the impact of any intervention. The counterfactual is a group within the study that is equivalent in all respects to the group that receives the intervention. The equivalence is established through a random selection and then measuring the intervention and control groups on measurable variable to ensure that they are in fact equivalent. The purpose of having a counterfactual group in experimental research is to know what would have happened to beneficiaries in the absence of the intervention. The impact is estimated by comparing counterfactual group outcomes to those observed with the intervention group.

² For a full list and exposition of the research questions go to the pre-analysis plan on the RCT registry of the American Economic Association (<https://www.socialscisearch.org/trials/405>).

2. Literature review

What does the literature tell us about effective remediation programmes that close the literacy achievement gap in the middle years of schooling across education systems? While there is limited literature that specifically uses the term “catch-up programme” or “catch-up intervention”, there is a small but growing body of literature that addresses interventions for “students who struggle academically” (this phrase is taken from Richards-Tutor et al., 2015). And while the empirical literature remains largely based on studies undertaken in the Global North, particularly in North America and the United Kingdom, there are a handful of studies in lower-middle-income and low-income countries that provide an important base on which to build policy and programme insights.

Torgesen (1998) identified four critical elements to be considered in evaluating the effect of system-wide remediation programmes, namely (a) the appropriateness and the quality of the instruction provided, (b) the intensity and the duration of the programme, (c) the fit in terms of the needs of the students, and (d) the timing of the intervention. With regard to the first element, he argues that all programmes, irrespective of whether the programme is intended for students that are achieving in line with curriculum expectations or whether it is for students that are struggling academically, should meet the criterion of being “structured, systematic and explicit”. In addition, he argues that all programmes, particularly “preventative” or “remediation” programmes, should incorporate phonemic awareness, letter-sound correspondence, blending skills, pronunciation conventions, strategies for multisyllabic words, and automatic recognition of high-frequency “irregular” words, all within a structure that encourages meaning-making in reading and writing. On the intensity and the duration of the programmes, Torgesen argues that these programmes would generally require substantially higher levels of intensity than conventional classroom instruction, as expressed in smaller classes or one-on-one instruction. On the third element, he argues that it is essential to ensure that the programmes match the particular needs of the students served. Without an adequate understanding of the specific weaknesses (and strengths) that the students experience, it is likely that inappropriate programmes will be selected. Finally, Torgesen noted the importance of identifying the most effective grades or phases in which to begin interventions.

To understand the findings of the empirical literature, it is useful to begin with a summary of the findings of recent systematic reviews. In a review of studies on the effectiveness of remedial programmes for English-language learners, Cheung and Slavin (2012) found that programmes that showed consistently positive results had in common the use of extensive professional development, coaching, and cooperative learning. More recently, Richards-Tutor et al. (2015) undertook another research synthesis of intervention programmes for English learners of English (i.e. second-language speakers) that are effective in improving reading performance. They found 12 peer-reviewed studies on remedial programmes for “at-risk” learners, or learners of English. Seven of these studies found moderate to large effect sizes for early-grade interventions. Five studies showed similar effect size gains in comprehension only. In addition to effect sizes, the Richards-Tutor et al. (2015) review also explored issues related to intervention intensity, group sizes, duration, personnel, and quality. Siddiqui et al. (2015) recently evaluated the effectiveness of two particular programmes designed to remediate literacy levels of underachieving students. In an evaluation of the “Switch-on Reading” programme, Gorard et al. (2014) found that a ten-week literacy intervention for Level 4 students had an effect size of +0.24. Siddiqui et al.'s (2015) evaluation of the twenty-week “Accelerated

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