Low cost, high quality printing of teaching & learning materials\(^1\) (TLM) requires well-designed and highly competitive procurement. Since 2010, Mozambique has implemented a range of measures to reduce costs over time, making its printing procurement possibly the most competitive in Africa. As a result, printed pages purchased by Mozambique cost less than half of those purchased across the channel in Madagascar. Many other countries are also paying overly high unit costs for TLM. Mozambique’s success story can be replicated elsewhere by introducing the following success factors.

**SUCCESS FACTORS IN MOZAMBIQUE**

**Success Factor #1: Make Procurement Predictable**
Mozambique developed a medium-term textbook provision schedule as part of the education project’s Implementation Plan. The schedule mapped curriculum revision by grade level and the corresponding procurement of textbooks. It showed the reordering and phase out of books of the outgoing curriculum and the procurement of books in time for the introduction of the incoming, revised curriculum. Quantities were planned to include projected enrollment growth and book replacement needs. The plan made it possible to budget the funds and time for procurement, making the procurement cycle predictable for government and bidders over multiple years.

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\(^1\) Teaching and Learning Materials: textbooks, teacher’s guides, and supplementary materials, including storybooks, non-fiction reading books, and workbooks.
Predictable, annual procurement increases competitiveness. Printing is an industrial process with schedules that are planned months in advance and large, expensive machinery that can only process fixed quantities at a time. Paper and ink are global commodities, ordered in bulk by large printers when global prices are lower, so predictable procurement cycles lead to lower costs.

**Success Factor #2: Consider Separating Publishing and Printing**

Publishing and printing are two separate industries. Publishers develop book content. Printers produce copies of books. When they are procured together, publishers almost always outsource printing, increasing costs. For the reprinting of books for the early primary grades, Mozambique separated publishing and printing. Reprint licenses for some titles were obtained from publishers for fees, other titles were developed by the Ministry of Education, and printing was contracted via International Competitive Bidding (ICB, one of several standard World Bank procurement approaches).

**Success Factor #3: Use Correct, Complete, and Standard Technical Requirements**

The technical requirements in bidding documents typically include the number of pages, paper type (interior and covers), paper size, binding type, and packing requirements. These requirements must be both clear and complete. Using standard paper types and sizes will decrease paper costs, which drive printing costs. The Mozambique Bid Documents are a good guide, as they contain the categories of technical specifications that printers need. These documents are revised and updated for every procurement. Contact the Mozambique education team for the most recent available version.

**Success Factor #4: Require PUR (polyurethane reactive) Binding in Most Cases**

PUR binding is high quality and cost-effective for printers around the world. Using PUR eliminates the need for section sewing. Section sewing requires large sewing machines which very expensive, even without adding the considerable labor costs involved in section sewing. PUR binding is also much faster than section sewing, reducing the time needed to produce your books and get them to classrooms. For workbooks and other materials that are planned to last for less than a year, use saddle stitching (staples).

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**Binding: A Quick Primer for Non-Specialists**

There are four main kinds of book binding.

- **Saddle stitching** consists of two staples, preferably galvanized to prevent rust, along the book’s spine. Saddle stitching is used for books of 96 pages or less.

- **Perfect binding with hotmelt glue** requires sections of books (multiple pages folded together), called signatures, to be glued to the interior of the book’s spine. It is used for thicker books. Hotmelt glue usually does not last more than a year, as it melts at 140 degrees Fahrenheit (60 degrees Celsius) and warehouses and trucks in hot climates can easily get that hot.
• **Perfect binding with hotmelt glue and section sewing** requires signatures to be sewn together, to be serrated on the spine and glued to the interior spine of the cover. This is extremely labor intensive, giving countries with low labor costs a huge advantage in bidding. These books likely won’t last more than a year. The sewn sections will stay together, but the hotmelt will melt and the pages will detach from the cover.

• **Perfect binding with PUR glue** uses an extremely strong and heat resistant polyurethane reactive glue to glue pages directly to the interior spine of the cover, without the need for section sewing. Once PUR glue dries, it is permanent. PUR is slightly more expensive than hotmelt, but books bound with PUR last at least three years. PUR is available around the world and is used by all industrial printers.

