

KAYSC PODCAST CREW: EVALUATION ACTIVITIES 2009-2010

September 2010

Prepared by Amy Grack Nelson & Gayra Ostgaard

DEPARTMENT OF EVALUATION AND RESEARCH IN LEARNING



Table of Contents

REPORT OVERVIEW	2
RECOMMENDATIONS FOR CREATING VIDEOS FOR A TEEN AUDIENCE	4
OVERVIEW	4
PHASE ONE: FRONT-END STUDY.....	4
PHASE TWO: INTEGRATING FORMATIVE EVALUATION DATA.....	5
LIMITATIONS.....	5
FORMATIVE EVALUATION OF YOUTH-CREATED PODCASTS	6
OVERVIEW	6
INSTRUMENT DEVELOPMENT.....	6
SAMPLE	6
DATA DISCUSSIONS.....	7
REFLECTIONS ON THE PODCAST DESIGN PROCESS	8
OVERVIEW	8
RESULTS & DISCUSSION: CYCLE TWO.....	8
RESULTS & DISCUSSION: CYCLE THREE	13
RECOMMENDATIONS	15
SUMMATIVE EVALUATION OF THE PODCAST CREW	17
OVERVIEW	17
RESULTS AND DISCUSSION	17
UNINTENDED OUTCOMES.....	29
CONCLUSION	29
APPENDIX A	31
APPENDIX B	32
APPENDIX C	33
APPENDIX D	35
APPENDIX E	36
APPENDIX F	38
APPENDIX G	39
APPENDIX H	40
APPENDIX I	42
APPENDIX J	44
PODCAST CREW EXIT INTERVIEW	45
PODCAST CREW - SKILLS CHECKLIST	47
RECOMMENDATIONS FOR CREATING VIDEOS FOR A TEEN AUDIENCE	49

Report Overview

From January – August 2010, the Kitty Andersen Youth Science Center's (KAYSC) Podcast Crew worked to develop five video podcasts to supplement the Disease Detectives exhibition. Four of these podcasts focused broadly on infectious diseases and one podcast was an overview of the KAYSC. Funded through a SEPA grant from the National Institute of Health, the podcasts were meant to enhance the Disease Detective exhibition experience and make it accessible to youth ages 12-18 by adding a teen voice. The podcasts are currently available for public viewing and download on the Disease Detectives website (www.diseasedetectives.org/videos).

Through the experience of developing the podcasts, youth were exposed to various skills and knowledge. Much of what they were taught was related to the video production process, including camera skills, audio skills, video editing, and video preparation. To gain video recording and editing skills, the youth worked with their Youth Program Manager, a professional from the Saint Paul Neighborhood Network (the non-profit community television provider for the City of Saint Paul), and other outside experts. Youth also learned content related to infectious diseases they researched to develop their podcast. Youth determined the topics and content of their podcasts by brainstorming ideas and conducting on-line research about various infectious diseases. To help develop the content for two of the podcasts, the youth went on infectious-disease related field trips and interviewed experts who work in related fields.

At the beginning of the project, the Crew consisted of six high school youth recruited from other KAYSC teams. Five of the youth came from the Mentor Buzz Team that has just completed its funding and a sixth youth came from the Park Crew. In the summer of 2010, three of the original crew members left and five additional youth from the Cell Lab Crew joined the Podcast Crew, for a total of eight youth during the summer. During the school year, crew members met a total of six hours a week, three hours afterschool on Wednesdays and three hours on Saturdays. During the summer months they met nine hours each week, three hours three days a week.

Evaluation activities associated with the Podcast Crew began January 2010 and were completed September 2010. Four studies were conducted to assess various aspects of developing video podcasts that were meant to supplement an exhibition and be appealing to teen visitors. Below are brief descriptions of the evaluation activities included in this report.

Recommendations for Creating Videos for a Teen Audience

One of the goals of the project was to develop recommendations for creating video podcasts meant for a youth audience. The recommendations were developed using a two-phase process. The first phase was a front-end study to create the initial recommendations for the Podcast Crew to use during their production process. See Appendix A for a list of podcasts used in the front-end study. The second phase occurred at the end of the project to revise and expand on the recommendations using the data from the formative evaluations of the five Podcast Crew podcasts. The recommendations provided guidance to the Podcast Crew as they created video podcasts to accompany the Disease Detectives exhibition. See Appendix B for a list of podcasts created by the Podcast Crew.

Formative Evaluation of Youth-Created Podcasts

Over the course of the Podcast Crew project, there were three cycles of podcast development. Around three quarters of the way through each podcast's development cycle, formative evaluation was carried out to test and improve the podcast prototypes. The evaluation process consisted of cued interviews with KAYSC youth. Youth watched the podcast prototype and then participated in an interview.

Reflections on the Podcast Design Process

Formative evaluation was carried out to improve the process of designing podcasts meant to supplement an exhibition. Reflective opportunities for both the youth and Podcast Crew Program Manager were integrated into the process after cycles two and three. The data was used to improve the production process and will provide guidance for future development of podcasts in the KAYSC.

Summative Evaluation of the Podcast Crew

A summative evaluation was carried out to gather information about youths' overall experience on the Podcast Crew, what they learned from their experience, and their future plans. The evaluation consisted of one-on-one interviews or an on-line survey with corresponding questions for those youth who were unable to participate in an interview.

Recommendations for Creating Videos for a Teen Audience

Overview

One of the goals of the SEPA grant RR020439, “Emerging Infectious Disease: Podcasting the Youth Experience,” was to develop recommendations for creating video podcasts meant for a youth audience. The recommendations provided guidance to the Podcast Crew as they created video podcasts to accompany the Disease Detectives exhibition. The recommendations will also live beyond the life of the grant and guide other Kitty Andersen Youth Science Center (KAYSC) teams that produce videos for a youth audience.

