

Webinar 2: Handout 6

Research to inform materials development

Before any materials are developed, background research needs to be conducted. Key questions that need to be answered through this research include:

- What are the objectives of the EGR program, the timeline for implementation and the available budget for resources?
- What is the language policy? What languages are used for instruction? In what languages will children be taught to read, and will instruction in different languages take place at the same time?
- What materials exist that could be used or adapted for teaching EGR?
- What are students' current reading levels? How might they differ by language, region or other demographic characteristics?
- What are teachers' current instructional practices and needs? What materials are they currently using (or not), and why?
- What technology may be available and feasible to use to develop materials, as well as to make available in classrooms?
- What policies and protocols exist with respect to materials production for education?

Some activities to undertake to answer these questions and to put together a materials development plan include those listed below. Note that the list is not in chronological order, and that the information gathered will need to be reviewed comprehensively to inform decision-making.

1. **Review student EGR assessment data.** Knowing what skills children have and what skills they need to develop is critical in identifying which materials need to be developed. For example, reading assessment results may identify whether children could benefit from having a large number of decodable books available in the classroom. Similarly, assessment data that points to a lack of oral language skills might indicate a need to develop big books, or story read-aloud books, that provide opportunities for children to practice oral language skills.
2. **Review language policy documents and any reports on language of instruction and language use in schools.** Understanding official language of instruction policy as well as the realities of language-related instruction in the classroom will help to identify what materials may be needed to support instruction. Content developed for first language speakers of a language will be different than that developed for those who are learning to read in a second or foreign language.
3. **Review reading program objectives and curriculum to identify what materials may be needed.** Student needs should inform the objectives and curriculum of a reading program, but the objectives of a program may not necessarily respond to all needs. Therefore, it's important to be aware of the parameters of a program when identifying materials to develop. A program that includes instruction in multiple languages will need to develop materials that are similar across languages, so that teachers who may be teaching reading in more than one language are more easily able to use the resources. For example, this means using a similar design and layout across languages.

4. Analyze language(s) to be used and verify that the writing system has been standardized.

Before content is developed, those who develop content and materials will need to be familiar with the languages that are being used. This will include an in-depth understanding of the language properties. It's critical that the language's writing system, or orthography, be standardized prior to developing content. If multiple writing systems exist, a program will need to work with stakeholders to agree on a standard orthography that will be used. Linguists, local NGOs and community members (among others) should all be involved in this process. The text box above describes how one USAID-supported program in Uganda engaged in such a process prior to developing its EGR materials. An "Orthography Assessment Score Sheet" (SIL LEAD), included in this handout, provides guidance on how to analyze the readiness of a language's writing system. Additional resources related to language standardization include a UNESCO toolkit (Kosonen, Young, & Malone, 2007; Malone, 2007). Free dictionary software (for example, the Wesay freeware provided by SIL: www.sil.org) also can be downloaded from the Internet to help communities to quickly start an initial dictionary.

Language standardization to support EGR materials development: The Uganda experience

Prior to developing reading materials in 12 Ugandan languages under the School Health and Reading Program, the project team engaged in a six-month process with local language boards to review and standardize each language's writing systems (orthography) and develop orthography guides.

Writers were then trained in the standardized orthographies and compiled vocabulary lists for each language.

Source: Pflapsen et al., 2015.

5. Review existing classroom observation findings and conduct additional classroom observations, as needed, with a focus on materials.

Classroom observations of teachers teaching reading—complemented with teacher interviews—can provide valuable information on a range of issues pertinent to the development of content, materials and teacher professional development. With respect to materials development, such research provides insight into the availability of specific materials, class size, use of materials by teachers and students, and storage of materials. Observations of teachers' instructional practices are also useful in identifying what materials they currently use and are familiar with, how new materials might be used to reinforce good instructional practices and how materials could be used to improve other instruction practices. Existing classroom observation data may

Recommendations for conducting classroom observations related to materials development include:

- Develop a classroom observation and teacher survey instrument. This will help ensure that those who collect the information collect the same information at each site, in a similar manner.
- Enlist qualified observers to conduct the survey. Data collectors should have a background in teacher and/or EGR pedagogy, materials use or instructional practices. They are likely to be program staff or Ministry of Education personnel who may already be working on the program, or on materials development in particular.
- Provide training/orientation to the survey instrument. Clear directions and some form of training in advance of data collection (even just one day of informal training) will help team members to understand what is expected and to adhere to a similar protocol. Include hands-on practice using the instrument and recording information.

