



Network for Information and Digital Access

The impact of Science Literacy delivery methods - what works?

Bibliography

Brochures | Group 3. Traditional publishing and journalism - print and broadcast

Ver. 2.00

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Introduction

This thematic bibliography is the result of research to survey existing literature available on Science Literacy delivery methods.

The search was carried out by retrieving documents and articles from a wide range of sources, including research databases, Google Scholar, ResearchGate, subject databases, open access repositories etc. using keyword combinations.

The results of the resource discovery are divided into two groups: one containing impact assessments using qualitative, quantitative or mixed method (both qualitative and quantitative) approaches to data collection and a second including descriptive resources, which encompass, for example, reviews, guides, handbooks, reports and project reports.

This bibliography is work in progress and is not designed to be fully exhaustive or complete. We will be pleased to receive suggestions and recommendations for additions that can contribute to the understanding of science, its applications and, to the promotion of science literacy.

Groups and methods list

During the first part of the Desk Research phase of this project (i.e. Task 1), the team identified 42 single-mechanism approaches, 2 composite approaches and 1 related approach that were relevant to the delivery and dissemination of scientific information. The list of single mechanisms was further organised into 7 thematic groups, as presented in the following Table.

Single mechanism approach	Group
Exhibitions, Expo, Festivals, Movies, Picnics, Science fairs, Seminars, Talks, TED Talks, Theatre, Workshops	1. Events, meetings, performances
Colloquia, Courses, Curricula, E-learning, Webinars	2. Education and training – including online
Animations, Books, Brochures, Cartoons, Comics, Games, Graphics, Posters, Publications, Radio, Reports, TV, Videos	3. Traditional publishing and journalism – print and broadcast
Competitions, Experiments, Makerspaces, Mobile classrooms, Mobile laboratories	4. Activities and services
Blogs, E-books, E-zines, Mobile Apps, Podcasts, Social media, Websites, Wikis	5. Online interactions
Composite approaches	
Multiliteracies	
Multimodalities	
Related approach	
Citizen Science	