**Success Factor #5: Pay Attention to Incoterms to Better Manage Delivery Risks**

Incoterms are standardized international terms that define the responsibilities of purchasers (buyers, typically ministries of education for TLM) and suppliers (sellers, typically publishers or printing companies for TLM) when buying, selling, and transporting goods. Incoterms cover a range of issues, including insurance, liability, shipping, taxes, export and import duties, and Customs clearance.

To maximize competition, use CIF (see below). Many printers are hesitant to take on the responsibility of Customs clearance and onward delivery in-country, due to frequent delays and unpredictable and opaque requirements and fees.

Incoterms are highly technical; the below is only meant as an introduction. Seek advice from an experienced procurement specialist to determine the best Incoterms for your procurement and to ensure appropriate insurance coverage for your TLM.

**Incoterms: A Quick Primer for Non-Specialists**

There are 11 three-letter Incoterms defined by the International Chamber of Commerce for use in the international trade and transportation of goods, including TLM (https://iccwbo.org/resources-for-business/incoterms-rules/incoterms-2020). The codes define the tasks, obligations, costs, and risks of Purchasers (the Mozambique Ministry of Education, for example) and sellers (the printing company).

In the procurement of TLM, the most used Incoterms are the following:

*CIF* (cost, insurance, and freight), the price of the goods at the Purchaser’s seaport. Use this code if the Ministry will take responsibility after initial offloading, including Customs clearance. The supplier holds all liability until the books reach the country. The buyer clears the books through Customs, pays taxes and port charges and handles onward delivery. This is the least complicated,
**Freight Collect Terms**

- **EXW** (Ex Works), the price of the goods available at the Supplier’s premises. This is the code you would use if you plan to procure distribution services that include pick up at the printing plant and all further shipping/distribution activities. This is the most complicated approach for buyers, as they must negotiate a range of issues in the country of origin of the materials. Liability transfers to the buyer when the materials are picked up at the printing plant. **Recommended**.

- **FOB** (Free on board), the price of the goods the Supplier has loaded on vessel. Use this code if the Ministry plans to take responsibility for the TLM once the printer has loaded the containers on the ship. These responsibilities include handling Customs clearance, paying shipping costs, handling all tracking, offloading and handling once the TLM arrive in port. Liability transfers to the buyer when the containers are on the vessel. If, for example, there’s a fire on the ship or the ship sinks, the buyer holds all liability. **Not recommended**.

- **CIP** (Carriage and insurance paid), the price of the goods at the place of delivery designated by the Purchaser. This is the code you would use if you plan to procure distribution services that include pick up at the printing plant and all further shipping/distribution activities. This is the most complicated approach for buyers, as they must negotiate a range of issues in the country of origin of the materials. Liability transfers to the buyer when the materials are picked up at the printing plant. **Recommended**.

**Freight Prepaid Terms**

- **CFR** (Coast and Freight), the price of the goods the Supplier has loaded on vessel. **Recommended**, as it’s more competitive compared to **FOB** and **CIP**. Many international printers will not bid on **CIP** (below), as it’s more complicated for them in countries they don’t know, where they’re not registered, and where processes can be very complex and opaque.

- **CIF** (Cost Insurance & Freight), the price of the goods the Supplier has loaded on vessel. **Recommended**, as it’s more competitive compared to **FOB** and **CIP**. Many international printers will not bid on **CIP** (below), as it’s more complicated for them in countries they don’t know, where they’re not registered, and where processes can be very complex and opaque.

- **CPT** (Carriage Paid To), the price of the goods the Supplier has loaded on vessel. **Recommended**, as it’s more competitive compared to **FOB** and **CIP**. Many international printers will not bid on **CIP** (below), as it’s more complicated for them in countries they don’t know, where they’re not registered, and where processes can be very complex and opaque.
Success Factor #6: Advertise Widely and Provide Adequate Time for Bid Submission
Advertise the tender on widely used global websites. International printers monitor global procurement sites, such as UNDB, DevEx, digMarket, and Africagateaway to find tenders. Local printers monitor local media, both print and digital. Advertising widely and providing adequate time for bid preparation (at least six weeks) makes it more likely that more printers will see the tender and be able to plan and submit bids. More competition (in printing) = lower costs and higher quality.