shed light on these issues, though during the materials design process a classroom observation focused specifically on resource availability and use is usually necessary to provide in-depth, current information to inform materials development. Semi-structured interviews with teachers can also bring to light issues they may experience related to the following areas: materials procurement, distribution and storage; challenges or successes they may have using existing materials; and resources they would like to have. Classroom observations and teacher surveys can include a relatively small sample of schools, depending on the diversity of the contexts in which they will be used. (For example, 10 schools—5 urban and 5 rural—should be sufficient within a region for which materials will be developed in one language.)

6. **Conduct research on instructional time use.** Identify how much time is available for instruction. This information will inform how much time teachers actually have to teach content, and thus what resources are needed and feasible to use for instruction. See Session 2 for more information on instructional time in EGR programs.
7. **Understand teachers' language skills.** While teachers should be able to fluently speak, read and write the languages they are teaching, this may not necessarily be the case. Information about teachers' literacy skills in the languages they will be teaching can then inform the design of materials such as the teacher's guide. For example, if teachers are expected to teach a language they do not read fluently, it may be helpful to include some text in the teacher's guide in a language they read well, as a way to support their comprehension of the content they are teaching. (Similarly, information on teacher literacy skills might indicate that teachers can read the language they are teaching well, and thus do not need a dual-language teacher guide.)

Understanding teachers' language skills may or may not require a formative assessment, which can be a sensitive issue, for many reasons. For example, teachers may be fearful that assessment data could result in them losing their jobs, if results are not confidential. It's therefore important that any assessment of teacher language skills be conducted with the clear understanding among everyone involved that the results will be confidential, and that they will be used with the explicit purpose of guiding materials development and, potentially, identifying needs that teachers may have for professional development and learning around their language skills.

Even if the above conditions are in place, the assessment tools and protocol should be designed in such a way that it is not perceived as being a "high stakes" test. This is because teachers may still be fearful of having their skills assessed, particularly if the assessment is conducted by someone with authority, or in a context in which a school principal or even another teacher may be able to hear or see them being evaluated. Note that a relatively small sample of teachers can be surveyed to obtain useful language data, depending on the context and diversity of the teacher workforce.

- 8. Identify and review existing materials.** Review existing research studies and program reports that might provide information on what materials are needed, and what materials have already been used in other programs. Visit local bookstores and markets where books are sold to find what is currently available. Identify any publishing companies in the country and materials printed. Talk to education ministry staff, donors and implementing organizations involved in education programs, as well as other education/EGR stakeholders, to find out what may exist. (Note that this process of finding resources can take several weeks, so leave time in the work plan to do it!) Be sure to develop a protocol and instrument for reviewing existing materials and to train/orient team members on how it should be used. It's recommended that team members review materials together, such as during an all-day working session, so that issues that arise can be discussed and agreement reached as a team.

Tips and tools for reviewing existing materials

In preparation for an early grade reading pilot for Hausa in Northern Nigeria, the Reading and Access Research Activity (RARA) inventoried and analyzed existing EGR materials. The purpose of the exercise was to identify what materials could be adapted and what needed to be developed. Materials were reviewed by a language expert, a reading expert and a teacher. Reviewers analyzed content, language, activities and design (readability) and recorded information in an evaluation rubric developed for the purpose.

Consult "Nigeria Reading and Access Research Activity: Review of Existing Reading Materials to Support Hausa Literacy Instruction" (RTI International, 2014) to read the report and survey instruments.

- 9. Understand the context for which materials will be developed.** Materials need to fit the context in terms of cultural relevance, appropriateness for the climate, publishing and printing considerations, and procurement and distribution considerations. For example, children will find a set of decodable readers more engaging if the topics relate to activities, places and other aspects of their lives. Providing the decodable text on laminated story cards may further help to preserve them and facilitate easier sharing among students, as well as be a more cost-effective way of getting an abundance of text to students. Such contextual factors should be researched, examined and discussed by the materials development team.
- 10. Identify the timeline, funding and technical capacity needed for materials development.** While student and teacher needs and other key factors may point to a need for a certain set of materials to be developed, considerations related to funding, the amount of time available to develop materials, and what might be feasible and sustainable on a large scale are also important factors. Local capacity to develop, print and distribute materials should also be researched.

References

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