The recommendations were developed using a two-phase process. The first phase was a front-end study to create the initial recommendations for the Podcast Crew to use during their production process. The second phase occurred at the end of the project to revise and expand on the recommendations using the data from the formative evaluations of the five Podcast Crew podcasts.

Phase One: Front-end study

A front-end study was carried out at the beginning of the grant, before the Podcast Crew youth began their video production work. The purpose of the study was to create the initial recommendations. The study design was composed of four separate group discussions with high school youth from KAYSC. Two of the groups were composed of KAYSC youth from the Cell Lab Crew and Leadership Team and each group contained five youth. The Podcast Crew youth composed the other two groups, one with three youth and one with two. The Crew was split into two groups for the front-end study because some youth were unable to attend the first discussion so an additional time was added. None of the youth in any of the four groups had participated in video production in the KAYSC at the time of the group discussions.

During each group discussion, youth viewed four videos and provided feedback on what they liked and didn't like about each video. The videos varied in content, format, and production quality (see Appendix for descriptions of the videos *Time to Stop*, *The Facts*, *Nanotechnology: What's the Big Deal?*, and *Sew What?*). Each of the four groups viewed the videos in a different order so that the order of the videos wouldn't bias results. After each video, youth were asked the following questions:

- What did you like about the video? What characteristics of the video do you think would be appealing to teens?
- What didn't you like about the video? What characteristics wouldn't be appealing to teens?

Youth worked individually to come up with their responses to the questions. They then shared their responses with the rest of the group and discussed why they liked or disliked something about the video. Using a sticky wall, youth placed their ideas under the corresponding like or dislike column for the video. This allowed the group to look at any emerging themes in the data and go into deeper discussions about what they liked and didn't like about the video. This process was then repeated for the other three videos so that the group discussions ended with like and dislike data for each video.

The data from the four group discussions were analyzed to come up with the initial recommendations. All responses for an individual video were analyzed together and put into themes under features youth liked or disliked about that video. Each response was identified by which group discussion it came from so that it was apparent if the responses under a particular theme came up in more than one discussion. The result was four documents, one for each video

that included the like data and corresponding themes and dislike data and themes. The final step was to look across all four documents to generate recommendations for creating videos meant for a teen audience. The resulting recommendations document was shared with the Podcast Crew so they could refer to the recommendations while creating their video podcasts to accompany the Disease Detectives exhibition.

Phase Two: Integrating formative evaluation data

Phase two involved integrating the formative evaluation data from the five podcasts created by the Podcast Crew. Each of the five podcasts went through a formative evaluation process. The formative evaluation involved KAYSC youth (not on the Podcast Crew) viewing the podcasts and participating in interviews. During the interviews, they commented on what they liked and didn't like about each video. The like and dislike data from the formative evaluation of each podcast was coded similarly to the front-end study data. For each video, the responses were put into themes for what youth liked and disliked about that particular video. The data for these five videos was reviewed along with the data from the four videos in the front-end study. Looking across data from all nine videos, the recommendations were revised and finalized, resulting in recommendations for presenting information, featuring people in a video, directing, and editing.

Limitations

The process of creating the recommendations had some limitations. One limitation was that youth involved in reviewing the videos were all from the KAYSC, meaning they were museum employees. This group of youth was used because the museum has a limited teen audience (only 8% of Science Museum of Minnesota visitors are between 13-20 years old¹), which would have made it difficult to gather data from teen visitors within the podcast production timeline of the grant. Instead, the KAYSC youth were chosen because they provided a diverse group of high school youth that were readily available and would be likely to visit a science museum, the audience the videos were meant for. A second limitation was that youth participating in the front-end study may have known some of the youth in the *Time to Stop* video since KAYSC youth starred in the video. This may have influenced their review of that video, however the evaluator stressed that the youth should not worry about being critical of the video because their peers just showed up and acted in the video, they were not involved in development of the video in any way. The video was created and produced by adult staff at St. Paul Neighborhood Network.

¹ Ellenbogen, K. & Cohn, S. (2008). *Science Museum of Minnesota visitor study*. Unpublished manuscript.

Formative Evaluation of Youth-Created Podcasts

Overview

Over the course of the Podcast Crew project, there were three cycles of podcast development. Around three quarters of the way through each podcast's development cycle, formative evaluation was carried out to test and improve the podcast prototypes. The evaluation process consisted of cued interviews with KAYSC youth. Youth watched the podcast prototype and then participated in an interview. If there were two podcasts produced during a production cycle, the youth viewed two podcasts during their interview. In order to avoid bias based on which podcast was viewed first, the order of the podcasts was switched for each interview. Since the youth were evaluating podcasts created by their peers, the evaluator stressed that youth should be open and honest about what they liked and didn't like about the video since their comments would remain anonymous and their KAYSC peers wouldn't know who said what when the information was shared.

Instrument Development

The youth, Youth Program Manager, and evaluator developed the interview questions collaboratively. The interview included questions to gather overall feedback about the video, the video's purpose, specific features of the video, and suggestions for improvement. Listed below are the questions the group decided on for every podcast prototype interview. Additional questions specific to a podcast were also added when youth had certain aspects of their video they wanted feedback about.

- What did you like best about the video? (Probe: Was there anything else you liked about the video?)
- Would you recommend this video to your friends to see? Why or why not?
- What didn't you like about the video? (Probe: Anything else?)
- Were you confused at any point in the video? If so, what was confusing?
- Was the video corny or cheesy at all? If yes, what was corny or cheesy about it?
- What do you think is the purpose of this video?
- What information will you remember from this video? (Probe: What pieces of information stood out to you the most?)
- What are some things the Podcast Crew should improve or change about the video? (Probe: Anything else?)

