



Network for Information and Digital Access

The impact of Science Literacy delivery methods - what works?

Bibliography

Mobile Classrooms | Group 4. Activities and services

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	

Attribution 4.0 International (CC BY 4.0)

Impact Assessment

- Edgar, Leslie D., Don Edgar, and Kristin Pennington. 2014. "An Assessment of Visual Communications Pilot Curriculum in Arkansas Secondary Agricultural Science Programs." *NACTA Journal* 58 (3): 262–68. <https://www.jstor.org/stable/nactajournal.58.3.262>.
- Estes, Stuart, Kristin Pennington, and Leslie Edgar. 2012. "Visual Communications on the Road in Arkansas: Analysis of Secondary Students Videos." *Discovery, The Student Journal of Dale Bumpers College of Agricultural, Food and Life Sciences* 13 (1): 11–16. <https://scholarworks.uark.edu/discoverymag/vol13/iss1/5>.
- Monk, K. I., J. S. Norwood, and M. J. Guthrie. 2000. "Effectiveness of the Southwest Dairy Center Mobile Classroom in Promoting Agricultural Literacy." *Texas Journal of Agriculture and Natural Resources* 13 (0): 8–13. <http://txjanr.agintexas.org/index.php/txjanr/article/view/177>.
- Mozelius, Peter, and Amit Roy. 2012. "Education on Wheels – Mobile Dissemination of E-Services and Computer Based Learning in Rural Gujarat, India." In , 10. Groningen, Netherlands. https://www.researchgate.net/publication/261676544_Education_on_Wheels_-_Mobile_Dissemination_of_E-services_and_Computer_Based_Learning_in_Rural_Gujarat_India.
- Pennington, Kristin. 2012. "Knowledge and Perceptions of a Visual Communications Curriculum Unit in Arkansas Secondary Agricultural Classrooms: An Impact of Experiential Learning." Master's thesis, Fayetteville, USA: University of Arkansas. <https://scholarworks.uark.edu/etd/282>.
- Segrott, Jeremy, Jo Holliday, Simon Murphy, Sarah Macdonald, Joan Roberts, Laurence Moore, and Ceri Phillips. 2017. "Implementation of a Cooking Bus Intervention to Support Cooking in Schools in Wales, UK." *Health Education (Bradford, West Yorkshire, England)* 117 (3): 234–51. <https://www.ncbi.nlm.nih.gov/pubmed/28725120>.

Descriptive Resources

- Chang, C.Y., J.P. Sheu, and T.W. Chan. 2003. "Concept and Design of Ad Hoc and Mobile Classrooms: Ad Hoc and Mobile Classrooms." *Journal of Computer Assisted Learning* 19 (3): 336–46. <https://doi.org/10.1046/j.0266-4909.00035.x>.
- Dover, Terry Franklin. 2004. "A Case Study of Teachers' Perspectives on the Impact of Transient Students in a Highly Mobile Elementary School." PhD thesis, Athens, Georgia: The University of Georgia. <http://hdl.handle.net/10724/21481>.
- Duggan, Stephen, and Lyndall Boyle. 1990. "Curriculum Decision Making for National Interest in the Tertiary Sector: An Evaluation of a Curriculum Project." *Australian Journal of Teacher Education* 15 (2): 10. <https://doi.org/10.14221/ajte.1990v15n2.1>.
- Guerin-Lesueur, Claire. 2003. *When School Comes to the Children*. Brothers of the Christian Schools. <https://books.google.co.uk/books?id=1bAenQAACAAJ>.
- Hamdan, Khaled. 2016. "The Effect of Using Mobile Classroom Response System on Students' Eng..." Education. <https://www.slideshare.net/BCcampus/the-effect-of-using-mobile-classroom-response-system-on-students-engagement-and-performance>.
- Huang, Yi-Ting. 2015. "Participatory Design to Enhance Ict Learning and Community Attachment: A Case Study in Rural Taiwan." *Future Internet* 7 (1): 50–66. <https://www.mdpi.com/1999-5903/7/1/50/htm>.

- Lawrence, Sarah, Daniel O'Reilly, and Maura McKee. 2013. *Future Classroom. Introducing Mobile Technology. A Handbook for All Schools in Northern Ireland*. Northern Ireland, UK: Creative Learning Centres 2. <http://futureclassrooms.org/wp-content/uploads/2013/03/FUTURE-CLASSROOMS-HANDBOOK.pdf>.
- Marcial, Dave E. 2015. "Teacher Education Perceptions of a Proposed Mobile Classroom Manager." *IAFOR Journal of Education* spec ed: 13–19. <https://eric.ed.gov/?id=EJ1100668>.
- McQuiggan, Scott, Jamie McQuiggan, Jennifer Sabourin, and Lucy Kosturko. 2005. *Mobile Learning: A Handbook for Developers, Educators, and Learners*. <https://www.wiley.com/en-gb/Mobile+Learning%3A+A+Handbook+for+Developers%2C+Educators%2C+and+Learners-p-9781118894309>.
- Puckett, Steven. 2015. "Teacher Perceptions of Bring Your Own Technology Classrooms." PhD thesis, Statesboro, Georgia: Georgia Southern University. <https://digitalcommons.georgiasouthern.edu/etd/1230>.
- Shen, Ruimin, Minjuan Wang, Wanping Gao, Daniel Novak, and Lin Tang. 2009. "Mobile Learning in a Large Blended Computer Science Classroom: System Function, Pedagogies, and Their Impact on Learning." *IEEE Transactions on Education* 52 (4): 538–46. <https://doi.org/10.1109/TE.2008.930794>.
- Siau, K., H. Sheng, and F.F.-H. Nah. 2006. "Use of a Classroom Response System to Enhance Classroom Interactivity." *IEEE Transactions on Education* 49 (3): 398–403. <https://doi.org/10.1109/TE.2006.879802>.
- Tolboom, J., and W. Kuiper. 2013. "How to Utilize a Classroom Network to Support Teacher Feedback in Statistics Education." In *Educational Design Research: Introduction and Illustrative Cases*, 665–93. Netherlands: SLO. <http://dspace.library.uu.nl/handle/1874/289588>.
- Wong, Anson. 2016. "Classroom Response Systems and Student Performance Improvement: Local Versus International Students." *Journal of Teaching in International Business* 27 (4): 197–208. <https://doi.org/10.1080/08975930.2017.1302393>.
- Yılmaz, Özkan, and Vehbi Aytakin Sanalan. 2014. "Establishing Interactive Classroom Environment in Science Instruction: Problems of M-SES Usage." *Journal of Education Faculty* 16 (2): 157-166–166. <https://doi.org/10.17556/jef.74863>.