Media MashUp:
An Analysis of Workshop Reflections from Participating Librarians

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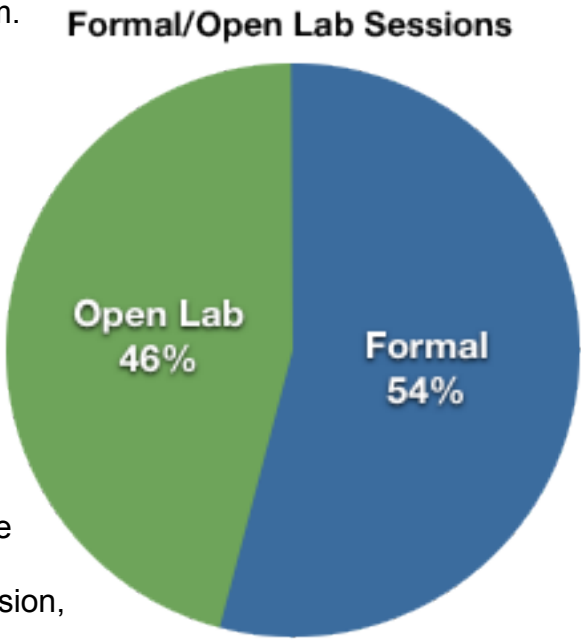
Context and Methodology

Media MashUp was an IMLS funded project (IMLS NLG 07-08-0113) designed to help libraries build capacity for offering technology-based programs for youth. These programs were intended to help foster 21st century skill development in participating youth in an informal setting. Several organizations (Partnership for 21s Century Skills, enGauge, Metri Group) have put forth 21st century skills frameworks that are used by educators in order to develop learning plans and outcomes. While there are differences between the different approaches, the skills focus on media and information literacy as well as leadership, innovation, creativity, and cultural competence, all which are acknowledged as critical to success in today's global economic climate.[1]

While youth had opportunities to use a variety of software programs (Audacity, Picasa, and so on) in Media MashUp workshops, the Scratch programming language (http://scratch.mit.edu/) was the primary tool youth learned and was the basis for developing creative projects. Scratch is a rich media content creation software that uses a building block approach to programming. It was written to be accessible for youth as young as eight years old. Yet, it enables sophisticated programming and project development and can incorporate digital photos or drawings as well as music and other types of sound effects. It is a tool that is easy to learn and is ideal for informal learning environments such as public libraries.

Media MashUp was a partnership between the Hennepin County Library, The Science Museum of Minnesota and five library systems[2] from around the country. Two to three staff members from each library participated in the program. Two different workshop formats were offered at each location, formal workshops and open labs.



Formal workshops were established as structured opportunities in which staff would develop a curriculum and teach a specific skill or project. Open Labs, by contrast were designed to be less structured chances for youth to engage in self-directed learning with support from library staff. Each library hosted at least 20 programs: 10 formal workshops and 10 open labs.

As a part of the project, librarians were asked to reflect on their experiences with young people and Scratch. The survey (reprinted in Appendix A) asked librarians to provide information on the session format, technical difficulties encountered, the number and types of facilitators for a session, insights into 21st century skill achievement, and more.[3]

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[1] Are they really ready to work, 2006

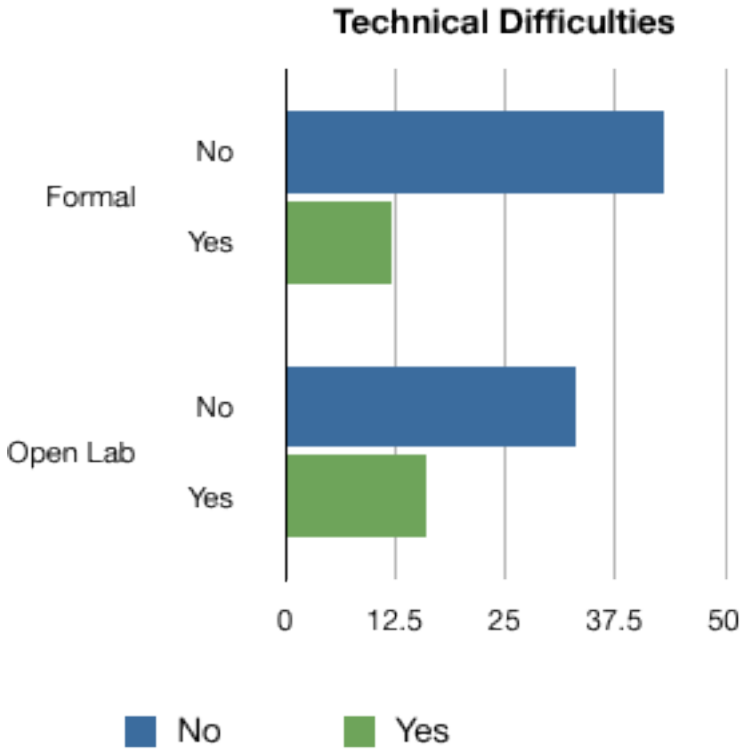
[2] Wilmette (IL) Public Library, Charlotte Mecklenburg Library, Free Library of Philadelphia, Seattle Public Library, Memphis Public Library.

