

NEPAL

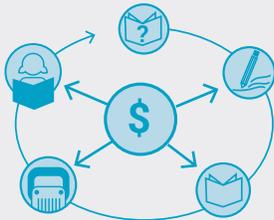
# Can Incentives Drive Publishers to Produce Quality Reading Materials and Schools to Buy and Use Them?

FEBRUARY 2022

The REACH Trust Fund supported a study to evaluate how the use of incentives impacted the production, procurement, and utilization of supplementary reading materials in lower primary grades in Nepal.



Solely distributing books does not necessarily mean that they are being used, or are provided in the language needed.



RBF incentives provided along the book chain process keep book production ample, appropriate, and accessible.



Photo courtesy of World Vision

*The Results in Education for All Children (REACH) Trust Fund supports and disseminates research on the impact of results-based financing on learning outcomes. The EVIDENCE series highlights REACH grants around the world to provide empirical evidence and operational lessons helpful in the design and implementation of successful performance-based programs.*

Books are one of the most important tools for student learning. Evidence from a wide range of countries demonstrates that to improve literacy and learning outcomes, students must have access to, and regularly use, quality learning materials. Unfortunately, many education systems struggle to provide quality books in adequate quantities to schools because of inflated costs, inefficiencies in the supply chain, or a lack of published content in the appropriate language. Even when schools have access to books, they

are not always used properly or regularly in the classroom.

Results-based financing (RBF) can help governments overcome these obstacles and ensure that all students have access to quality books in an appropriate language. Such incentives, which link rewards to the achievement of specific targets, can motivate stakeholders at all stages of the supply chain—from book development and production to procurement and distribution—to improve their performance. Incentives can also be used to

encourage the utilization of books in schools and at home.

The REACH Trust Fund partnered with World Vision International to create a digital, one-stop marketplace to facilitate the publishing and procurement of books. The project provided financial incentives to publishers to encourage them to produce supplementary reading materials (SRM) for lower primary students and to deliver orders on time. It provided nonfinancial incentives to schools to encourage them to buy these reading materials through the digital marketplace and to use them in the classroom.

#### WHAT ARE SUPPLEMENTARY READING MATERIALS?

Supplementary reading materials are books or other reading materials that complement the core textbooks for a curriculum with additional information, alternative learning approaches, alternative languages, or knowledge of relevant subjects not directly covered by the school curriculum. Teachers can use these reading materials for supplementary instruction and students can use them in structured or unstructured study. Evidence from a range of countries suggests that supplementary reading materials can significantly increase learning compared to reliance on core textbooks alone. But in low-income countries, such materials are rarely supplied to schools in adequate quantities.



## CONTEXT

Nepal, a lower-middle income country in South Asia, has achieved near-universal access to education<sup>1</sup> but its 20,000-plus primary schools struggle to provide effective learning to students. A 2018 assessment<sup>2</sup> found that 60 percent of Grade 2 students could not read a single word of a short text in the Nepali language. Children who start school at age four in Nepal can expect to complete 12.3 years of school by their 18th birthday. Adjusting for what they actually learn during that time, however, their true expected years of schooling is only 7.2 years.<sup>3</sup>

One potential driver of Nepal's poor learning outcomes is the country's shortage of textbooks and supplementary reading materials.

According to the government's standards for primary schools, known as the Prioritized Minimum Enabling Conditions (PMEC), schools are required to have a "book corner" that is stocked with high-quality, appropriate textbooks and supplementary reading materials which are available for teachers and students to use. In actuality, very few schools have their own book corner. In the Morang and Sunsari districts in Southern Nepal's Terai region where the REACH-funded activity took place, only 15 percent of public primary schools had a book corner, and none of the books included in these corners were peer-reviewed educational materials.<sup>4</sup>

The intervention decided to explore whether results-based financing, in the form of both financial and nonfinancial incentives, could

change the behavior of publishers and their end-customers (schools). The ultimate goal was to strengthen Nepal's book supply chain and get quality books written in appropriate languages to children for use as supplementary reading material in the classroom.

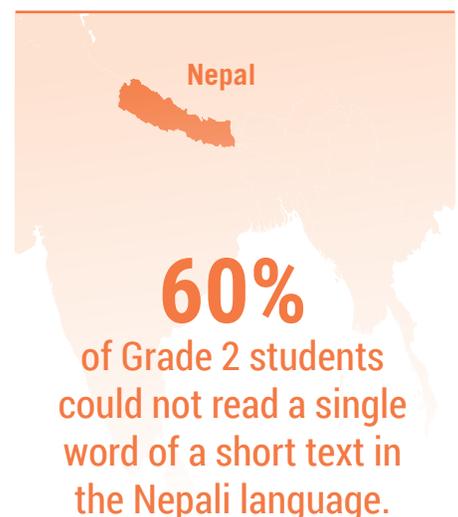




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## WHY WAS THIS INTERVENTION CHOSEN?