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Impact Assessment

- Anthony, Robert J., Christine D. Tippet, and Larry D. Yore. 2010. "Pacific CRYSTAL Project: Explicit Literacy Instruction Embedded in Middle School Science Classrooms." *Research in Science Education* 40 (1): 45–64. <https://doi.org/10.1007/s11165-009-9156-7>.
- Barragán, Maribel, Giselle Hicks, Mark V. Williams, Carlos Franco-Paredes, Wayne Duffus, and Carlos del Rio. 2005. "Low Health Literacy Is Associated with HIV Test Acceptance." *Journal of General Internal Medicine* 20 (5): 422–25. <https://doi.org/10.1111/j.1525-1497.2005.40128.x>.
- Bester, Nicolette, Michelle Di Vito-Smith, Theresa McGarry, Michael Riffkin, Stefan Kaehler, Richard Pilot, and Robert Bwire. 2016. "The Effectiveness of an Educational Brochure as a Risk Minimization Activity to Communicate Important Rare Adverse Events to Health-Care Professionals." *Advances in Therapy* 33 (2): 167–77. <https://doi.org/10.1007/s12325-016-0284-y>.
- Clark, K. L., R. AbuSabha, A. von Eye, and C. Achterberg. 1999. "Text and Graphics: Manipulating Nutrition Brochures to Maximize Recall." *Health Education Research* 14 (4): 555–64. <https://www.ncbi.nlm.nih.gov/pubmed/10557525>.
- Davis, T. C., D. D. Fredrickson, C. Arnold, P. W. Murphy, M. Herbst, and J. A. Bocchini. 1998. "A Polio Immunization Pamphlet with Increased Appeal and Simplified Language Does Not Improve Comprehension to an Acceptable Level." *Patient Education and Counseling* 33 (1): 25–37. <https://www.ncbi.nlm.nih.gov/pubmed/9481346>.
- Friedrich, M., T. Cermak, and P. Maderbacher. 1996. "The Effect of Brochure Use versus Therapist Teaching on Patients Performing Therapeutic Exercise and on Changes in Impairment Status." *Physical Therapy* 76 (10): 1082–88. <https://www.ncbi.nlm.nih.gov/pubmed/8863761>.
- Gebhard, Robyn D., Marilyn J. Goske, Shelia R. Salisbury, A. Catherine Leopard, and Dianne M. Hater. 2015. "Improving Health Literacy: Use of an Informational Brochure Improves Parents' Understanding of Their Child's Fluoroscopic Examination." *American Journal of Roentgenology* 204 (1): W95–103. <https://doi.org/10.2214/AJR.14.12573>.
- Helitzer, Deborah, Christine Hollis, Jane Cotner, and Nancy Oestreicher. 2009. "Health Literacy Demands of Written Health Information Materials: An Assessment of Cervical Cancer Prevention Materials." *Cancer Control* 16 (1): 70–78. <https://doi.org/10.1177/107327480901600111>.
- Jacobson, T. A., D. M. Thomas, F. J. Morton, G. Offutt, J. Shevlin, and S. Ray. 1999. "Use of a Low-Literacy Patient Education Tool to Enhance Pneumococcal Vaccination Rates. A Randomized Controlled Trial." *JAMA* 282 (7): 646–50. <https://www.ncbi.nlm.nih.gov/pubmed/10517717>.
- Khan, Khadija, Brendan Ruby, Ruth S Goldblatt, Jean J Schensul, and Susan Reisine. 2014. "A Pilot Study to Assess Oral Health Literacy by Comparing a Word Recognition and Comprehension Tool." *BMC Oral Health* 14 (1): 162–67. <https://doi.org/10.1186/1472-6831-14-135>.
- Kools, Marieke, Robert A. C. Ruiter, Margaretha W. J. Wiel, and Gerjo Kok. 2007. "Testing the Usability of Access Structures in a Health Education Brochure." *British Journal of Health Psychology* 12 (4): 525–41. <https://doi.org/10.1348/135910706X132930>.
- Lin, Xiao. 2013. "The Impact of Comics on Audiences' Knowledge of, Attitude toward, and Behavioral Intentions Related to Wind Energy." Master's thesis, Ames, Iowa: Iowa State University. <https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=4269&context=etd>.
- Meade, C. D., W. P. McKinney, and G. P. Barnas. 1994. "Educating Patients with Limited Literacy Skills: The Effectiveness of Printed and Videotaped Materials about Colon Cancer." *American Journal of Public Health* 84 (1): 119–21. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1614927/>.

- Michielutte, Robert, Judy Bahnson, Mark Dignan, and Elissa Schroeder. 1992. "The Use of Illustrations and Narrative Text Style to Improve Readability of a Health Education Brochure." *Journal of Cancer Education* 7 (3): 251–60. <https://doi.org/10.1080/08858199209528176>.
- Murphy, P. W., A. L. Chesson, L. Walker, C. L. Arnold, and L. M. Chesson. 2000. "Comparing the Effectiveness of Video and Written Material for Improving Knowledge among Sleep Disorders Clinic Patients with Limited Literacy Skills." *Southern Medical Journal* 93 (3): 297–304. <https://www.ncbi.nlm.nih.gov/pubmed/10728518>.
- Perry, C., J. Albrecht, R. Litchfield, R.L. Meysenburg, I.N. Er, A. Lum, S. Beattie, et al. 2012. "The Development of a Food Safety Brochure for Families: The Use of Formative Evaluation and Plain Language Strategies." *Journal of Extension* 50 (1, Article RIB3): 9. <https://www.ioe.org/ioe/2012february/rb3.php>.
- Tippett, C., L. Yore, and Anthony R. 2008. "Creating Brochures: An Authentic Writing Task for Representing Understanding in Middle School Science." In *Planning Science Instruction: From Insight to Learning to Pedagogical Practices*, 46–51. Reykjavík, Iceland. http://mennta.hi.is/malthing_radstefnur/symposium9/webbook/1_papers.pdf.
- Whittingham, J. R. D., R. A. C. Ruiter, D. Castermans, A. Huiberts, and G. Kok. 2008. "Designing Effective Health Education Materials: Experimental Pre-Testing of a Theory-Based Brochure to Increase Knowledge." *Health Education Research* 23 (3): 414–26. <https://doi.org/10.1093/her/cym018>.