[3] Responses to areas not covered in this report are available on request. Please email jennifernels@gmail.com for more information.

The 107 reflections submitted by librarians were analyzed in order to evaluate the impact of a program's format - formal or open lab - on learning and 21st century skill acquisition. The chart to the right shows that the number of open lab sessions reported on was slightly less than the number of formal sessions. The following report outlines findings and provides a series recommendations based on analysis of data gathered in the reflections.

Session Format & Technology Difficulty

Educators and librarians sometimes find that technical glitches, including malfunctioning technology hinder them from successfully providing opportunities to young people to learn 21st century skills. As a part of the reflective survey, librarians were asked if there were technical difficulties in the open lab or formal sessions.



The graph on the left shows that there were only slightly more difficulties with the technology in the open lab setting vs. the formal setting. This data is important as some librarians may shy away from providing technology programming to youth in an open setting due to concerns related to technology barriers - including computers not functioning properly, software not working as planned, and so on. If it is only slightly more likely that technology will be a barrier in an open setting, then librarians may be more confident about technology success, and more often willing to try sessions of this type. As a result librarians will provide greater opportunities for young people to gain 21st century skills related to leadership, creativity, initiative, and media literacy. (More information on specific areas of skills acquisition is available in the next section of this analysis.)

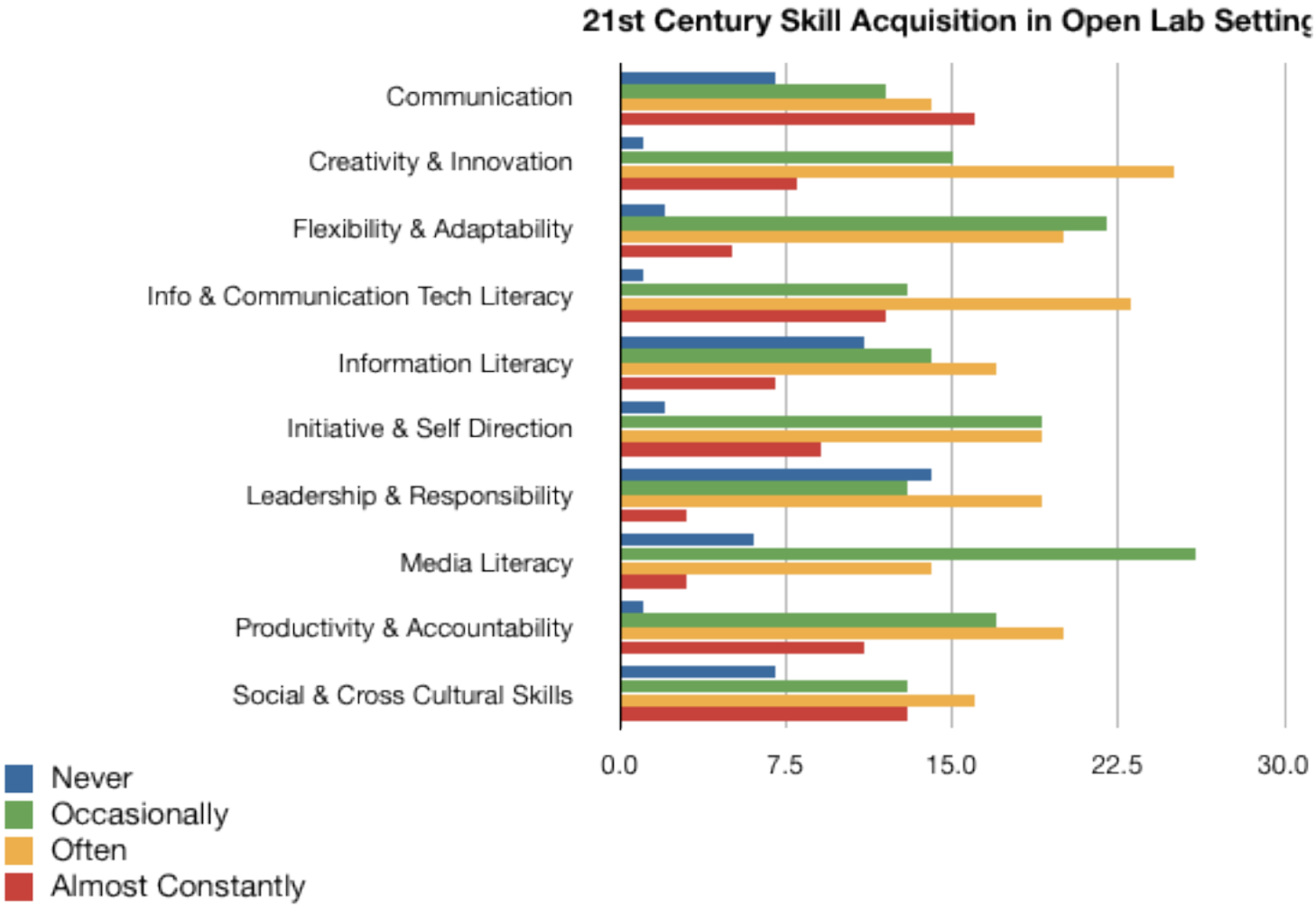
Within this context it is important to note that the most common difficulty that librarians faced when facilitating the sessions - either open lab or formal - was in connecting to and using the Scratch website. Scratch workshops do not require the use of the website, the software is resident on the local computer. This has positive implications as it demonstrates that, for the most part, the computers used in the sessions - in participating libraries or community- based organizations - did not present barriers to success once the decision was made to download Scratch to the computers.

