

# Annotated Bibliography

## Designing materials for adult learning and low literacy

### Purpose

Oftentimes in development there is a focus on the technical content to be delivered through a curriculum but the same level of attention has not been placed on the learning design, nor of the materials design. We'd like to understand the state of the industry in terms of design for learning (and therefore design for behavior change). Specifically, we would like to understand the extent to which curriculums in international development are designed for use; to what extent have curriculum developers considered the participants' needs? The facilitator's needs? For how adults learn? And, for how adults interact with learning materials?

### Sources sought

Peer reviewed journal articles on any of the following topics:

- Training or teaching low literacy adult populations
- Train the trainer models in international development
- Instructional design in international development
- Visual materials and teaching aids for teaching adults
- Visual materials and teaching aids for facilitators
- Designing learning experiences in international development
- Graphic design best practices for teaching materials
- Approaches to teaching adult learners in international development (e.g., learner-centered, etc.)

### Bibliography

**Altay, Burçak. "User-Centered Design through Learner-Centered Instruction." *Teaching in higher education* 19, no. 2 (February 17, 2014): 138–155.**

This article focuses on the parallels between user-centered design and learner-centered design, focusing on how these parallels can be applied in teaching college-level designers to create a user-centered design. The article discusses the benefits of things such as case-based learning, role-play in teaching, project-based learning, and reflection. This article also advocated for a more universal design approach, which is a bit of a red flag.

**Barton, Koenig. "The Design of a Low Literacy Decision Aid About Rheumatoid Arthritis Medications Developed in Three Languages for Use During the Clinical Encounter." *BMC medical informatics and decision making* 14, no. 1 (November 25, 2014): 104–104.**

This article goes into a detailed description and study of the design process of a low literacy decision aid for rheumatoid arthritis patients. Within the design process, they utilized things such as participatory action research, testing the materials with patients as well as clinicians, and getting feedback on things such as the use of icons, fonts, as well as the overall spacing and pacing of the guide. The article goes into detail about which low literacy guidelines were used, as well as what steps were taken to create this multilingual guide. It also includes example images of what the guide looked like and how it changed throughout the design and research process.

**Boughton, Durnan. "Cuba's 'Yes, I Can' Mass Adult Literacy Campaign Model in Timor-Leste and Aboriginal Australia: A Comparative Study." *International review of education* 60, no. 4 (May 31, 2014): 559–580.**

This article looks into the use of the "Yes, I can!" mass adult literacy campaign that ran in Timor-Leste and Aboriginal Australia. It goes into detail about how that campaign was created and adapted for use within these two locations. It argues for the use of mass literacy campaigns that while tailored slightly to the community do not rely solely on local literacy practices. It details what the program contains, such as DVD recordings, workbooks, and group work led by local facilitators. The study looks into the effects mass literacy campaigns have had on countries and communities as a whole.

**Caposecco, Andrea, Louise Hickson, Carly Meyer. Assembly and Insertion of a Self-Fitting Hearing Aid: Design of Effective Instructional Materials. *Trends in Amplification* 15, no 4. (2011). 184-195. <https://doi.org/10.1177/1084713811430837>**

This article documents the process of developing instructional materials for the insertion of a self-fitting hearing aid - starting with planning, design, assessment, and finally the results of pilot testing. It outlines the best practice design principles that were utilized in developing materials that were able to convey the necessary information to their target audience. They determined that their audience had limited health literacy in addition to visual and cognitive deficiencies. The process highlighted by this article shows the importance of utilizing best practice design principles in order to maximize interest, comprehension, and information recall. This conclusion has the potential to be applied to teaching in low literacy populations.

**Carstens, Adelia. Tailoring print materials to match literacy levels: A challenge for document designers and practitioners in adult literacy. *Language Matters* 35 no. 2 (2004) 35:2, 459-484, DOI: 10.1080/10228190408566229**

This report summarizes research and studies conducted on low literacy populations regarding the development of textual materials. Carstens outlines an existing model of information processing and the difficulties readers with low literacy have at each step of the process. The report continues to examine the evaluative tools used to determine the readability of materials and an individual's literacy level. It lays out the

shortcomings in materials for those with low literacy and suggests a long list of heuristics based on research findings.