In some instances, the youth were hesitant about people giving feedback on an unfinished product. The evaluator assured the youth that she would make sure to stress to interviewees that the product was still in development and that the Podcast Crew was looking for how they could make the video better. The evaluator also asked the Crew members to list what they knew for sure they were going to do to the podcast before it was complete. This information was shared with the interviewee so that their suggestions wouldn't focus on things the Podcast Crew already had planned, but what else could be improved.

Sample

As with the front-end study, KAYSC youth were used for the formative evaluation because they were the target age range for the video podcasts. The museum's limited teen audience and the quick week and a half turn around necessary for the formative data, made it difficult to gather data from teen visitors. Instead, the KAYSC youth were chosen because they provided a diverse group of high school youth that were readily available and would be likely to visit a science

museum, the podcasts' intended audience. Table 1 shows how many youth participated in each formative evaluation. The sample sizes were small because of the limitation of only having a week to collect data so that it could be turned around quickly to share with the Podcast Crew.

Table 1: Sample Sizes for Formative Evaluation of the Podcasts

Podcast title	Sample size
Kitty Andersen Youth Science Center	11
Mystery Microbes in the Cell Lab	10
Annie's Talk Show	10
Malaria Worldwide	7
Got Beef? The Story Behind Antibiotics and Livestock	7

Data Discussions

The formative evaluation results were shared with Podcast Crew youth in a participatory manner. This means, instead of the evaluator providing youth with a report of all the data analyzed and interpreted, the youth were immersed in the raw data and made their own interpretations. The evaluator led youth through data discussions about the results for each podcast. The youth reviewed the responses for each interview question and reflected on their impressions of the data, what seemed to work well about their podcast, and what didn't seem to work so well. As part of this process, Podcast Crew members also defined the main message of each podcast and came to an agreement of what someone would have to say to "get" the main message, "kind of get" the main message, or "not get" the main message. The Crew then read through the responses to the question "What do you think is the purpose of this video?" and for each response decided to what extent each interviewee understood the podcast's purpose. This helped the youth reflect on the effectiveness of their video to convey their main message or purpose. After analyzing all the formative evaluation data for a podcast evaluation, the youth worked together to decide on next steps. They identified a list of changes they wanted to be sure to make to their podcast, changes they would make if they had time, and changes they couldn't make because of the time or resources involved but that they would recommend if they didn't have any limitations.

Reflections on the Podcast Design Process

Overview

The podcast design process was composed of three cycles. The purpose of the first cycle was for youth to learn the skills necessary to be able to create their own podcasts. During this cycle, youth created a podcast about the Kitty Andersen Youth Science Center. The second and third cycles involved creating podcasts about infectious disease to supplement the Disease Detectives exhibition.

Formative evaluation was carried out to improve the process of designing podcasts meant to supplement an exhibition. Reflective opportunities for both the youth and Podcast Crew Youth Program Manager were integrated into the process after cycles two and three. The data was used to improve the production process and will provide guidance for future development of podcasts in the KAYSC.

Results & Discussion: Cycle Two

During cycle two, youth created their first infectious disease podcasts. Two podcasts were simultaneously developed. To determine the topic of the podcasts, the youth watched videos about various infectious diseases and conducted online research. They used a graffiti wall method to brainstorm a variety of topics and decided to focus on how infectious diseases are spread.

The youth had difficulty deciding on a format for their videos. The Youth Program Manager was trying to encourage youth to come up with ideas of how to present their content in a video without telling them straight out what all the possibilities were. He found this caused some difficulties for the youth. The Youth Program Manager said that as staff he knew what the possibilities were, but he had difficulties with how to get the format possibilities across without telling the youth directly what to do.

To help energize the youth and get them thinking about format ideas, the Youth Program Manager decided to put the youth behind the camera interviewing people. The youth asked museum visitors and staff true and false questions about infectious disease. The youth watched the footage and the Youth Program Manager encouraged them to think about ideas based on the footage. The Youth Program Manager left the group alone for half an hour after they did some brainstorming and when he returned they had decided on the talk show format. They chose the talk show format because they felt it would be fun to do and interesting for a teen audience. As one youth noted, *"it wouldn't make people fall asleep."* The youth also felt a talk show allowed for different guest possibilities and could be done without a script.

The Podcast Crew had problems deciding on a second podcast format. The Youth Program Manager suggested that they do something related to the museum's Cell Lab since they spoke to someone in the Cell Lab during their museum interviews. The Youth Program Manager felt he pushed the Cell Lab idea harder than he wanted to, but since the youth weren't deciding on a topic he felt he needed to provide some structure. He also knew the talk show was going to be a large project and wanted to make sure the other podcast was more manageable for the youth. When the evaluator asked the Podcast Crew youth about the Cell Lab podcast, they said they weren't as interested in that topic as the talk show.

After the end of cycle two, the Youth Program Manager reflected on the process through a one-on-one interview and five of the six youth participated in a large group discussion with the evaluator.

Crew Successes

Youth were asked what they liked about the Podcast Crew up until that point of their crew experience. Each youth wrote a list of what they liked and their responses were compiled into themes as listed below. Youth liked working with the other crew members. They enjoyed the process of brainstorming ideas for the podcasts, even though the process seemed challenging from the Youth Program Manager's perspective. Youth enjoyed various aspects of creating the video podcasts, especially shooting video.

What Youth Liked About the Podcast Crew (n=5)

Crew members

- I like working with everyone.
- Enjoy working with my crew.
- Crew members. ☺ ☺ ☺ ☺
- Co-workers.
- Co-workers.

Brainstorming ideas

- Brainstorming ideas for podcast.
- Brainstorming.
- Sharing of ideas.
- Goal setting/strategies.

Shooting video

- Recording.
- Shooting videos and using the cameras.
- Filming/being on set.
- Everyone gets a chance to use the video camera.

Other aspects of video production

- Videos.
- Editing the videos.
- Our videos are good and fun to make.

