Literacy and Second Language Educational Programs in Minimal Resource Environments

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The value of literacy, the ability to read and write a language, cannot be overstated. Literacy is the foundation of education and the single most important skill for a student to acquire. Giving students literacy, combined with the desire to be life-long learners, is among the greatest gifts education has to offer.

The goal of this paper is to raise awareness of what is needed for literacy training to be possible and achieved in minimal resource environments. Literacy has a history that extends back thousands of years when almost all of humanity lived in what would now be considered Third World conditions at best. There are many supportive aspects to developing literacy, such as social, political, and economic development that will not be addressed here, although all play a role in setting the stage for developing literacy. All successfully developed countries rely on a foundation of education which in turn is a direct result of achieving a high standard of literacy in their populations. Providing literacy training is not just extending assistance to less fortunate segments of a society - it is the very foundation of future development and success of all nations, and by extension, humanity itself.

In minimal resource situations, schools operate with very little funding, sometimes being no more than a classroom, teacher, students and very limited materials. Teachers and students must use books as their primary source of information and input. The more understanding of language and literacy a student acquires, the greater the opportunity to learn, and the more achievement possible. Often literacy is the only educational tool students will have and educators cannot expect students to excel beyond their level of literacy. Literacy can also be the cornerstone of very effective foreign language education and since students cannot be more literate in, or speak, a foreign language better than their native one, literacy's importance is compounded by these qualities. Many of the ideas presented here for literacy development overlap with foreign language learning, and at times are interchangeable.

Reading as a Process is the Same in All Languages

The basic skills of reading, and literacy as a process, are fundamentally the same in all languages. The skills of reading, and language in general, have their foundation in the same core of language proficiencies. If a student has good literacy skills in a native language, a great deal of general language learning skills and knowledge can be applied, or transferred, to the learning of a second language. Reading, regardless of the writing system employed, uses the same processing strategies. As these strategies cannot be clearly broken down into separate skills, reading is best viewed as a unitary process. Deriving meaning from written or printed symbols across languages and language contexts is also similar. There is a common underlying proficiency in language development whereby literacy skill is generalizable from the first to a second language (Wallace 1992). Establishing a good foundation of literacy in a native language automatically provides students with an excellent set of skills to learn a second language as well.

Encouraging Literacy

The single most important influence upon a student, particularly children, starts at home. Situations where parents encourage their children to learn, and actively support their efforts, produce students that have a positive attitude toward school and education. Parents, consciously or not, train their children to live in society and influence attitudes about themselves and school. What children learn, and how interested they are in learning, is closely related to how their parents feel about education (Streeter 1986).

Crucial, but often overlooked, is recognizing that the future success of a child's educational experience starts with proper nutrition from conception. From conception, growth and development of the brain, its structure and the central nervous system are effected by the mother's health and nutrition. Additionally, during the first two years from birth, the brain's weight doubles. Poor nutrition during these first two years has been connected to structural changes in the central nervous system, shorter attention span, a slowness in adjusting to a new environment or stimuli, and retardation (Streeter 1986). Minimal resource environments are often quite harsh - compounding such circumstances by raising children with diminished capacities due to poor nutrition should be avoided at all costs.

Parental involvement from conception through elementary schooling and beyond is the most important factor for a child's learning success. Encouraging parents to be active supporters of a child's development both physical and intellectual is very important. In many cases parents from minimal resource environments may lack formal education and be illiterate themselves. A supportive home environment and the most basic acts of encouraging learning may not be part of their experience. Parents may have only vague ideas of the value of education and not understand what kind of commitment is required of their children and themselves. Teachers cannot control the home life of their students, however, they can and should, meet with parents and encourage them to be active supporters of their children's educational development. Promoting an appreciation of literacy and education in general by advancing "a culture of learning" is a key ingredient for success.