**Hanemann, McKay. "Learning in the Mother Tongue: Examining the Learning Outcomes of the South African Kha Ri Gude Literacy Campaign." *International review of education* 65, no. 3 (May 15, 2019): 351–387.**

An examination of the Kha Ri Gude Literacy campaign, analyzing the outcomes through learner assessment of the 485,941 participants across eleven languages. The article addresses the need for literacy teaching within the location's native language while addressing that when teaching literacy in multiple languages within a singular nation, one needs to address the existing hierarchies of language and prejudice within the communities they are teaching. They address the need to teach in a way that enhances the learner's life skills as well as literacy, as well as take into account working memory capacity and tailoring materials to fit within the cultural language context. The article addresses the need for literacy training to be tailored to fit each community and be created with help from local facilitators, backing up this argument with in-depth data analysis.

**Hung, Yah-Ling & Stones, Catherine. Visual Design in Healthcare for Low-Literate Users – A Case Study of Healthcare Leaflets for New Immigrants in Taiwan. (June 2014). 44-55. 10.1007/978-3-319-07635-5\_5.**

Based on interviews with low literacy Vietnamese immigrants to Taiwan, the study created a list of suggestions for design guidelines for informational booklets to increase their effectiveness. Suggestions included specifics regarding the creative idea, typeface, color, photo use, illustration, layout, and cultural design. They were also able to identify aspects that participants found to negatively affect their learning of the material.

**Jong, Ton de. "Cognitive load theory, educational research, and instructional design: some food for thought." *Instr Sci*, no. 38 (2010): 105-134.**

Within this article Jong discusses and reviews different aspects of cognitive load theory. Through referencing other articles that discuss cognitive load theory Jong goes into the main aspect of cognitive load theory such as Intrinsic load, Extraneous load, and German load. This then leads to a discussion on how to lessen cognitive load within the realm of instructional design practice. This article gives insight into the mental work that makes certain materials seem more difficult to understand than others. The article also goes into a detailed discussion of how cognitive load research is done, the flaws within this research as well as discussing the way cognitive load varies from individual to individual based on a number of external causes.

**McLeod, Marie. "What's Right with Me? A Strengths-Based Teaching Approach for Students of Adult Learning." *Fine print* (Melbourne, Vic.) 42, no. 2 (July 2019): 22–26.**

This article discusses how focusing on a student's strengths can help facilitate healthy learning experiences, and inspire students to continue learning. It discusses different methods that can be used to approach spotting and addressing students' strengths. As well as going into how that while acknowledging strengths is important, you should not overly rely on a single strength.

**Muscat, Morony. "Qualitative Insights into the Experience of Teaching Shared Decision Making Within Adult Education Health Literacy Programmes for Lower-literacy Learners." *Health expectations : an international journal of public participation in health care and health policy* 20, no. 6 (December 2017): 1393–1400.**

A trial program used to help low literacy people groups in Australia use Shared Decision Making or (SDM) systems to help them advocate for themselves medically. This article looks into the effectiveness of devices such as discussions and take-home materials, to teach the SDM method to lower literacy communities. In the article, they focus mainly on the teacher's perspective and view on how successful the training was, and why. Things such as time frame, materials, questions, and the reading levels of the content, are brought into question and evaluated if they were effective as a whole within the project.

**Nath, Charlotte. "Literacy and Diabetes Self-Management: Low Literacy Affects Outcomes; Communication Is Key." *The American Journal of Nursing* 107, no. 6 (2007): 43-49. Accessed December 8, 2020. <http://www.jstor.org/stable/40384539>.**

Nath reviews existing literature surrounding literacy, specifically health literacy and the significant impacts it can have on the actual health of individuals - she cites research that found health literacy to be a "stronger predictor of health status" than "socioeconomic status, age or ethnic background". Nath further discusses the assessment tools used by researchers in determining literacy levels before outlining studies that showed the impact of literacy level and an individual's success in health management. Lastly Nash outlines recommended strategies consisting of improved communication between patient and information provider. Strategies included, encouraging self efficacy, design of instructions, teach back, computer assisted instruction and better understanding of the patients culture and needs by the provider.