Other

- Acting.
- Supervisor.
- Check-ins. ☺ ☺

Challenges During Cycle Two

Youth were asked what some of the challenges were while working on the infectious disease podcasts during the second production cycle. The youth discussed a variety of challenges including coming up with ideas, lack of skills, feeling rushed, getting their idea across in the talk show podcast, and the editing process.

Youth had challenges coming up with ideas for the format of their podcasts. This was echoed by the Youth Program Manager's reflection on the process. He had difficulty trying to find the balance between letting youth lead their own production process and providing enough structure to help them move forward effectively.

Youth felt they needed more training in video production, acting, and editing. They wanted more training on how to write scripts and how to get their point across in an interesting way. The Podcast Crew youth were the actors in both podcasts and they felt like they needed more experience acting if they were going to be in front of the camera in future podcasts. They also felt more training was needed around editing because some youth were better at using the editing software than others.

For the talk show podcast, the youth didn't go off of a script. Instead, they did improv. One of the KAYSC staff had improv experience and she led workshops to help develop the youths' improv skills. She helped them think about who their characters were going to be and what the different scenes would be. The youth did some research about infectious disease and came up with three questions for each guest to guide their content. The Podcast Crew felt the improv was good in terms of "not sounding like robots when reading a script," but they didn't feel like there was a main message or purpose they were trying to get across with the video. They felt like they were missing a guiding statement or a list of things they wanted to get across in their podcast.

Youth felt rushed creating their podcasts, particularly the talk show podcast. They would have liked more time to rehearse and more than one day at SPNN (where they filmed the talk show podcast). Youth also desired more time to edit the final podcasts.

Youth had some challenges with the editing process overall. Only a few people could be on the computer editing at a time. Although the youth worked in teams to create their podcasts, only one person was at the computer editing while the other youth were sitting around with nothing to do.

Youth Program Manager's Role in the Production Process

During the interview, the Youth Program Manager reflected on the structure he provided during the second production cycle. He tried to lay out a self-directed process where you were deciding what they wanted to do for their videos. However, leaving the options wide open provided some challenges for youth. When the evaluator asked the Youth Program Manager if there was anything he wanted to know about the second cycle of the production process, he had questions about the amount of structure the youth wanted for their next round of development. To gather this information, the evaluator asked the youth to rate the level of structure they desired for different steps of the podcast production process. Three levels of structure were placed on the wall in a room: youth would decide what to do, the Podcast Crew Program Manager would offer suggestions or provide constraints, or the Youth Program Manager would decide what to do. The evaluator read a statement and youth then responded to each statement by standing by their choice. Results are presented in Table 2.

Table 2: Youths' Desired Level of Structure for the Podcast Production Process (n=5)

	Youth decide	Youth Program Manager offers suggestions/constraints		Youth Program Manager decides
Deciding who to include in the video	xxxx	x		
Deciding on the overall type of video	xxx		xx	
Developing interview questions		x	xx	xx
Deciding on the topic of the video		x	x	x xx
Deciding what components need to be in the video			xx	xxx
Creating the shot list				x xxxx
Write the script for the video				xxxxx

Almost all of the youth felt that they should decide on who should be in the video. They felt that if Podcast Crew members were featured in the video, they should decide who should be in front of the camera because they all didn't feel comfortable acting.

Some youth wanted to decide on the type of video, while others wanted suggestions from the Youth Program Manager. A youth that felt they should decide on the type of video said, "Because we are the ones acting in it, it's better to do what we want to do than be told what to do." However, some of the youth wanted the Youth Program Manager to provide suggestions, especially because they sometimes had a hard time deciding on an idea. "We have a lot of ideas and then we get silent when there are so many ideas and no one wants to ultimately decide-takes a while."

Youth wanted at least some level of Youth Program Manager's involvement in developing interview questions, deciding on the topic of the video, and deciding on what components need to be in the video. When asked about the Youth Program Manager's involvement in choosing the topic, one youth said, "I think that if he were to decide it wouldn't be based on us, we would just drag our feet along, kind of fun if we think of it, but we sometimes have roadblocks." One of the youth that felt the Youth Program Manager should decide on the topic stated, "I think if he decides right away, we can get more creative on how we can deliver it. He probably has a better idea of what to do. We don't have to waste time on choosing the topic."

All of the youth felt that the Youth Program Manager should write the script because they didn't have any training in script writing. The evaluator followed up to see if youth would be interested in learning how to write a script if the Youth Program Manager brought an expert in to work with them. Only one of the youth expressed interest in that opportunity.

Youth also felt that the Youth Program Manager should create the shot list. They didn't feel comfortable creating a shot list and cited that they didn't have the right skills to do so.

Suggested Changes to Podcast Production Process

Youth provided suggestions of how they would change the next cycle of the podcast production. As illustrated in the list below, one of the suggestions was more crew members. The Podcast Crew was made up of six youth, while other KAYSC teams typically have up to 12 youth. Youth also expressed a desire to do activities they did on other crews, but had not done yet on the Podcast Crew. This included team builders, field trips, Omni films, and outreach activities. Youth also wanted to go on field trips to find new places to shoot. *"The more time we spend in the KAYSC it gets old... We need new settings, need to get out."* Additionally, some youth wanted more hours and didn't want to work on Saturdays.

What Would You Change About the Podcast Crew? (n= 5)

More Crew members

- More crew members.
- MORE MEMBERS please!
- Need more crew members.
- Bigger crew.
- More team members.

Field Trips

- Field trips.
- Field trips!
- Going places.
- Do more things outside the SMM building. Ex: Do an experiment outside

Changes in Hours

- No Saturdays and hours!
- No Saturdays.
- No Saturdays.
- More hours.

More Team Builders

- More team builders.
- More team builders.
- Active – more team builders.