Teachers have a strong impact on the achievement of students. Students respond to the expectations and goals teachers communicate to them. Research by the U.S. Department of Education regarding teacher expectations concluded that teachers expectations become self-fulfilling prophecies. Students generally respond to and achieve the high, or low, expectations that their teachers communicate to them. (US Department of Education 1986)

The combined expectations of parents and teachers is a vital part of any students' achievements in all areas of education. The value of literacy and the doors it opens should be conveyed by all means possible.

Graded Reading

A very effective method of developing literacy, and foreign language ability, is through the use of graded reading. Students with a basic foundation in the language they are studying can benefit greatly from reading materials that vary in complexity according to their reading ability. Basic oral proficiency must be part of their language foundation as a way to introduce the context for the written form of the language they are encountering.

A three stage plan, based on graded reading (Krashen 1997), can be instituted to assist literacy and development in foreign languages. The first stage introduces artificially constructed reading texts to give exposure to the language at an appropriate level for the student to comprehend. Graded reading of this sort will enable students to achieve a level of comprehension high enough to begin reading easy authentic texts. The second stage, reading "light" authentic texts will encourage students to attain a level of competency high enough to understand easier "academic" and "serious" texts. The third stage is the reading of authentic texts. According to Verhoeven (1990), by developing oral skills learners have a better chance of making correct inferences from literacy instruction and only by using graded text materials will they be able to use and understand syntactic and semantic constraints in a second language.

This three stage approach can be very effective for native and foreign language education. It should be pointed out that the ultimate goal of a foreign language program is not to produce native like speakers of the foreign language being studied. If a language program can lead students to intermediate level, it should be considered very successful. A motivated student at the intermediate level has the skills necessary to confidently pursue more advanced competency in a native or foreign language.

Free / Extensive Reading

In a minimum resource situation, books serve as a vital source of input and information. In

many cases students will have very limited contact time with a teacher resulting in books being the dominant, if not only, input source. Possessing even limited literacy, a learner can progress in general fields of education and second language acquisition. Many of the following references are in regard to literacy and second language acquisition, however in large part are generalizable to learning in general. If a student has even minimal ability in a foreign language, reading can be very effective at many levels of acquisition and learning.

Day, Prentice et al. (2016) define extensive reading (ER) as a teaching approach that encourages learners to read as much as they can in order to gain fluency in English and any other foreign language. The approach is entrenched in the principle that reading is the best way of learning how to read. An interesting feature about ER is that students are given autonomy to choose the genre and volume of materials to read. However, instructors are keen to ensure that the material chosen is easy to read. Through this approach, students benefit in a number of ways. For instance, they are able to capture the overall meaning of a particular text while at the same time finding great pleasure as well as enjoyment in reading. Moreover, students are not under hard rules to read every book they choose; teachers using the ER approach allow learners to discard a book if they perceive it to be too hard or uninteresting (Day et al., 2016).

Extensive reading has been proved to confer a number of benefits to students as well as teachers. To begin with, there is plenty of evidence that learners' comprehension skills are greatly improved through extensive reading. From the foregoing definition, it is easy to understand how this happens. Precisely, ER encourages learners to read as widely as possible, and this offers them comprehensible input. Bell (1998) explains that ER is more effective than traditional instructional approaches that tend to provide artificial, planned, and restricted exposure to foreign languages. In ER, there is no restriction to the volume of material that learners can read, and this gives them sufficient exposure to a given language. On top of this, extensive reading takes place in an environment that is tension-free. All of these factors assist learners to comprehend a new language quite fast, and with minimal pain.

A second benefit of ER, to learners attempting to acquire fluency in a foreign language, is that it increases one's knowledge and mastery of vocabulary (Bell, 1998). Studies reveal that it is not effective for teachers to attempt teaching vocabulary to students through direct instruction. This is to say that even though direct instruction may equip learners with knowledge of vocabulary, the result is often short-term in the sense that very few words can be retained in the learners' minds. To ensure that learners' acquire long-term mastery of vocabulary, ER has been used successfully. As Grabe (2009) notes, extensive reading facilitates vocabulary growth in that it builds and develops the cognitive skills of learners. Through extensive reading, individuals develop the capability to remember new words and assign meanings to them. On top of this, extensive reading allows learners to create conceptual space in order to accommodate new words. This way, the learner acquires a vast collection of new vocabulary, and this is important in second language acquisition in terms of reading and writing fluency.