The shortage of books in Nepal's schools reflects problems in the book supply chain. Publishers generally prioritize private schools in the provision of supplementary reading materials given that most private schools are based in urban areas that have easier procurement processes and a larger guarantee of payment. In addition, few publishers operate outlets outside of the capital city Kathmandu. As a result, public schools in other parts of the country traditionally have had no reliable, centralized location where they can procure suitable books, instead making do with whatever materials they can find at local shops. Lack of funds is another issue. Although schools receive some funding for books as part of their annual grant from the

government,<sup>5</sup> most report that the amount is inadequate for purchasing the number of books they need. The intervention sought to address these challenges by establishing an online marketplace to serve as a convenient, single location to review and order books. The project offered incentives to both publishers and schools to use the marketplace, with the goal of improving both the supply of quality books and the process for purchasing them. In particular, the researchers set out to compare the effectiveness and sustainability of this approach with an alternative approach taken by the National Early Grade Reading Programme (NEGRP), supported by the U.S. Agency for International Development (USAID). The USAID program provided free books to

schools in 38 districts across Nepal and worked with teachers, parents, and the community to support early grade reading. More generally, the researchers set out to contribute to the global evidence base on the use of incentives to increase children's access to quality supplementary reading materials.

**Public schools traditionally have had no reliable, centralized location where they can procure suitable books.**

## HOW DID THE INTERVENTION WORK?

The intervention, known as Knowledge Improvement through Access to Books (KITAB), had two key parts: (i) the online marketplace for book selling and ordering, and (ii) incentives at multiple stages along the book chain aimed at promoting the creation, procurement, distribution, and utilization of quality books. The marketplace, called KITAB Bazaar, provided a single location where publishers could list SRM books prepared especially for lower grades; schools could then visit the online marketplace to place orders at the beginning of the school year and to purchase additional books later on in the year, if needed. Publishers were expected to deliver orders on time to local municipalities, known as Palika, where head teachers could collect their books.

The intervention offered two types of incentives: financial incentives for publishers and nonfinancial incentives for schools. Publishers would receive US\$100 for each book they listed on the marketplace that was written in the Nepali language and endorsed by the Curriculum Development Centre (CDC), the government body which officially endorses school materials. To encourage increased production of high-quality books in minority languages, publishers would get a larger bonus totaling US\$200 for

each listed book written in a minority language and endorsed by the CDC. A smaller bonus of US\$20 was paid for each listed book that was peer-reviewed but not CDC-endorsed. To incentivize timely publication and distribution of books, the intervention offered publishers a bonus equivalent to 5 percent of the total value of each book order that was delivered to the Palika on schedule.

The intervention was implemented in two districts. Both were selected as they had generally low student literacy levels and a large population that spoke minority languages. At the same time, these areas had comparatively strong Internet connectivity, which was needed to implement the online portal aspect of the intervention. In total, 898 government primary schools in the two districts were eligible to use the online portal, or digital marketplace, and receive incentives. The study began with a baseline study in November 2018. The digital marketplace and incentives scheme were operational through summer of 2019, and an evaluation was conducted in April 2021.

For schools, incentives primarily took the form of free books. Schools were divided into two categories based on need: Category A consisted of “vulnerable” schools—very small schools<sup>6</sup> and those with a high number of Dalit or minority-language students—while Category B schools included all other community schools from the project implementation area. To incentivize schools to create

and stock book corners, the project awarded free books for every book that the schools purchased through the online marketplace at the start of the 2018/19 school year. Category A schools received nine free copies of various books, while Category B schools received four free copies. To motivate schools to maintain the stock of their book corners, the intervention offered smaller incentives to Category A schools to make a second round of book purchases later in the school year,