More Omni Films

- Go to more Omni films.
- Omni films.

Snacks

- More snacks.
- Getting pizza

Other

- Doing outreaches.
- Sometimes boring – when people don't talk.
- Editing – don't like it.
- Do your JOB! Better DIRECT DEPOSIT!!!!

Throughout the group discussion, youth brought up other suggestions for improving the podcast production process. While talking about the level of structure they want in the production process, the youth suggested that maybe they could try having the Youth Program Manager in charge of one of the podcasts and the youth in charge of the other. They felt that, *"We don't want him to just come in and say this is what you are going to do. We want some voice, but it would be easier to just have the Youth Program Manager tell us what to do."*

Podcast Crew youth also brought up the suggestion of creating three sub-teams. They thought one team could work on the content, one team could do the filming, and a third could do editing. This would help ensure that everyone is not in the editing room at the same time.

In addition to field trips to capture footage, youth wanted to hear from experts. They wanted to have experts talk to them about the topic of their podcast. As one youth said, he/she wanted to hear from *"a person who actually went to school to study this stuff."*

Youth also had suggestions for the use of costumes in future podcasts. Since the youth didn't have costumes while shooting their videos, they ended up having to make sure they wore the same clothes every time they shot the video. They suggested that in the future they have costumes that they can use so they can easily shoot video whenever they need without worrying about wearing the right clothes to work.

Results & Discussion: Cycle Three

For the third production cycle, the composition of the team changed. Five youth from the Cell Lab Crew were added to the team and three of the youth from the original Podcast Crew left. This meant for cycle three there were a total of eight youth on the team instead of six. As in cycle two, the youth created two podcasts simultaneously. The Crew split into two groups. One group ended up creating a malaria podcast and the other group created a podcast about antibiotic resistance in meat.

Based on evaluation feedback from Podcast Crew youth after cycle two, the Youth Program Manager decided to provide some structure to the cycle three production process by suggesting that the youth use experts in their podcasts. The Youth Program Manager provided examples of videos that featured experts, but were produced in creative and interesting ways. He stressed that they could do whatever they wanted for a format, but that it had to rely on experts instead of the Internet for factual information. The use of experts set up the youth to creating more of a documentary style podcast. The Youth Program Manager felt that, *" Using documentary production as a basis for planning our next podcasts allowed for more momentum and planning throughout the process."*

The youth chose the topics they wanted to focus on and the experts they were going to contact. They brainstormed ideas, created a mind map to help focus their topic, and did some preliminary online research. They also searched for local experts in their topics of interest. The youth had some challenges in finding and getting a hold of experts within their production timeline. The experts they chose and returned their phone calls ended up driving the content of the podcasts. To interview the experts, the youth went on field trips to where the experts worked. This built on youths' feedback after cycle two of wanting to gather footage outside of the museum.

After the end of cycle three, the Podcast Crew Youth Program Manager reflected on the process through a one-on-one interview and seven of the eight youth participated in one-on-one interviews that were also part of the summative evaluation.

Challenges During Cycle Three

Youth were asked what challenges their team encountered while working on their podcast. Table 3 shows that five of the youth reported that setting up the interviews was challenging. Sometimes they had trouble finding the right experts, other times experts were unable to participate in interviews. The fact that youth could only do interviews during their Podcast Crew meeting time prevented a challenge as well. These challenges were overcome by persistence and narrowing the field of who they wanted to talk with. *"I mean once you get turned down you just dial the next number on the list cuz you have a list of people to call. I mean, when ...they said yes we were really excited cuz ... we actually were gonna get some real footage and go shoot some more video. Yeah you gotta be persistent."* Two youth talked about some of the challenges they encountered with editing. These challenges were overcome by teaching each other and practicing these skills. Two youth also mentioned narrowing down their podcast format or message as a challenge. See Appendix C for full responses regarding challenges encountered while working on podcasts.

Table 3: Challenges Encountered While Working on Podcast (n=7)

Theme	Number of youth
Setting up interviews	5
Editing	2
Identifying a podcast format or message	2
Other	1

Note: Some youth provided more than one answer.

Youth Program Manager's Role in the Production Process

The youth were asked if there was any part of the process where they wished the Youth Program Manager would have been more involved. Most of the youth (five out of the seven youth) said there weren't any parts of the process where they wanted more Youth Program Manager involvement and they liked his role in the process. One youth said, *"I actually liked how he led us to make it our own video instead of his telling us exactly what to do cuz then we would just follow his orders and not go through the process on our own cuz he already knows how it goes but we don't."* Two youth commented on where they would have liked to have seen more involvement by the Youth Program Manager. One of the youth would have liked him to provide more technical training before they started creating their videos. Another youth wanted less Youth Program Manager involvement in the process. See Appendix D for full comments about where the youth wished the Youth Program manager would have been more involved.

Suggested Changes to Podcast Production Process

Youth were asked if they would have changed anything about the process their team went through to develop their podcast. Two of the youth said they wouldn't have changed anything. The other youth cited something they would change about the process. Two youth wanted more time to work on the podcasts. One youth wanted more time for editing while the other would have liked more time for the entire project. Two youth would have changed the allocation of responsibilities to have fewer people doing the same task at one time. One youth would have liked to have had all the Crew members work on the same podcast, but assign each group different questions/areas to research about the topic. Another youth felt that some Crew members could have been collecting video, while others worked on editing. As previously mentioned during the second cycle of podcast production, the number of people involved in editing process was brought up again. *"I know we want everybody's input and all that but ... It's actually almost more distracting. I got more work done when I came in and got on the*

computer by myself than I do when I'm down there with three other crew members kind of just watching what I'm doing and commenting." Finally, one youth would have liked to have had more B-roll to insert into various parts of the video. Youths' full comments about their desired changes can be found in Appendix E.