Success Factor #7: Make it Easy to Obtain the Bidding Documents
Remember, you want to attract as many reputable bidders as possible. Selling bidding documents has become a source of revenue for Ministries of Education but could be counterproductive and result in higher costs overall. Imposing onerous procedures for obtaining bidding documents (you must come in person to our office on x street in x city in a country requiring a visa that is hard to get with limited flights between 2:30 and 3:00 PM on Tuesday and pay cash) reduces the number of bidders who will be interested in bidding. Making bidding documents freely available on the Ministry website will widen competition and reduces opportunities for corruption. In addition, the Ministry and the bidders will not know who downloaded the bidding documents and who will bid until bid submission. This also improves the integrity of the bidding process.

Success Factor #8: Answer Questions from Suppliers Promptly, Preferably through a Bidder’s Conference
In the best case scenario, bidding documents are so clear and precise that bidders don’t have any questions. In reality, there will always be someone with a question. There are two options: a bidder’s conference or a process for bidders to ask questions in writing and receive responses in writing, which are then posted on the Ministry website for all bidders to read. Bidders’ conferences with options for virtual participation are preferred, as they are accessible to all. Stick to your schedule (see below) and provide clarifications at least three weeks before bid opening. Make sure all of the questions are answered and all of the questions and answers are posted on the website. If there are complicated questions, or questions which point out oversights in the bidding documents, issue an amendment to the bid documents and extend the deadline for bid submission if additional time will be required for bid preparation.

Success Factor #9: Set Reasonable Timelines for Questions, Bid Submission, Contract Award, and Book Delivery
This is a sample timeline to maximize the number of reputable printers who will consider bidding on your procurement:

<table>
<thead>
<tr>
<th>Event</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Bid Invitation</td>
<td>6 weeks before bid submission/bid opening date (both events occur on the same day)</td>
</tr>
<tr>
<td>Publication of answers to bidders’ questions</td>
<td>3 weeks before bid opening date</td>
</tr>
<tr>
<td>Bid Opening Date</td>
<td>30 business days after Bid Documents are available</td>
</tr>
<tr>
<td>Award notice</td>
<td>4 weeks after bid opening date</td>
</tr>
<tr>
<td>Contract signing</td>
<td>2 weeks after Award</td>
</tr>
<tr>
<td>Clearance to print</td>
<td>3 weeks after contract (for contracts that are printing only)</td>
</tr>
</tbody>
</table>
Success Factor #10: Build Procurement Capacity over Time in the Ministry of Education (MOE) and the Bank Country Team

Ultimately, long-term success is best assured through strong national capacity for book procurement. Mozambique’s approach was developed with technical assistance and supported by a medium-term planning approach. Institutional strengthening for implementation was provided through an IDA-GPE financed operation, directly by bilateral donors, and through implementation support missions. These resources helped to finance resident procurement consultants (both national and international) to invest in the government’s procurement capacity.

Today, the Bank procurement team continues to provide regular training to the Ministry of Education, including on-the-job training and coaching for the textbook procurement unit. The Bank and MOE teams review documents together, discuss comments from bidders, and work in partnership throughout the process. It’s been a long, fruitful procurement partnership that has resulted in more cost-effective book production and delivery, essential steps on the ladder to eradicating learning poverty.

For further information on the Mozambique experience, including bidding documents, planning tools, or procurement training content, contact: Lucia Jose Nhampossa (lnhampossa@worldbank.org).

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This note is part of a series being prepared by the Read@Home team to support World Bank teams as they procure teaching and learning materials (textbooks, teacher’s guides, and supplementary reading materials). For more information, contact co-TTLs Amanda Devercelli (adevercelli@worldbank.org) and Peter Holland (pholland@worldbank.org). To access additional resources, follow this link: https://www.worldbank.org/en/topic/education/brief/read-at-home.

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