Through reading a student can be in contact with a foreign language while improving competence. Given time to engage in free reading, reading books of their own choosing, students gain in ability and competence. Students reading only for pleasure display dramatic results. It is clear that literacy is a key skill for students in a minimal resource situation. If students can be given an interest in reading and motivation to learn, the basic and most important tools for success have been acquired. One method for encouraging reading is through Sustained Silent Reading (SSR). Students read for pleasure for a short period each day. They choose material freely and simply read it with no other requirements. This should be a stress free activity with no accountability regarding what they read. According to Krashen (1993b) "students who do SSR typically gain at least as much on standardized tests as students who participate in traditional [second language] programs, and usually do much better if the program lasts long enough."

The habit of reading should be instilled in all students from the beginning of their education. One very effective method is to set a time for the whole school; students, teachers, and administrators to engage in uninterrupted SSR every day. Outstanding results have been recorded in schools were this is done. According to Robertson etal. (1996) students enjoy the calm SSR creates and many teachers enjoy the feeling of reading alongside their students. One teacher in the study mentioned getting his students to stop reading when time was up as the most difficult aspect of SSR! Robertson went on to point out that students found SSR to be a time to enjoy reading, and that reading and meaning were together. It provides an example of how valuable reading is, and helps develop stamina. Students also enjoyed sharing the excitement of what they were reading with others. Students are encouraged to be members of the community of readers. Everyone reading together provides a positive role model with the teacher doing it rather than preaching about it.

Creating Graded Reading Libraries

Commercially produced graded reading materials catering to all levels of language competence currently exist. These materials are well made and very useful, however, there are two important drawbacks to them in minimal resource programs. First, and most importantly, funding such purchases would be very difficult. Second, while materials are of the proper levels from very low beginner to intermediate, the content of the materials may not be appropriate, readily understood, or related to, by the audience of students this paper is addressing. Commercially produced materials are generally for students in industrialized countries and assume a set of cultural, social, and economic norms very different from that of students in rural settings of developing countries. The materials must be at the proper level, and be of subjects familiar to the readers so their background knowledge and experience can be transferred to what they are reading. This last point is crucial particularly when readers have limited access to teachers and other supportive materials. Appropriate graded reading materials that require minimal expense, can be created by students as part of their study programs. Handcrafted Books (Krashen 1997) are books written by students for other students of lower ability. The books should be written without the use of a dictionary - if the author does not know a word most likely the reader will also not know it. They can be original stories or retellings from other sources. Illustrating the books is encouraged and the text should be corrected by the teacher. Once a volume is completed it should be placed in a library that can be easily accessed by other students.

Handcrafted Books are effective for varying levels of students. Students should be encouraged to write about their experiences and ideas. These topics will be most familiar to their readers, make valid their lives and thoughts as proper subject matter, and encourage them to see education as it relates to them personally. Subjects could include village life, local folklore, interviews with community leaders, written versions of oral histories from elders, current sporting events - to list just a few ideas.

Creating books challenges students at multiple levels. The publishing process only starts with producing written language. While making the book for an intended audience the clarification and editing of ideas, layout of language and artwork are brought into focus. The more cognitive and tactile functions are incorporated in the process the deeper the learning. There is also a feeling of achievement in creating your own product. (Refer to the appendix in order to see examples and methods for making handcrafted books.)

Tasks and the Task-Based Syllabus

In minimal resource environments, where infrastructure, supplies, and facilities are limited, task-based education is recommended. In essence, tasks are activities with a defined goal to accomplish. Instead of learning having a theoretical value that the learner is expected to accept, tasks have defined outcomes that can be directly appreciated.