The Youth Program Manager also reflected on changes he would have made to the Crew. He would have liked more opportunities to hold screenings. The Crew held a screening for their families at the end of the entire program. However, the Youth Program Manager would have also liked opportunities to share with the public what the crew had developed. The Youth Program Manager also acknowledged that he had problems with youth staying on track and not feeling rushed. He acknowledged that he could have been better about setting deadlines far enough in advance so the youth didn't feel so rushed at the end. He said he was trying to remain flexible but felt it may have been better to have deadlines nailed down.

Recommendations

Formative evaluation of the podcast production process helped to improve the cycles of podcast development during the Podcast Crew program. The evaluation also provided insight into future development of podcasts in the KAYSC. Below are recommendations to consider when planning future video production processes with KAYSC youth.

- Find ways to balance the roles of the Youth Program Manager and youth in the video production process. Although the KAYSC focuses on youth-driven programming, evaluation after cycle two made it clear that youth desire and need some direction throughout the process. The Youth Program Manager introduced the constraint of using experts for the third cycle of podcasts. As a result, the Youth Program Manager was able to provide more tailored examples at the beginning of the process, which helped the youth focus their thinking and move forward. Youths' cycle two challenges and frustrations of deciding on a topic and format did not come up from either the Youth Program Manager or youth their reflections of the cycle three production process.
- Consider including more than six youth on a podcast production crew. After cycle two, youth expressed that they wanted more crew members. The Youth Program Manager also cited that there were often times when all the crew members weren't present during cycles one and two. He felt this led to low energy and motivation from the members in attendance.
- The Podcast Crew simultaneously created two infectious disease podcasts during production cycles two and three. The Crew was split into two groups, where each group created one of the podcasts. Within each group, the youth decided on their roles for the development process. During cycle two, each group worked together for all parts of the process. However, when providing feedback about cycle two, the youth had suggestions for structuring the groups, particularly during the editing stage. One suggestion was to create three sub-groups, where people are working on different components of the project at the same time. For example, one group works on content, one does filming, and a third does editing. During cycle three, the Youth Program Manager had some youth do script writing while other did editing. This helped to give all of the youth roles during the final stage of podcast production. However, there were still some complaints about sitting around while others edited. Youth want an active role throughout the podcast production process, so future production teams should ensure that the roles are defined in such a way that all youth have something to work on while others are editing.

- Consider adding more time for shooting in outside studios and finalizing the podcast after gathering evaluation feedback. The youth felt rushed during various stages of the production process. They wanted additional time in the studio at St. Paul Neighborhood Network and more time at the end of each production cycle to perfect their videos. As suggested by the Youth Program Manager, ensure that production milestones and deadlines are clearly communicated to the youth from the beginning of the production cycle so youth can plan better to avoid feeling so rushed.
- Continue using experts as a means to gather content for podcasts. The youth enjoyed talking to experts and used their knowledge to structure the content and messages of their videos. However, there are a few things to consider when using experts. Youth should remain flexible in the topic of their podcast if relying on experts in their video. As the Podcast Crew experienced, their messages ended up slightly changing based on the experts that were available to talk to them. Youth should also contact experts far in advanced and offering flexibility of when they can conduct interviews (possibly outside of their regular meeting time) to increase the likelihood of obtaining interviews with desired experts.
- For specialized or short term crews, such as the Podcast Crew, consider including components of a regular KAYSC team. This includes team builders, field trips, and outreaches. These are activities that currently take place as part of other KAYSC teams, and something Podcast Crew youth missed from their team experiences as evident from cycle two feedback. As a result of the cycle two evaluation, field trips and more team builders were integrated in to the third production cycle. Due to the project's focus on video production, not community outreach, the team was unable to lead outreach activities with youth in the local community.
- The Podcast Crew youth had some suggestions to keep in mind when including youth actors in videos. They stressed that it should be voluntary for youth to be in front of the camera since not all youth were comfortable acting. They also said if the video includes youth actors, costumes should be used. That way if they want to reshoot something at a later time, they don't have to worry about the fact that they may not be wearing the same thing to work that day. This was an issue for their KAYSC podcast, limiting their ability to reshoot scenes easily.
- Include outreaches as part of cycle three. However, reflecting back on the project, the Youth Program Manager felt that it would have nice to be able to do outreaches with the community around the topics of Crew's podcasts.

Summative Evaluation of the Podcast Crew

Overview

A summative evaluation was carried out in August 2010 to gather information about the overall experience of the Podcast Crew, what youth learned from their experience, and their future plans. The evaluation consisted of one-on-one interviews or an on-line survey with corresponding questions for those youth who were unable to participate in an interview. Eight out of the eleven Podcast Crew youth participated in the summative evaluation. Seven of these youth participated in a one-on-one interview and one completed the online survey.

Results and Discussion

Overall Podcast Crew Experience

Youth had an overall positive experience on the Podcast Crew. When asked to name their favorite thing about the Crew, youth most frequently cited aspects of the video production process (six out of eight youth). Four youth said they enjoyed using a video camera and filming scenes for their podcast. *"I had never had a camera to work with so that's a good experience from the start."* One youth specifically mentioned how using the cameras would be useful to her future career. *"For my career, I was thinking about digital photography and this has really helped me with that and my skills with technology. I'm glad I got to do this."* Other aspects of the video production process youth mentioned include learning how to write a script, researching diseases for the podcast, and editing their video. Working with other crew members was also mentioned as a favorite aspect of the Podcast Crew (three out of eight youth). Youth particularly liked the ability to work as a team and two youth specifically mentioned becoming closer with members of the Crew. *"We worked together as a group and I think that's why we've become so close was because we all put a little bit of our opinions in there so it made it more successful."* See Appendix F for full descriptions of youths' favorite things about the Podcast Crew.