Descriptive Resources

- AMC Cancer Research Center (Denver, Colo.), and Centers for Disease Control and Prevention (U.S.). 1994. *Beyond the Brochure: Alternative Approaches to Effective Health Communication*. <https://stacks.cdc.gov/view/cdc/6199>.
- Basu, Arindam, and Health Services Assessment Collaboration (Group). 2010. *Interventions to Mitigate the Effects of Low Health Literacy*. Christchurch, N.Z.: HSAC. http://www.healthsac.net/downloads/publications/HSAC36%20Health%20Literacy_150411_FINAL.pdf.
- De Walt, D.A., and J. McNeill. 2013. "Integrating Health Literacy with Health Care Performance Measurement." <http://nam.edu/wp-content/uploads/2015/06/BPH-IntegratingHealthLiteracy.pdf>.
- Freda, Margaret Comerford. 2005. "The Readability of American Academy of Pediatrics Patient Education Brochures." *Journal of Pediatric Health Care* 19 (3): 151–56. <https://doi.org/10.1016/j.pedhc.2005.01.013>.
- Haute Autorité de santé. 2008. "How to Produce an Information Brochure for Patients and Users of the Healthcare System." Haute Autorité de santé. https://www.has-sante.fr/portail/upload/docs/application/pdf/2009-10/how_to_produce_an_information_brochure_-_methodology_guide.pdf.
- Hillebert, Amanda R. 2014. "Instructional Technology and Literacy Performance." Master's thesis, Fredonia, New York: State University of New York. <http://hdl.handle.net/1951/64523>.
- Jahan, Saulat, AbdullahM Al-Saigul, AliM Alharbi, and MuzamilH Abdelgadir. 2014. "Suitability Assessment of Health Education Brochures in Qassim Province, Kingdom of Saudi Arabia." *Journal of Family and Community Medicine* 21 (3): 186. <https://doi.org/10.4103/2230-8229.142974>.
- Kondilis, B.K., P.D. Akrivos, T.A. Sardi, E.S. Soteriades, and M.E. Falagas. 2010. "Readability Levels of Health Pamphlets Distributed in Hospitals and Health Centres in Athens, Greece." *Public Health* 124 (10): 547–52. <https://doi.org/10.1016/j.puhe.2010.05.010>.

Kools, Marieke, Robert A. C. Ruiters, Margaretha W. J. van de Wiel, and Gerjo Kok. 2004. "Increasing Readers' Comprehension of Health Education Brochures: A Qualitative Study Into How Professional Writers Make Texts Coherent." *Health Education & Behavior* 31 (6): 720–40. <https://doi.org/10.1177/1090198104263340>.

Pignone, Michael, Darren A. DeWalt, Stacey Sheridan, Nancy Berkman, and Kathleen N. Lohr. 2005. "Interventions to Improve Health Outcomes for Patients with Low Literacy: A Systematic Review." *Journal of General Internal Medicine* 20 (2): 185–92. <https://doi.org/10.1111/j.1525-1497.2005.40208.x>.

Primack, Brian A., Thuy Bui, and Carl I. Fertman. 2007. "Social Marketing Meets Health Literacy: Innovative Improvement of Health Care Providers' Comfort with Patient Interaction." *Patient Education and Counseling* 68 (1): 3–9. <https://doi.org/10.1016/j.pec.2007.02.009>.