**Neuhauser, Constantine. "Promoting Prenatal and Early Childhood Health: Evaluation of a Statewide Materials-Based Intervention for Parents." *American journal of public health* (1971) 97, no. 10 (October 1, 2007): 1813–1819.**

A study of the usefulness of a prenatal and early childhood tool designed using participatory design practices. The tool included six videos, a 60-page guide book, brochures, and a book to read aloud to babies (all written materials were written at a sixth-grade level). This study evaluated the tool through several comparison groups (including both English and Spanish speakers), questionnaires, as well as extensive interviews over a fourteen-month period. This in-depth analysis of the tool showed that participatory design practices helped create a more usable design.

**Neuhauser, Linda. "Integrating Participatory Design and Health Literacy to Improve Research and Interventions." *Information services & use* 37, no. 2 (April 1, 2017): 153–176.**

This article focuses on the use of participatory design in developing materials for health literacy. While a good portion of the article focuses on why health literacy is needed, it also addresses how the participatory design practices involving study groups of people the materials were for and medical experts were run as well as their success. It includes case studies that range from the development of a mobile app to creating materials for migrant Chinese workers. This article offers an in-depth study into why participatory design is needed when designing materials for marginalized groups.

**Neuhauser, Rothschild. "Participatory Design of Mass Health Communication in Three Languages for Seniors and People With Disabilities on Medicaid." *American journal of public health* (1971) 99, no. 12 (December 1, 2009): 2188–2195.**

This article details the creation of Mass health communication materials for Medicaid through participatory design practices. This mass communication was created to be aimed at seniors and people with disabilities in order to equip them to make detailed health decisions. The tool consisted of a guide book that went through four tested iterations using consumer and professional testing groups, advisory interviews, usability and readability tests, and focus groups. The article describes the process in-depth and addresses the changes in the adaptations, as well as the benefits of using participatory design practices and research.

**Pettersson, Rune. "Visual Literacy and Message Design." *TechTrends* 53, no. 2 (March 2009): 38–40.**

This short article details the definition of visual literacy and message design. It goes briefly into the science of how visual literacy and message design work hand in hand with many other areas of both design and science. The article discusses how graphic design, information design, instructional design, mass design, and persuasive design are all interconnected and should be studied and treated as interconnected and part of the larger message and visual literacy whole.

**Preidis, Geoffrey A., Conor D. Shapiro, Inobert Pierre, Monica J. Dyer, Claudia A. Kozinetz, and Richard M. Grimes. "An Effective, Low-cost Approach to Implementing HIV/AIDS Education Programs in Low Literacy Populations: An Example from Rural Haiti." *Journal of Health Care for the Poor and Underserved* 21, no. 2 (2010): 430-437. doi:10.1353/hpu.0.0310.**

Reports on the effectiveness of a low-cost education HIV program used in Haiti where a drama performance was created by a youth group to increase knowledge and instigate behavior changes. The performance was based on the personal experiences of the youth group, thus it integrated culturally relevant ideas. The results of the program indicated success in communicating knowledge of resources available to the Haitian communities and some change in behavior.

**Purcell-Gates, Victoria, Sophie C. Degener, Erik Jacobson, and Marta Soler. "Impact of Authentic Adult Literacy Instruction on Adult Literacy Practices." *Reading Research Quarterly* 37, no. 1 (Jan, 2002): 70-92.**

Study to expand research into adult literacy and the forms that produce the most effective results for adults. They conducted surveys of adult learners and the programs to explore the relationships between the types of literacy instruction and the changes in literacy practices in adult students after instruction. The results found that students in classes that utilized a greater degree of authentic, contextualized activities and materials were more likely to report changes in their literacy practices. These findings highlight the importance of the format and type of adult literacy instruction on actual effectiveness for the learner.