Youth were also asked about their least favorite aspects of the crew. Seven youth had least favorite aspects, while one youth said there wasn't anything he/she didn't like about the crew, *"It's really fun. I just want to come here. It's my first job and I'm happy I work here."* The editing process was one of the least favorite things about the crew for three youth. They said the editing process took a long time and would get boring, however they said that even though the process was long there were positive aspects to it. *"Least favorite thing was all the hours of editing and sitting in front of the computer. Its boring cuz it's repetitive, but after you get it all done its okay."* Two youth felt they didn't have enough time during their team meetings for everything they wanted to do. One youth was doing research on his/her own time to make sure the team stayed on schedule, although he/she said, *"I like researching, so it's good."* Another youth mentioned that sometimes they are so busy working on their video that they don't have time to socialize with their crew members. Brainstorming topics was another crew activity that one of the youth mentioned, specifically because it can be hard to do. A least favorite for the youth that was the only one to come from a different crew didn't like that he/she had been told that the Podcast Crew *"was going to be a new crew full of different people from all over [the KAYSC]."* Instead this youth ended up being the only new person in a group of youth that had already worked together in a previous crew. When the youth first started the crew he/she felt like *"this kind of sucks cuz if I had known it was going to be like this I wouldn't have joined."* The youth said it eventually got better and that *"it still ended up being cool."* See Appendix G for full descriptions of you youths' least favorite things about the Podcast Crew.

Youth input is an important part of the KAYSC's commitment to youth-driven programming. In this case, Podcast Crew youth reflected on what they would have changed about the Podcast Crew experience; information that will be useful to the development of future KAYSC teams. Four of the youth provided suggestions of what they would change, while three of the youth said they wouldn't have changed anything. One of these youth even said, *"Nothing, it was perfect. It's just that you have to have those mistakes so you can learn from them and so learn things from the mistakes and then everything else was good."* All four of the youth that suggested changes talked about modifications to the production process, with three specifically mentioning the editing process. During the editing process, only some of the youth could be on the computer editing the video, while the others watched and provided suggestions. One youth felt that additional equipment might have helped address some of the sit and wait time to use equipment. Another youth suggested that youth split up so that some are editing, while the other youth are out shooting video for their next podcast. Similarly, a third youth felt that team members should have been assigned to certain parts of the production process, for instance having *"an editing team and then a production team, cuz when you get four people sitting around a computer and one's actually doing something the other three people are just sitting there like 'Oh My God. What am I doing?' So that was a challenge."* The youth also felt that more people on the team would have helped to split up skill sets. The other suggestion related to the production process was in relation to time management of the process and team activities overall. See Appendix H for full responses of what youth would have changed about the Podcast Crew.

New Skills and Knowledge

Youth identified the two most important things they learned while being on the Podcast Crew. As illustrated in Table 4, youth learned a variety of skills from their experience on the crew, including life skills and technical skills. Only one of the youth mentioned anything about the infectious disease content they learned through the process of creating the podcasts. Teamwork and communication skills were the most frequently mentioned life skills. Youth talked about working together to develop the podcasts and improving their communication skills with their peers and outside experts. *"The most important thing I learned on the Podcast Crew was interacting and making interview questions for the interviewer because it just shows your communication skills and building."* Two youth said they learned about time management through having to stay on task to get their podcasts done by the deadline. In addition to life skills, some youth also touched on learning technical skills including video recording skills and editing skills. When talking about video recording skills, one of the youth mentioned an increase in confidence, *"the camera stuff definitely, like just being able to take shots, use a camera. That's cool. And now I just know how I feel much more confident using cameras and going forward in the skill."* Other skills youth said they learned included patience, how to brainstorm, and leadership. See Appendix I for full responses of what youth reported learning.

Table 4: Two Most Important Things Youth Learned from being on the Podcast Crew (n=8)

Theme	Number of Youth
Teamwork	3
Communication skills	3
Time management	2
Video recording skills	2
Editing skills	2
Other	4

The Podcast Crew had opportunities to learn a variety of technical skills necessary to create a video podcast. In order to gauge how participation in the Podcast Crew impacted the youths' camera, audio, video preparation, and editing skills, they were asked to fill out a self-assessment rubric. The self-assessment rubric was adapted from the Educational Video Center's Rubric for Assessing Learning through Documentary Production². Youth completed the rubric when they started and ended their involvement on the Podcast Crew. For each skill, they chose from one of the following four levels of proficiency:

- No knowledge (I don't know how to do this)
- Basic (I can do this with help)
- Intermediate (I can do this independently)
- Advanced (I can teach someone else how to do this)

Results from the self-assessment rubric can be found in Tables 5, 6, 7, and 8. Data for eight of the youth are included in the tables. The other three youth were missing entry or exit data so their ratings couldn't be compared. The data is presented to represent when the youth were involved in the Crew. Youths 6, 4, and 7 were in the Podcast Crew from its inception to its ending, so they participated in all three podcast production cycles. Youths 9 and 10 were involved in production cycles one and two, but left the Crew early during the summer of 2010. Youths 8, 5, and 2 started on the Podcast Crew during the summer of 2010 so they were only involved in the third podcast production cycle.

The youth came to the Podcast Crew with a variety of camera skills. As illustrated in Table 5, half of the youth came with no knowledge or basic knowledge of camera skills, while the other half came with intermediate or advanced knowledge of some of the skills. By the end of their Podcast Crew experience, the majority of the youth reported at least an intermediate level of proficiency and felt they could do most camera operations independently. Five of the youth felt they knew enough to be able to teach someone else most of the camera skills. There were still two youth who felt they were unable to independently set manual settings for white balance or use a tilt shot and three youth that felt they needed help to be able to do a pan shot.