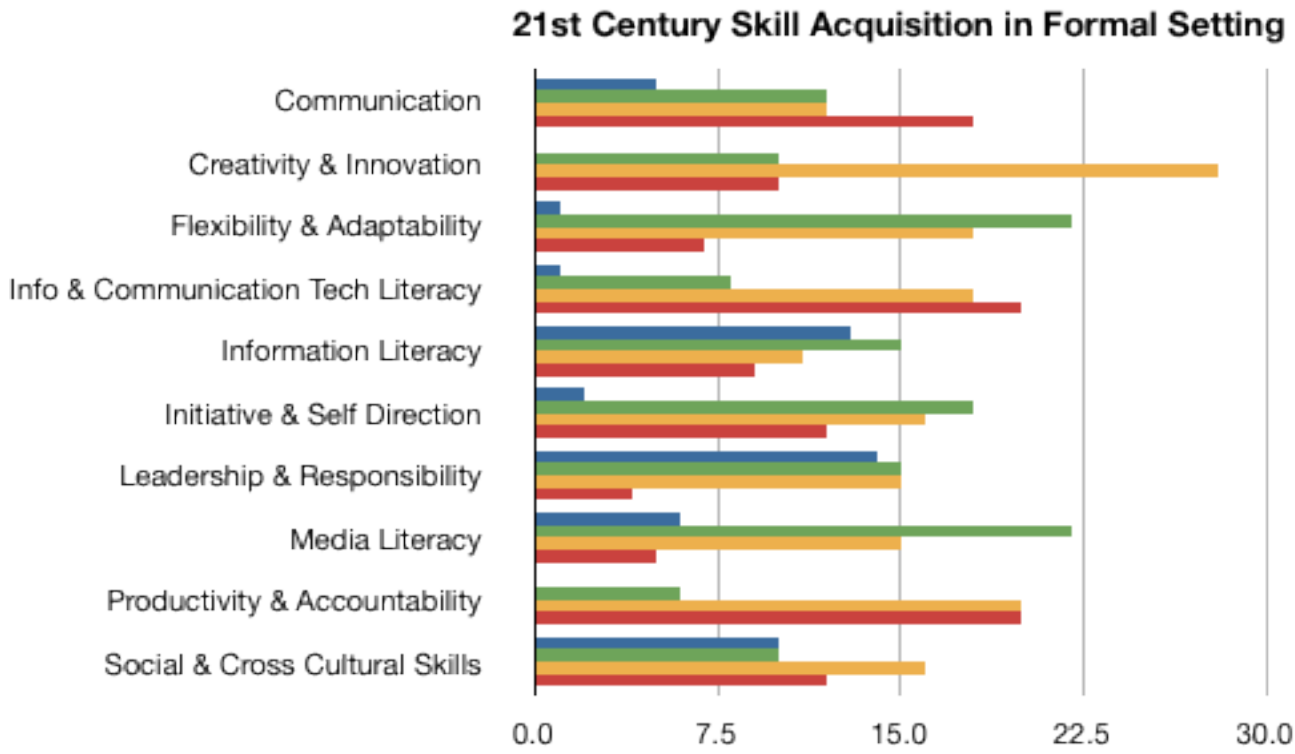
At the onset of the project, interestingly, some library staff were interested in the availability of a web-based version of Scratch, since two participating libraries were reluctant to install Scratch as part of the products available on computers, and web-based access seemed a promising solution to this potential barrier. Our data shows that

