NIDA

Network for Information and Digital Access

The impact of Science Literacy delivery methods - what works?

Bibliography

Webinars | Group 2. **Education and training - including online**

Ver. 2.00

Date: May 2019

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	

Impact Assessment

Amhag, Lisbeth. 2013. "Collective Webinars in Higher Distance Education." In *Proceedings of E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2013*, edited by Theo Bastiaens and Gary Marks, 1706–1715. Las Vegas, NV, USA: Association for the Advancement of Computing in Education (AACE). https://www.learntechlib.org/p/115125.

Best, Ruth. 2016. "An Online Statistics Course From Faculty and Students' Perspectives: A Case Study." PhD thesis, Minneapolis: Walden University. https://scholarworks.waldenu.edu/dissertations/2202/.

Black, Agnes T., Marion Clauson, and Shelley Fraser. 2013. "Nursing Education and Research Rounds: Evaluation of a Webinar-Based Education Strategy to Engage Nurses and Support Practice." *Journal for Nurses in Professional Development* 29 (5): 249–54. https://doi.org/10.1097/01.NND.0000433148.41255.06.

Davis, Barbara D., Mary Flannery, and Jeannie S. Payne. 2012. "A Webinar Case Study by a Clinical Microbiologist to Microbiology and Physiology Students: An Integrative Learning Experience." *Journal of Microbiology & Biology Education* 13 (1): 91–93. https://doi.org/10.1128/jmbe.v13i1.385.

deCharon, Annette. 2014. "Mapping Out Scientists' Messages: Models That Support Collaborative Critical Thinking." In *Cases on Teaching Critical Thinking through Visual Representation Strategies:*, 28. Advances in Educational Technologies and Instructional Design. IGI Global. https://doi.org/10.4018/978-1-4666-5816-5.

Gilkey, Melissa B, Jennifer L Moss, Alyssa J Roberts, Amanda M Dayton, Amy H Grimshaw, and Noel T Brewer. 2014. "Comparing In-Person and Webinar Delivery of an Immunization Quality Improvement Program: A Process Evaluation of the Adolescent AFIX Trial." *Implementation Science* 9 (1). https://doi.org/10.1186/1748-5908-9-21.

Hamstra, Dan, Jyllian N. Kemsley, Desmond H. Murray, and David W. Randall. 2011. "Integrating Webinar and Blogging Technologies into Chemistry Seminar." *Journal of Chemical Education* 88 (8): 1085–89. https://doi.org/10.1021/ed1007734.

Mayorga, Eduardo, AnaG Palis, and JesicaG Bekerman. 2014. "Webinar Software: A Tool for Developing More Effective Lectures (Online or in-Person)." *Middle East African Journal of Ophthalmology* 21 (2): 123. https://doi.org/10.4103/0974-9233.129756.

Mohorovičić, S., J. Lasić-Lazić, and V. Strčić. 2011. "Webinars in Higher Education." In *2011 Proceedings of the 34th International Convention MIPRO*, 1271–74. Opatija, Croatia: IEEE. https://ieeexplore.ieee.org/abstract/document/5967253/.

Moss, Jennifer L., Paul L. Reiter, Amanda Dayton, and Noel T. Brewer. 2012. "Increasing Adolescent Immunization by Webinar: A Brief Provider Intervention at Federally Qualified Health Centers." *Vaccine* 30 (33): 4960–63. https://doi.org/10.1016/j.vaccine.2012.05.042.

Nagy, Judit T., and Mária Bernschütz. 2015. "The Impact of Webinar-Webcast System on Learning Performance." *Education and Information Technologies* 21 (6): 1837–45. https://doi.org/10.1007/s10639-015-9422-4.

NASA. n.d. "Aquarius." NASA Mission EPO Metrics. Accessed August 1, 2018. http://nasamissionepometrics.org/aquarius/.

Nelson, L.S. 2010. "Learning Outcomes of Webinar versus Classroom Instruction among Baccalaureate Nursing Students: A Randomized Controlled Trial." PhD thesis, Denton, Texas: College of Nursing,. https://core.ac.uk/download/pdf/50516668.pdf.

Reinke, Lynn F., Randall G. Griffith, Seth Wolpin, DorAnne Donesky-Cuenco, Virginia Carrieri-Kohlman, and Huong Q. Nguyen. 2010. "Feasibility of a Webinar for Coaching Patients With Chronic Obstructive

Pulmonary Disease on End-of-Life Communication." *American Journal of Hospice and Palliative Medicine®* 28 (3): 147–52. https://doi.org/10.1177/1049909110376807.

Stein, Gerald H., Ayako Shibata, Miho Kojima Bautista, and Yasuharu Tokuda. 2010. "Webinar : An Initial Experience with Web-Based Real Time Interactive Clinical Seminars for Japanese Medical Students." *General Medicine* 11 (2): 87–90. https://doi.org/10.14442/general.11.87.

Sypsas, Athnanasios, Eugenia Toki, and Jenny Pange. 2015. "Supporting Undergraduate Students via Webinars." In *2015 International Conference on Interactive Mobile Communication Technologies and Learning (IMCL)*, 227–31. Thessaloniki, Greece: IEEE. https://doi.org/10.1109/IMCTL.2015.7359592.

Wang, Shiang-Kwei, and Hui-Yin Hsu. 2008. "Use of the Webinar Tool (Elluminate) to Support Training: The Effects of Webinar-Learning Implementation from Student-Trainers' Perspective." *Journal of Interactive Online Learning* 7 (3): 175–94. 1541-4914.

Descriptive Resources

Badia, Giovanna, and April Colosimo. 2013. "Best Practices for Engaging Users in AWeb Conferencing Environment." In *Information Tools and Techniques for Engineering Education*, 14. Atlanta, Georgia. https://peer.asee.org/1925.

Bates, Mary Ellen, and Cathey Chiba. 2015. "Secrets of Successful Webinars." Online Searcher. 2015. http://www.infotoday.com/OnlineSearcher/Articles/Features/Secrets-of-Successful-Webinars-106050.shtml.

EIFL-PLIP. 2013. "Farmers Value Rural Library Webinars Klintaine Public Library, Latvia." http://www.eifl.net/resources/klintaine-public-library-latvia-farmers-value-rural-library-webinars.

Fenz, Andrea. 2017. "From Creating Joyful Learning Experience into Active Citizenship - Trainer's Toolkit." Text. EPALE - European Commission. 2017. https://ec.europa.eu/epale/en/resource-centre/content/adult-literacy-trainers-toolkit-methods-joyful-teaching.

Kaushik, Anna. 2015. "MOOCs and Library and Information Science Domain: A Review of Selected Literature." *International Journal of Information Dissemination and Technology* 5 (3): 188–95. http://www.ijidt.com/index.php/ijidt/article/view/5.3.9.

Verma, Anuradha, and Anoop Singh. 2010. "Webinar – Education through Digital Collaboration." *Journal of Emerging Technologies in Web Intelligence* 2 (2). https://doi.org/10.4304/jetwi.2.2.131-136.

Zoumenou, Virginie, Madeleine Sigman-Grant, Gayle Coleman, Fatemeh Malekian, Julia M. K. Zee, Brent J. Fountain, and Akela Marsh. 2015. "Identifying Best Practices for an Interactive Webinar." *Journal of Family & Consumer Sciences* 107 (2): 62–69. http://www.ingentaconnect.com/content/aafcs/jfcs/2015/00000107/00000002/art00012.