**Rajapakse, Neeman. "The Effectiveness of a 'Train the Trainer' Model of Resuscitation Education for Rural Peripheral Hospital Doctors in Sri Lanka." *PloS one* 8, no. 11 (2013): e79491–e79491.**

This study evaluates the effectiveness of the Train the Trainer model in teaching resuscitation to rural previously untrained doctors in Sri Lanka. Eight trainers were trained by specialists, then sent to peripheral hospitals to teach workshops. In the study, they tracked the effectiveness of the train the trainer model through statistical analysis and observation of the doctors taught by the trained doctors. This study goes into great depth into what aspects of the training were successful, such as the use of video and hands-on training with dummies, how the trainers were trained, as well as how well the training stood up over the test of time. This study found that the train the trainer model was successful and effective in teaching resuscitation practices.

**Sichula, N.K., Genis, G. Pedagogical practices in non-formal adult literacy classes in Zambia. *Int Rev Educ* 65, 879–903 (October 2019). <https://doi.org/10.1007/s11159-019-09808-y>**

Studied the application of pedagogical practices in non-formal adult literacy classes in Zambia as implemented by both government agencies and an NGO. The Zambian government-directed use of learner-centered practices in adult literacy classes, however, this study found a disconnect between managers and policy and the facilitators. Through interviews and discussions conducted with literacy managers, facilitators, and learners they found teacher-centered and lecture-based pedagogical approaches being used most. Their findings found this to be partly a result of assumptions about the ignorance and illiteracy of the adult learners.

**Thorning, Helle, Tazuko Shibusawa, Ellen Lukens, and Lin Fang. "Developing a Train-the-Trainer (TTT) Model for Social Work Education in Kazakhstan." *International Social Work* 56, no. 4 (July 2013): 534–43. <https://doi.org/10.1177/0020872812437064>.**

Reports the development, implementation, and evaluation of a train the trainer model used in Kazakhstan to train social workers. It was a collaboration between teams in the US and in Kazakhstan and took place in both countries. Trainers were trained over the course of several months both at a larger training in Kazakhstan and a smaller one in New York. The results of the TTT program appear to be relatively

successful however there were issues in conveying concepts that were grounded in western cultural assumptions.

**Warkineh, Warkineh. "Profiling Adult Literacy Facilitators in Development Contexts: An Ethnographic Study in Ethiopia." *International review of education* 64, no. 1 (February 2018): 9–30.**

This study works to shed light on the literacy facilitators and teachers in Ethiopia and serves as a launching point into a further discussion as to how to help facilitators in low literacy areas. In this study, they interview five facilitators on topics such as their background, education, aspirations, training, support system, or lack thereof. Addressing issues such as poverty, sexism, lack of full-time employment, and lack of training that many facilitators face. Through the study focuses on a small study group of five facilitators it does address how these issues cause difficulties for facilitators as a whole while calling for more work to be done in studying what facilitators need to be successful.

**Wickens, Sandlin. "Literacy for What? Literacy for Whom? The Politics of Literacy Education and Neocolonialism in UNESCO- and World Bank–Sponsored Literacy Programs." *Adult education quarterly (American Association for Adult and Continuing Education)* 57, no. 4 (July 26, 2016): 275–292.**

This article focuses on how adult literacy programs can propagate neocolonialism through things such as funding, and financial structures. The first part reviews literature on education, neocolonialism and post colonial theory before analyzing literacy programs sponsored by UNESCO and the World bank. Their analysis framework examines the literacy programs in terms of their purposes/goals as well as their funding. Their final conclusion maintains that there is a connection between literacy, funding of literacy education and globalization whereby the organizations leading such programs are largely entrenched in neocolonial practices/ideologies.

**Windisch, H.C. How to motivate adults with low literacy and numeracy skills to engage and persist in learning: A literature review of policy interventions. *Int Rev Educ* 62, 279–297 (April, 2016): 279-297 <https://doi.org/10.1007/s11159-016-9553-x>**

Focuses on low literacy and numeracy within more developed countries - adults who went to school but do not have high levels of proficiency. Suggests the use of formative assessment, e-learning outside of the classroom, a "contextualized" approach to basic skills including family literacy programs and workplace skill courses as appropriate tools and techniques to address low adult literacy.