Important factors that need consideration in order for educational tasks to be effective are;	
goals	- teachers and students must understand and identify what are the objectives of a
	given task,
procedures	- the activities and methods used to complete a task,
time	- the amount of time appropriate for a task and/or its components require for
	completion,
results	- the outcome or outcomes students produce by successfully completing a task,
strategy	- the kind of tactics a student uses to complete a task,
evaluation	- how will the $outcome(s)$ be judged,

participation	- the manner in which a task is completed; individually, with a partner, or with a
	group of other students,
resources	- the materials and resources available.

These different aspects should be considered and controlled in order to make task based learning successful. In language classroom situations, the verbal exchange of essential information is the most important factor. Communicative tasks should only be completed with the verbal input of a partner. Tasks must encourage, or in fact, force communication in the target language as the key to their success.

Tasks specifically for SLA communicative skills must be designed for all participants to provide some kind of input in the target language. Tasks can require students take turns interviewing each other as they pretend to be famous people. Activities can require that each group member become familiar with some different information that must be reported to the group in order to complete a task. Tasks from simple to very difficult are limited only by the imagination of the people making and participating in them. Communicative pair and group interaction is usually very energetic and enjoyable for students. It is common for the classroom to become quite active and noisy while the students use the target language.

Tasks can be designed to use very little resources. Tasks can range from defining a set of skills or actions that a student should display from verbal prompting, all the way to a large year long activity such as recording the activities of farmers in a local district. Such large tasks involve many smaller tasks in order to reach completion. Each activity, for example field preparation, could be broken down into its component activities and the underlying reasons and/ or theories for each step recorded in English. Tasks within tasks can move down to the tiniest details or move up to a broad survey project. The level and scope of complexity can be adjusted to the level of the students involved.

It may be a good idea to consider English as the language of "official" documentation and allow students to use their mother tongue, and English when possible, during research and field work stages of large tasks. The final results could be presented in Handcrafted Books by each group involved in a project or task.

Tasks can be utilized as the basis for a school's syllabus. Large scale tasks can incorporate many, if not all subjects that are taught at a school. If a task is based on documenting the making of an irrigation system for a field, then it may be a good opportunity to study the science and engineering related to simple machines and their applications to create water moving devices. Earth science, ecology, and environmental studies to understand the effects to and from the irrigation system in the area. Geology and the application of geometry in land surveying to assess the suitability of land for farming by irrigation. These are some examples of how areas of study can be integrated. There are many interesting and unique opportunities for learning in rural settings that urban dwellers can not experience. Taking advantage of the unique aspects of rural living should be included in educational programs. By focusing tasks on activities that are of importance to a community, or part of every day activities, students can really "feel" the subject as part of their lives. The value of education, to improve their understanding of the world around them and their lives, becomes more clear.

Spending available Funds

In minimal resource situations almost all allocation of funds represent a trade off between competing needs. Three areas; teacher training and support, provision of as many books as possible, and rural libraries should come before all else.

Teacher support, both financially and in training, should be a high priority. Teachers who must regularly supplement their income by other means cannot be expected to give the time and dedication that quality education requires. The more trained and prepared a teacher is, the more students will benefit. Over a career one teacher will come in contact with hundreds and in many cases thousands of students, multiplying the value of funds put toward that teacher by the number of students who benefit.

Parallel to investing in teachers should be a commitment to provide books and reading materials. It is a recognized fact that the more exposure to literacy and books the higher the achievement of learners. Literacy and books go hand in hand - in fact, access to books and libraries have a single greater impact on academic achievement than teachers alone.

If any other funds for educational materials are available, it is strongly recommended that such monies go toward small rural libraries. One suggestion is for the creation of mobile libraries. Libraries that move along a circuit of locations around the countryside, either in small vehicles or in crates that are shipped in rotation, allowing students from small rural schools to have access to books and materials. Students can contribute copies of their Handcrafted Books to these libraries to deepen involvement and maintain active exchanges with other schools and communities along the mobile libraries route. This could be an exciting way to learn about other communities and people in their country. These libraries should contain materials of very broad interest as well as materials for teacher training and education. These libraries could allow a whole community to share in learning and the excitement these mobile libraries could generate.