## Book Supply Chain

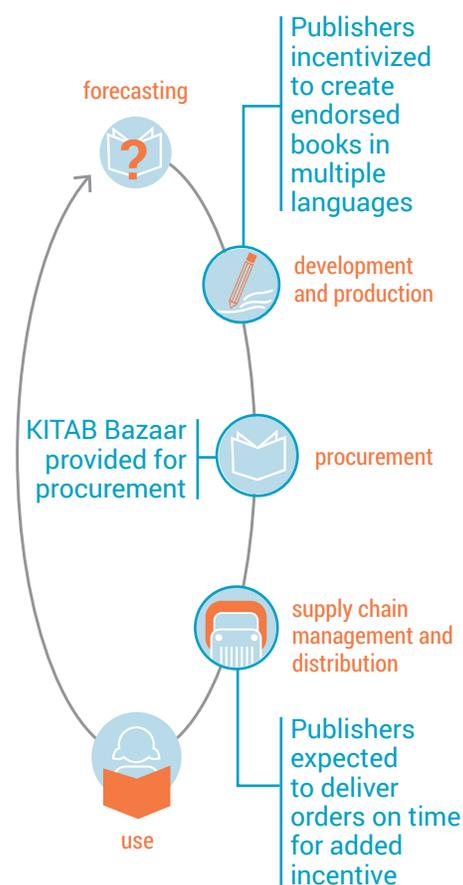




Photo courtesy of World Vision

## Incentives

### Publishers

Received US\$100 for each endorsed book (Nepali language) listed on the marketplace

Received US\$200 for each endorsed book (minority language) listed on the marketplace

### Schools: Category A

Vulnerable schools received nine free books for every book purchased (round 1), plus one free book for every book (round 2).

### Schools: Category B

Other participating schools received four free books for every book purchased at the start of the school year.

*898 schools participated from 2 districts*

issuing one bonus book for each book purchased. (Category B schools were not eligible for this incentive.)

Schools received other incentives for utilizing the book corners. Officials from sub-education districts made two observational visits to schools during the school year to verify usage. Schools found to be using the book corners during both visits received a mobile library bag (i.e. a pocket chart) or a rack for book storage.<sup>7</sup> Schools found to be using books during one of the visits received a teachers' kit, including teaching and learning materials such as a dictionary, scissors, and ruler.

The study had some limitations. The evaluation did not include a formal control group, either of schools without access to the online marketplace or of schools with access to the marketplace

but ineligible for the incentives. The researchers had intended to construct a pseudo-control group using administrative data from Nepal's Education Management Information System (EMIS), but the system was not fully operational at the local level at the time of the intervention. As a result, the researchers were not able to access information on key indicators for the planned control group, such as the share of schools that had and were using book corners. Instead, the researchers used a mixed-method approach, employing interviews with key stakeholders including publishers, Palika education heads, and head teachers of schools to identify whether, and how, the marketplace and the incentives improved book development, publication, procurement, distribution, and utilization.

## WHAT WERE THE RESULTS?

**The school incentives were effective in increasing the number of books in book corners and in schools generally.** At endline, 828 schools (92 percent of the total) had a book corner, compared to 138 schools (15 percent) at baseline. A total of 133,008 books were ordered and delivered, with an average of 161 books distributed per school and an average of 54 books per grade for grades 1–3, benefiting an estimated 53,198 students. Despite that this results-oriented approach required schools to invest some of their own funds in books, the rate of book receipt was similar to that for the neighboring district of Siraha,

where free books were distributed through the NEGRP program. Under the USAID-supported program, schools received an average 59 books per grade.

**The incentives also appear to have successfully motivated schools to utilize and maintain book corners.** Some 232 schools (29 percent) were found to be actively using their book corner during both visits by the Palika education head and received a mobile library bag or a book storage rack, while 70 percent were found to be “fully utilizing”<sup>8</sup> the corner during at least one visit and received a teachers’ kit.<sup>9</sup> Strikingly, the share of schools utilizing the corners was higher during the second visit (543 schools, or 67 percent) than the first (308 schools, or 38 percent),

suggesting an increasing rate of use over time. Only one in 10 schools was found to be not using its book corner on either visit. Schools also bought more books during the year to maintain their book corners. The vast majority (90 percent) of Category A schools, which were eligible to receive a second incentive for purchasing additional books midway through the year, did so. Category B schools were not eligible to receive the incentive for a second round of purchases, but one-third nonetheless purchased additional books using their own funds.

**The publisher incentives were successful in generating more peer-reviewed books for the online marketplace.** Publishers uploaded 136 peer-reviewed titles



Photo courtesy of World Vision

to the digital portal, even though incentives were less financially valuable than for CDC-endorsed books and the bonuses mostly went to paying reviewers. Given that the official CDC approval process was very lengthy, reviewers included CDC and education ministry officials, as well as professors and journalists, and publishers said they felt the review process improved the quality of the books.

**The publisher incentives also succeeded in increasing publication of minority-language books, but the absence of incentives for schools to purchase such books meant few of those books were ordered.** Nineteen percent of the uploaded titles were in minority languages. However, only one percent of portal orders consisted of such books, possibly because school incentives did not provide specific incentives aimed at motivating schools to order these particular titles.