the sessions would have likely have not been as successful if they had relied solely on web-based access to the software. The few technology difficulties that were hardware related arose from installing Scratch on computers with open source operating systems. Therefore this type of barrier to success was not primarily of the hosting institution's making, rather from compatibility issues.

Session Format and 21st Century Skill Acquisition

The charts below display information gathered from Media MashUp participating librarians regarding observation of 21st century skill demonstrations during Scratch events. The charts present a picture of 21st century skills acquisition that does not vary strongly from session format to session format. (Note: the values in the chart below are the numbers of participants who responded in a particular fashion.)





The area in which these findings may prove to be most useful to librarians planning programs and services that support 21st century skill acquisition is in determining the best program format for gaining of particular skills. For example, an open lab format is perhaps the best setting for acquisition of leadership and responsibility skills as in these environments participants should have more opportunity to help peers out, try to find solutions on their own, and keep to the task at hand.

While gaining leadership and participation skills should be reflected strongly in open lab sessions, the data collected demonstrates that leadership and responsibility were never, or only occasionally, seen in the open lab environment. This may point to the need for librarians to think more strategically about how the different types of sessions are organized. It may also require that librarians develop new rubrics for determining if the acquiring of these skills has taken place.

The same is true for several of the other areas of 21st century skill acquisition reported on in the reflection data. Areas such as flexibility and adaptability, creativity and innovation, initiative and self-direction all encompass skill areas that are well suited to open lab environments. Yet, for each of these, there is not a strong difference in librarian's noting of skill gains between the open lab and the formal environment. For example:

One might hypothesize in the area of creativity and innovation that an open lab environment would lead to more opportunities for demonstration of those skills. However, not only was there less recognition of this skill at the "almost constantly" level within the open lab, there was one instance in which this skill was recorded as never seen in the open lab setting.

In the area of initiative and self-direction, these skills were slightly more often recognized at the "almost constantly" level in formal settings. Young people taking part in open lab sessions, in order to be successful, would need to take initiative and be self-directed as they are not being taken through a step-by-step process.

The somewhat surprising results in the reflections related to acquisition of 21st century skills are explained effectively in the summative report of the Media MashUp project:

Some of the workshop leaders wrestled with the idea of children accomplishing a project in a structured, teacher-led setting versus providing them the freedom to explore and uncover solutions on their own or with peers. It was clear that some instructors were more comfortable with a hands-off approach than others. For example, one participant described the teaching experience as, 'Most kids would start exploring on their own after following along with a Scratch card or two and would find their own ways to embellish their projects. It was very loose and unstructured.' In contrast, another leader said, 'Instead of leaving the project up to the kids, we had them stay on task and stepped them through the process of making a game, using the lesson plan.'[4]

Recommendations

The findings from the reflective surveys point to several areas for further study and librarian professional development.

When librarians integrate technology into programs with youth, knowledge of the technology being used is only one piece of the preparation puzzle. Before successfully hosting a technology centered lesson it is key that librarians understand and gain comfort in how to empower young people to engage in learning. Librarians also need to gain comfort in thinking outside of proscribed boxes. This will require practice and training in facilitating rather than leading, and require an understanding of what successful 21st century skills acquisition looks like.

