Digital Literacy for ALL Learners

Introduction

The Digital Literacy for All Learners project within the Center for Digital Inclusion is working to develop and share models for contextualized digital literacy & innovation programming that empower citizens to affect social change. Guided by the Critical Interpretive Sociotechnical (CIS) framework that seeks to foster knowledge power & challenge exclusionary forces, our participatory leadership process works to advance community agency and self-efficacy at each point of the information, knowledge, action, power cycle. The three core foundations of our demystifying technology pedagogy encourage participants to progress from passive use of technical artifacts to co-creation of innovations-in-use by community, in community, for community: 1) Computational thinking & inquiry-based learning to advance critical thinking; 2) The critical interpretive sociotechnical framework to advance a critical perspective regarding the relationship between the social & the technical; and 3) A revolution of values to advance a humanizing & people-centered approach grounded in popular power.  

---


Site Example

The first big project at the Urbana Neighborhood Connections Center (UNCC) was upgrading their current lab. Over the course of several weeks, 24 new desktop computers were brought in. Instead of having adults set up the lab, we enlisted the help of the students of UNCC. Using this hands-on approach, we demystified knowledge power as students learned about how computers are put together, and the various cords and ports needed for a computer to run. Students worked together to hook up the computers and check to see if the computer worked. With a fully functioning lab, the next step was to install a new Ethernet switch to network these computers, creating an opportunity for critical thinking. The approach fostered community and collaboration, tapping into each student's expertise to build something that benefits all, thereby championing a people-centered approach.

Site Example

A Silhouette Cameo digital cutter used at the Teen Open Lab

One of the technologies available at the Teen Open Lab at the Urbana Free Library is the Silhouette Cameo digital cutter. In order to encourage inquiry-based learning, when teens ask what it is for, I offer suggestions of things they could do and then guide them to come up with the project they want to make. The project further evolves as they learn more about the design software – Silhouette Studio – as well as the cutting and drawing capabilities of the machine. Using a popular education pedagogy, the instruction process is a collaboration of my knowledge and the teen’s knowledge in order to complete the project. For example, in helping a young lady make a birthday card, we talked about possibilities, she identified an idea in line with her purposes, and we worked together on it. In expanding her knowledge power, she was empowered to work independently on a subsequent bookmark idea and to later exclaim: “I’m good at this!”

By Hailey Fargo, DL4ALL Research Assistant

By Kim Naples, DL4ALL Research Assistant

Site Example

At the Champaign Public Library, computer games are extremely popular. Game design has been an ideal way to channel teens’ interest while introducing them to the basics of coding and computational thinking in an engaging way. I chose RPG Maker because it allows teens to build up and create an end product they are invested in – in a way, it is like playing a game. You get a short introduction tutorial, and then you learn and progress through exploration and experimentation. With RPG Maker you learn as you go, but the full arsenal of tools is there from the beginning. Teens don’t have to approach it a certain way or follow a certain timeline to progress. It’s not software designed “FOR KIDS TO LEARN,” but rather a program designed and used by professionals. The teens move from consumers of games created by others to be the creators, the ones in charge, making what they want. The black box that can be video games is demystified, allowing for critical thinking and problem solving as teens gain exposure to new technology, skills, and knowledge.

Screenshots of a game designed by a teen at the Champaign Public Library using RPG Maker

By Sarah Butt, DL4ALL Research Assistant

Site Example

Early on, Kenwood had a “Girls Only” day to foster the involvement and leadership of young women at their after-school Tech Time. The next collaboration was a weekly Girls Lead day with a broad variety of activities. When the boys wanted a Boys Lead day, this led to an evidence-based discussion about sexism in the adult world. With a little discussion, the boys began to see that they weren’t being kicked out (as they first claimed), but that girls have been effectively kicked out for so long that it seems normal now. Once this systemic marginalization was identified, the students adopted a critical perspective, we discussed possible solutions to the problem, and concluded that making extra room for girls is a positive step and not “two wrongs” as the boys first felt. Since then, Girls Lead has hosted guest speakers, volunteers, and a wide range of activities, such as crochet, photoblogging, and bike repair. These activities complement the ongoing Tech Time activities of coding & demystifying hardware. Comparing technologies while focusing on including young women helps develop a people-centered approach, where the various tools we use are only a means to the end of projects that matter.

By Travis Faust, DL4ALL Research Assistant