**However, the publisher incentives aimed at increasing the number of CDC-approved books did not work.** In fact, publishers did not add any books endorsed by the CDC to the online marketplace. Researchers conducted interviews with the publishers to determine why. The publishers said that while the CDC has authority to review textbooks, they did not believe the agency had the authority or expertise to review literary works. In addition, the process for obtaining CDC endorsement can be costly and time-consuming.

## WHAT WERE THE LESSONS LEARNED?

**Even nonfinancial incentives can be very effective for improving book access and supply, especially when schools lack funding to buy books on their own.** Despite the lack of a control group, the researchers concluded based on their findings and interviews that the incentives played a key role in encouraging schools to purchase books and establish book corners. “Books are expensive and we have no budget. Without the incentive we cannot purchase new books. It motivates us to order new books,” commented one head teacher.

**Incentives tend to be most effective when supported by a clear policy framework.** As noted above, establishment of book corners was among the five minimum conditions required of primary schools under the government’s P MEC standards. The information dissemination activities conducted under the intervention to inform schools about the incentives also raised awareness about these standards.<sup>10</sup>

**Incentives may not be effective in overcoming resistance to specific reforms or initiatives.** Although publishers responded well to the incentives linked to publication of peer-reviewed books, the (larger) incentives aimed at encouraging publication of CDC-endorsed books

could not overcome publishers’ belief that CDC should not be approving supplementary reading materials. “CDC is not the appropriate institution to endorse creative or literary pieces of work,” commented one publisher.

**Technical support may be needed to help users of digital book-ordering systems take full advantage of incentives.** Although the intervention included training for head teachers on how to use the online marketplace, a number reported problems using the system.<sup>11</sup> Because the portal only allowed procurement during two specific time periods each school year, head teachers did not have an opportunity to place multiple orders and become more familiar with the system. In addition, some of the trained headteachers transferred to schools outside the districts in the study and were replaced by untrained teachers. Other teachers, meanwhile, reported challenges related to Internet access. World Vision International provided extensive support to individual users to help them overcome these barriers, and any future scale-up of the intervention would likely require support to be provided in a more systematic way.

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**Incentives tend to be most effective when supported by a clear policy framework.**

## The online marketplace facilitated access to quality supplemental reading materials and improved the book supply chain in the two districts.

## CONCLUSION

The REACH Trust Fund partnered with World Vision International to test incentives across the supplementary reading material book chain in Nepal. Incentives for publishers increased the number of peer-reviewed SRM books published and made available through an online marketplace, but failed to overcome resistance among publishers to having such material approved by a government curriculum authority.

A majority of stakeholders, including school head teachers, Palika leaders, and publishers agreed that the online

marketplace facilitated access to quality supplemental reading materials and improved the book supply chain in the two districts. Several head teachers noted that the marketplace and an assured delivery system for ordered books made it easier to buy books especially for schools in remote areas. At the same time, head teachers said in interviews that the book incentive (for purchasing books through the portal) made a big difference for schools, especially in Category A, which otherwise wouldn't have adequate budget to buy books to stock and maintain a book corner.

- 1 Ninety-six percent of primary school-age children in Nepal were enrolled in 2019 (UNESCO Institute for Statistics).
- 2 USAID Early Grade Reading Assessment. Available at: <https://earlygradereadingbarometer.org/nepal-2018/snapshots.> (“(accessed July 1, 2021).”)
- 3 World Bank 2020. Human Capital Index.
- 4 According to the baseline survey for this study conducted in October 2018.
- 5 Known as the Per Child Fund.
- 6 Those with fewer than 65 students in grade 1–3
- 7 The intervention initially intended to deliver mobile library bags to all schools achieving full utilization. However, following feedback from schools in Sunsari District, researchers agreed to provide a book rack instead to schools in that district.
- 8 “Fully utilizing” means: (i) the books were in the classroom easily accessible to the students; (ii) there was a register maintained if the students were borrowing the books to take home; (iii) teachers were making use of those books to teach the students in the classroom.
- 9 A total of 801 and 806 of the 828 schools that received books (97 percent) were visited by Palika education heads at the first and second visit respectively, and were eligible for utilization awards. We are a little confused on which is the right number: the previous statement or this one? “A total of 828 schools received books and were eligible for rewards for using their book corners. To confirm use, Palika education heads observed 801 schools during the first round of visits and 806 schools during the second round.”
- 10 Seventy-nine percent of participating head teachers at endline said the project had raised their awareness of the PMEC requirement
- 11 At the midterm review conducted in November–December 2019, only 30 percent of head teachers had been able to place an order independently without seeking help from colleagues or the project team.

## RESULTS IN EDUCATION FOR ALL CHILDREN (REACH)

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