In order to support youth 21st century skills acquisition, librarians must recognize when it is suitable to sponsor a formal learning experience and when it is most fitting to sponsor an informal or open lab experience. The decision to offer formal versus informal workshops may be driven by the intersection of three considerations: the needs of the youth, the age of the target audience for the workshop, and the skill and comfort of the librarian-teacher.

Librarians who are more comfortable with goal-oriented activities will be more satisfied with formal workshops. From the participant perspective, librarians need to recognize that a formal learning session may be most appropriate when young people are first learning a topic. In the software environment a formal learning session provides session leaders with the opportunity to explain what the purpose of the software is and provide a detailed overview of how the program works. Formal learning sessions are also useful in meeting the learning style needs of youth who require a step-by-step process approach gaining understanding. Formal learning sessions are useful when youth have

[4] Elizabeth H. Danter, PhD, *Media MashUp Summative Report*, unpublished report, January 2011, page 1.

not yet acquired comfort and skill at testing out ideas and collaborating with others in order to learn something new.

By the same token, librarians who believe that the process of learning is as important as the final product will be quite comfortable with the Open Lab approach. Librarians need to understand that an informal or open lab learning experience is best offered when youth need opportunities to experiment, learn from each other, and expand collaboration skills. Open labs are highly conducive to acquisition and continued development of these skills. An open lab also works well for providing youth with opportunities to lead and practice troubleshooting skills.

In their descriptions of successes and challenges of their programs, many of the librarians spoke to their own expectations and frustrations when those expectations were not reached. "Some of the kids were a little TOO excited. I would like to maintain a little more control over the noise level/behavior in the room. We could get a little more done that way--the kids would have more time to work on their own." It is important for librarians working with youth, within a 21st century skill construct, to focus more clearly on the skill development and less on what expectations are for how a program might look, how participants should behave, and what specific products will be produced. This will require growing confidence in each librarian's skills in facilitating and in an expanded sharing of learning and teaching experiences with youth. The Media MashUp ning (www.mediamashup.ning.com) is the perfect virtual setting for this sharing to take place.

Several of the respondents noted that time was an issue. "Open Studios are awesome! But, I only wish we/I had more time to devote to these teens. Their ideas are amazing, but we run out of time, every time." This points to the need for librarians to rethink traditional timeframes for programs, for considering new methods of building series programs, and for providing opportunities to young people to continue projects and learning outside of the library program framework. An important question is, how can public libraries create persistent learning environments that support 21st century skill acquisition?

Practice in teaching within a 21st century learning framework is key for librarians. Innovation in libraries needs to go beyond provision of hardware and software to staff and customers, and focus at least in part on making sure staff working with youth have opportunities to try out methods for helping young people gain 21st century skills. This goes beyond standard professional development. It requires re-thinking how to provide opportunities for testing out ideas and making mistakes in order to gain proficiency and learn what does and doesn't work.

Underlying, but unexplored in this project were differing conceptions of formal learning and informal learning environments. Further study that investigates where libraries fit along the continuum between these two constructs would be of great value in helping librarians to articulate the role of technology workshops for youth. It will also help librarians to capitalize on formal workshops or open labs to provide youth with opportunities to develop specific 21st century skills.

Media MashUp reflective participant data provides a useful look at how 21st century skill development can be supported in libraries. With more opportunities to engage with

youth in 21st century learning, and understanding of what success in 21st century learning looks like, librarians are well suited to support youth in this area.

Appendix A

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Media Mash Up Post Workshop Reflection
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This form was set up to help you reflect on the Scratch sessions you run as a part of the Media Mash Up grant. This site serves two purposes

1. Provides you some structure to help you organize your thoughts about your teaching.

2. Serves as a record of your sessions for evaluative purposes.

You may want to share some of your reflections that you include in this document with the other Media Mash Up participants on the ning site http://mediamashup.ning.com. You are free to copy and paste things from this document into a blog on the ning site.

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General Setting
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1. Where do you work?