There are good reasons to invest in modern facilities and equipment, but universal access to libraries and literacy should come before expensive materials and facilities for the more advantaged. Public funds should serve the greatest good of all the population. The better off segments of any society will provide extra support for their childrens' education. Computers and other "high-tech" equipment require infrastructure that communities this paper addresses most likely will not have. Additionally such equipment must be maintained and repaired periodically draining off valuable funds that could go to more books and materials. If there is insistence that some money go to such equipment, rather than paying for a computer, the mobile libraries could be outfitted with electric generators or solar batteries that could power audio-visual equipment. Such equipment could be utilized by a whole community for learning and pleasure.

Conclusion

Quality education does not always require spending large sums of money. Of course, sufficient funds to provide enough well trained teachers, build modestly equipped schools, and provide basic materials for students is desirable - but, it is only the starting point of education. For students in minimum resource environments, where even basic resources may not exist, quality education can still take place. The single most important and primary goal of education in such situations must be literacy. Literacy in a mother tongue allows students to approach learning with confidence and will instill in them the ability and skills to learn outside the classroom.

Promotion of a "culture of learning" and education in general is essential. SSR - participated in by all in any learning environment should be given a position of importance. The value of education, the kind of commitment it requires, and how it can improve the quality of life for all who pursue it, must be conveyed to all involved, including importantly the parents of learners.

Handcrafted Books can be a valuable educational tool in themselves and are effective in providing reading materials of varying levels in topics readily understood by learners in the environment they are made. In situations of limited funds, Handcrafted Books can fill a void that otherwise may not get addressed.

Utilizing a foundation of literacy, students can study second languages with insight into the nature of language. Second language acquisition programs based on a mixture of reading and communicative tasks, even in minimal resource situations, can effectively produce skilled second language users. The goal of such programs should, at most, be the production of competent intermediate level readers and speakers. From this level students are equipped well enough to further master a second language as far as they choose.

Task based education with a focus on practical knowledge and its application should be encouraged. Education must be seen to yield results that justify its pursuit, and raise the selfesteem of those involved.

The first priority for available funding should be teacher training, books, and mobile libraries equipped with a variety of books, equipment, and materials that can be utilized by entire communities.

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Appendix

Making Handcrafted Books

Handcrafted books are easy to make. Three different kinds of handcrafted books, and how to make them are illustrated in the following photos and instructions.

The first two types are best for books made from a single sheet of paper. The third requires two or more pieces of paper if you wish to give it a cover or make it more substantial.

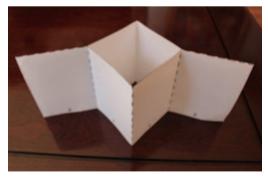
The first "one sheet" type is a very easy way to create something that feels and appears as a simple book.

A1. The dotted lines indicate where to fold, the solid line where to cut. The numbers will appear at the bottom of the pages.



A1

A2. Push the backs of 1 and 2 and the backs of 5 and 6 together. Next push those pieces together so that the backs of 3 and 4 and the backs of 7 and 8 come together.



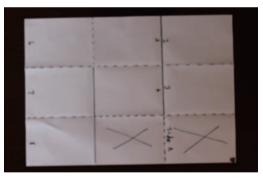
A3. This is how the finished piece should look. Glue the backs of the pages together to form a more permanent book.





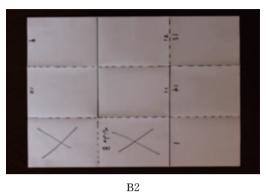
The second "one sheet" type uses both sides of the paper. It results in a book that has 14 pages that repeats around on itself.

