

## Documenting and Assessing Learning in Media-Rich Informal Environments

Jay Lemke, Robert Lecusay, Michael Cole & Vera Michalchik. Cambridge: MIT Press. 2015

*Reviewed by Paige Mustain (University of Oxford)*

The new MacArthur Foundation funded report *Documenting and Assessing Learning in Media-Rich Informal Environments* (2015), by leading scholars in human development and learning from the University of California, San Diego and Stanford University's Center for Teaching and Learning, helps us reframe the way we assess and understand learning in media-focused and informal environments. The authors offer a model of assessment for informal learning programs with an overview of various methods, approaches and recommendations for good practices in project assessment while also identifying needs for improved assessment techniques. Their proposed model is called the outcomes-by-levels model for assessment which outlines at least ten valued outcomes for learning at the project, group, and individual levels. With the sustained interest and proliferation of technology-centred education initiatives, both inside and outside of school, the report equips other scholars and education stakeholders with a useful framework for answering the pressing call for more evidence-based reviews of how effective and sustainable these initiatives are.

The central point made in the report is that “the scope of valued learning outcomes for informal learning activities should include social, emotional, and developmental outcomes as well as content knowledge and should include learning by groups and whole projects as well as by individuals” (p.89, emphasis in original). The authors are encouraging a more holistic conceptualisation of learning assessment that considers socio-emotional and development outcomes through an evaluation of learning at three distinct but interconnected levels of analysis (individual, group, and project). Learning at these three levels are linked and in order to understand learning at one level one needs to understand what is happening at the others. Specifically in the context of informal environments, the authors write that comprehensive models are necessary “because the valued outcomes of informal learning tend to be less predictable and much more diverse than those of formal education” (p.5).

The report is organised into four sections: introduction, review of the literature on assessment of learning in informal settings, highlights from expert meetings, and

conclusions and recommendations. A majority of the report is dedicated to the review of selected and representative research projects, giving readers an overview of various methods and approaches in informal learning settings and providing recommendations for good practices in project assessment. The review focuses on (1) after-school programs (2) community center programs (3) museum-based programs and (4) online communities and forums. The levels of analysis (individual, group, or project), valued-learning outcomes and methods are outlined for each study.

Following the review of literature and research projects, the authors discuss highlights from three expert meetings where twenty-five senior researchers discussed project design and development, assessment and outcomes, and external evaluations of programmatic initiatives from a range of informal learning environments. Given the fact that learning and development are long term processes and recognising that communities are multi-faceted, heterogeneous entities, the authors argue that "...efforts to fully assess the effects of learning experiences must be based on longitudinal, ethnographic records, such as collections of material objects and semiotic products with in-progress versions over time" (p.84, emphasis in original).

Among the many helpful insights and recommendations put forth, the report's most useful contribution is its proposed outcomes-by-levels model, especially in conjunction with the ten general types of valued outcomes. This is a critical resource for anyone evaluating the learning and development that is taking place in informal environments. The model is comprehensive enough to account for the diverse interests of the learners participating in these programs. In line with their comprehensive reconceptualization of learning outcomes, the authors argue that there needs to be special consideration of the institutional contexts, history of the program, and community included in the assessment. This is especially vital when considering the issues arising from the one-size-fits-all policies that continue to be produced which fail to see that sociocultural and situational barriers are often the reasons for ineffective policies in this area.

As a technology and education researcher, I found myself looking for more in terms of how the assessment of learning differs between media-rich and non-media-rich, informal environments. Despite the report focusing on media-rich learning programs and projects, the media element is decentred here. The authors do offer useful insights on ways technological resources can be used in the documentation process, such as computer-assisted learning games. However, we are missing a discussion on the role media plays in shaping these informal learning environments and the impact this has on the learning that is taking place. With this being said, the authors do note in their recommendations that each project needs to be assessed based on its specific context and aim, meaning those involved in these media-rich learning environments would presumably take the media element into account in their assessment. However, there is no direct engagement with its role or how learning in media-rich versus media-free environments might be assessed differently; this warrants attention in a future report.

While there is a rich history of learning assessment research in traditional school-based structured learning environments, there is a surprising dearth when it comes to learning assessment in informal media-rich environments. It is indeed surprising

when you consider the staggering number of media-centred after-school programs and community-based education initiatives that have been established in the past decade and which are continuing to grow at an unprecedented rate. The authors provide us with an extensive bibliography in Appendix B that includes research done for these programs, illustrating just how widespread they are. This makes it even more critical that there is a model in place to document and assess learning in these spaces. Ultimately, this report is a timely and necessary resource for anyone in the field of education or involved in community-based research, including educators, scholars, and policymakers. Given their reach and continued growth, we need to take seriously the learning outcomes and sustainability of these initiatives. This report gives us a much-needed framework and direction to start answering the field's more impending questions.