_____

2. Where was your program held?
- ( ) In the public use computer area
- ( ) In a special computer classroom
- ( ) On laptops in the children's section
- ( ) On laptops in a teen section
- ( ) Other

3. What was the nature of your session?
- ( ) Formal Workshop
- ( ) Open Lab Format

4. How many youth attended your Scratch session?

_____

5. Who helped run this session? (Check all that apply)
- ( ) I ran this session alone
- ( ) I ran this session with help from another adult(s) paid library staff
- ( ) I ran this session with help from adult volunteer(s)
- ( ) I ran this session with help from paid youth staff member(s)
- ( ) I ran this session with help from youth volunteer(s)

6. How many of the youth participating had used Scratch before? Please make your best guess.
- ( ) None
- ( ) One or two
- ( ) Less than half
- ( ) More than half
- ( ) Most
- ( ) All

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Scratch Platform
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7. Did you have any technical problems or issues using the Scratch program?

( ) Yes
( ) No

8. If you had problems with the Scratch Platform please describe them here.

_____
_____
_____
_____
_____

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Instructional Approach
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9. Describe how you taught the workshop - your instructional approach. (or describe ways that you changed your approach form last time if applicable.

_____
_____
_____
_____
_____

10. Please list some things that went well with the way you taught the workshop.

_____
_____
_____
_____
_____

11. Please list some things you would like to change in how you taught the workshop?

_____
_____
_____
_____
_____

12. Of the things you would like to change, describe how you will implement these changes for your next workshop.

_____
_____
_____
_____
_____

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Physical Set Up
==========

13. Did the physical setup of the room have an impact on the workshop?
( ) Yes, something in the setup had a positive impact
( ) Yes, something in the setup had a negative impact
( ) No, the setup had no particular impact this time

14. If the physical setup had some impact on your workshop please explain.

_____
_____
_____
_____
_____

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Youth Dynamics
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15. Did youth dynamics have an impact on the workshop?
( ) Yes, something in the youth dynamics had a positive impact
( ) Yes, something in the youth dynamics had a negative impact
( ) No, the youth dynamics did not have a particular impact this time

16. If yes, please explain how the youth dynamics impacted the workshop.

_____
_____
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_____
_____

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Scheduling
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17. Did the scheduling of the session have an impact on the workshop?
( ) Yes, something in the scheduling had a positive impact
( ) Yes, something in the scheduling had a negative impact
( ) No, the scheduling had no impact this time

18. If the scheduling had an impact on your session please explain.

_____
_____
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_____
_____

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21st Century Skills
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19. How frequently did you observe any of the following skills?

Never Occasionally Often Almost Constantly

Communication and Collaboration (did youth talk to one another, engage in mutual problem solving or project development?)
_____ _____ _____ _____

Creativity and Innovation (did youth try new techniques in creating or remixing projects? Did youth bring creative skills to project work?)
_____ _____ _____ _____

Flexibility and Adaptability (did youth attempt different approaches to problem solving? were youth able to change course in mid stream to solve problems?)
_____ _____ _____ _____

Information and Communication Technology Literacy (were youth able to readily use Scratch, any related technology tools, and the internet?)
_____ _____ _____ _____

Information Literacy (did youth use the internet or other resources to get images or sound for projects? did youth demonstrate a critical awareness of the information sought/found?)
_____ _____ _____ _____

Initiative and Self Direction (did youth make independent decisions about whether/how to incorporate specific programming techniques in projects? Did youth make independent decisions about what projects to create and how to create them?)
_____ _____ _____ _____

Leadership and Responsibility (were any youth identified as leaders (informal)? did youth respond appropriately to requests from other youth?)
_____ _____ _____ _____

Media Literacy (did youth demonstrate an awareness of the role of the ScratchR website and social networking? Did youth critically evaluate images or sounds used in projects?)
_____ _____ _____ _____

Productivity and Accountability (did youth stay on task and move forward in project development?)
_____ _____ _____ _____

Social and Cross Cultural Skills (did youth work together? did youth from differing backgrounds work together? Did youth work productively with one another?)
_____ _____ _____ _____

20. Do you have any other observations regarding 21st Century learning skills?

_____
_____
_____
_____
_____

==========
Media Mash Up Support
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21. Do you have any comments or questions about support from Media Mash Up Central (a.k.a. Jen Nelson and Keith Braafladt)?

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_____
_____
_____
_____

22. Is there anything else you would like to share about your experience?

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Sharing
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Before you submit this reflection, is there anything you wrote today that you would like to post as part of a blog on the ning site http://mediamashup.ning.com

Thank you for your time.

23. Would you like a copy of your reflection sent to you via email? If so please provide your email address.

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Thank You!
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Thank you for taking our survey. Your response is very important to us.