B1. Side "A" is laid out below. The numbers will be on the bottom of the pages of the finished book.





B2. Side "B" is laid out below. The numbers will be on the bottom of the pages of the finished book.

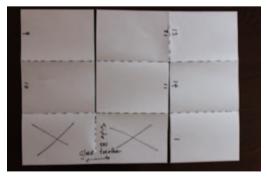


B3. Side "A" after cutting the solid lines.



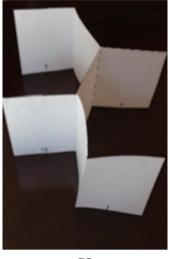


B4. Side "B" after cutting the solid lines.



Glue together the sections with "x" on them.

B5. Stand the resulting construction on its side. It should look the same as the photo.



B5

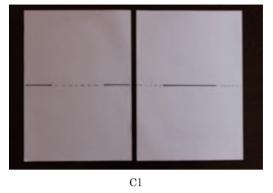
B6. Push the pages together as shown in the photo. The result is a 14 page book that will repeat on itself.



B6

The final book presented is best for constructing bigger, multiple paged books.

C1. The two types of pages for this book are provided. Cut along the solid lines.



C2. Roll together one side of the papers cut from the outsides. Insert the rolled sheets through the center cut in the other papers.



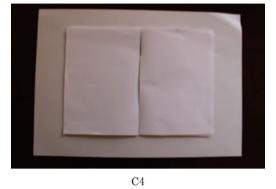
C2

C3. This is how the basic book looks after the rolled pages are pulled through and unrolled flat. Used like this a book made from six sheets of paper has 24 pages if you include the front and back.



The following series of photos will demonstrate how to give the books a harder bound cover.

C4. Place the book on a larger sheet that will become the outer cover.



C5. Fold or mark the cover sheet with the horizontal and vertical sides of the book and the spine.



C5

C6. Fold and cut the cover sheet as shown. Glue down the folded over sections.



C6

C7. On the inner and/or outer sides of the front and back cover pages of the book (C3) glue on more or sturdier paper.



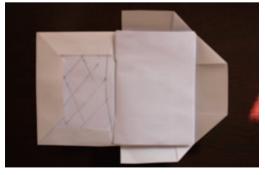


C8. Place the book into the cover from picture C6.



C8

C9. Fold around and glue down the outer flaps of the cover onto the reinforced outer page.



C10. Repeat the process from picture C9 on the other outer page.

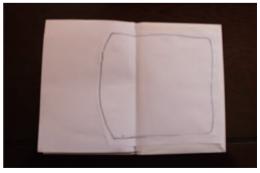


C11. To finish the insides of the cover prepare sheets that extend past the glued down flaps on the insides of the covers but smaller than the cover.



C11

C12. Glue the finishing sheet over the flaps on the insides of the cover. Extending over the center of the book will make the spine stronger.



C13. Finished example. Six sheets of paper and a cover result in a book with a full "hard" cover and twenty inside pages.



C13

和文要旨

最低限の教育資源環境におけるリテラシーと 第2外国語教育プログラム

Lawrence S. LEVY

教育は時間と労力を集中せねばならぬ活動です。限られた資源環境の中では教育は気の遠くなる ような営みです。この論考では、そのような状況下でも質の高いリテラシーの訓練を提供するため に必要なものを探し、考察するものです。リテラシーは、ある人々または一国のいかなる学術的業 績にとっても出発点です。そのようなリテラシーや第2外国語を教授するためのメソッドが発表さ れています。幅広い状況下で応用可能で教育的な発達を支援する低コストのメソッドが数多くあり ます。この拙稿では、そのような環境における教育プログラム、シラバス、そして財源の適正化の ための提言について論じて締めくくることとします。

キーワード: SSR (Sustained Silent Reading: 授業内読書), extensive reading (多読), handcrafted books (手作りの本), literacy (リテラシー), task-based learning (課題学習), minimal resource education (最小限のリソース教育)