The youth also learned audio skills as part of their Podcast Crew experience. A majority of the youth started the Podcast Crew with the low levels of knowledge in this area, five of the youth said they had no knowledge or just a basic knowledge of the audio skills listed (see Table 6). By the end of their Podcast Crew experience, all of the youth reported an intermediate or advanced

² Educational Video Center. (2006). *Youth powered video: A hands-on curriculum for teaching documentary*. New York, NY: Author.

knowledge of how to monitor audio levels and most of the youth (seven out of eight) reported intermediate to advanced skills in monitoring audio quality.

Youth learned a variety of skills related to preparing to shoot a video, from identifying the main focus of their video to conducting an interview. Most of the youth started with at least some experience with video preparation skills (see Table 7). Seven of the youth had intermediate to advanced levels for some of the skills. Only one youth felt he/she couldn't do any of the skills independently before starting the Crew, but by the end could do over half the skills independently and the rest with help. Developing a shot list and writing a script had three to four youth who still felt they couldn't do the skill independently and needed assistance. The youth were least proficient at developing a storyboard with five of the eight youth feeling that they couldn't create a storyboard without help.

Video editing skills were an important component of the podcast production process. As shown in Table 8, youth reported a range of video editing skill levels at their entry to the Podcast Crew, with some youth having intermediate or high skill levels and others having low to no experience. By the end of their Podcast Crew experience, five of the youth felt they could do all of the video editing activities independently or could teach someone else how to do these activities. Three of the youth felt they could do most of the skills at an intermediate or advanced level, but still felt they couldn't add titles or transitions to videos without assistance.

Table 5: Youths' Self-Assessment of Their Camera Skills When They Entered and Exited the Podcast Crew (n=8)

Camera Skills	All Three Cycles						Cycles 1 & 2				Cycle 3 Only					
	Youth 6		Youth 4		Youth 7		Youth 9		Youth 10		Youth 8		Youth 5		Youth 2	
	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit
Set manual settings for white balance	N	A	I	I	N	A	N	B	N	A	B	I	N	B	B	A
Set manual settings for focus	N	A	B	I	B	A	B	I	B	A	B	I	N	B	B	I
Use a close-up shot	I	A	B	A	B	A	A	A	B	A	B	A	I	I	B	I
Use a medium shot	I	A	B	A	B	A	A	A	B	I	B	A	I	I	B	I
Use a wide shot	I	A	B	A	B	A	A	A	B	I	B	A	I	I	B	I
Use a high angle shot	A	A	I	A	N	A	A	A	B	I	B	A	I	I	B	I
Use a low angle shot	A	A	I	A	N	A	A	A	B	I	B	A	I	I	B	I
Use a pan shot	A	A	B	A	N	I	A	A	B	N	B	N	I	I	B	B
Use a zoom shot	A	A	I	A	B	A	A	A	B	A	B	A	I	I	B	I
Use a tilt shot	A	A	B	A	N	B	I	A	B	N	B	A	I	I	B	I

Note:

N=No knowledge (I don't know how to do this)

B=Basic (I can do this with help)

I=Intermediate (I can do this independently)

A=Advanced (I can teach someone else how to do this)

Table 6: Youths' Self-Assessment of Their Audio Skills When They Entered and Exited the Podcast Crew (n=8)

Audio Skills	All Three Cycles						Cycles 1 & 2				Cycle 3 Only					
	Youth 6		Youth A		Youth 7		Youth 9		Youth NO		Youth 8		Youth 5		Youth B	
	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit
Monitor audio quality	B	I	N	I	N	A	N	B	B	A	I	I	B	I	B	I
Monitor audio levels	I	A	B	I	N	A	N	I	I	A	I	I	B	I	B	I

Note:

N=No knowledge (I don't know how to do this)

B=Basic (I can do this with help)

I=Intermediate (I can do this independently)

A=Advanced (I can teach someone else how to do this)

Table 7: Youths' Self-Assessment of Their Video Preparation Skills When They Entered and Exited the Podcast Crew (n=8)

Video Prep. Skills	All Three Cycles						Cycles 1 & 2				Cycle 3 Only					
	Youth 6		Youth 4		Youth 7		Youth 9		Youth 10		Youth 8		Youth 5		Youth 2	
	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit
Identify message, argument, or main question of a video piece	I	A	B	B	A	I	B	B	I	A	I	I	I	I	B	I
Develop a list of interview questions	I	A	B	I	I	I	I	I	A	B	I	A	I	A	B	A
Conduct in-person interviews with adults	A	A	N	I	A	I	I	I	A	B	I	A	I	A	B	A
Conduct in-person interviews with other youth	A	A	B	I	A	I	I	I	A	B	I	A	I	A	I	A
Write a script	A	A	N	B	I	I	B	B	B	N	I	A	I	I	B	I
Develop a storyboard	A	A	B	B	B	B	B	B	N	N	B	A	I	I	I	B
Develop a shot list	B	I	N	I	N	B	B	B	I	N	B	B	I	I	B	I

Note:

N=No knowledge (I don't know how to do this)

B=Basic (I can do this with help)

I=Intermediate (I can do this independently)

A=Advanced (I can teach someone else how to do this)

Table 8: Youths' Self-Assessment of Their Video Editing Skills When They Entered and Exited the Podcast Crew (n=8)

Editing Skills	All Three Cycles						Cycles 1 & 2				Cycle 3 Only					
	Youth 6		Youth 4		Youth 7		Youth 9		Youth 10		Youth 8		Youth 5		Youth 2	
	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit	Entry	Exit
Capture video off of the camera onto the computer	B	A	B	A	N	I	I	I	A	A	B	A	B	B	B	I
Select quality shots from video footage	B	A	B	A	B	A	B	I	B	A	I	A	B	I	B	I
Arrange shots in a way that makes sense to tell a story or make an argument	I	A	N	I	N	I	I	A	B	A	I	A	I	I	B	I
Add titles to a video	A	A	I	A	N	B	I	I	A	N	I	I	I	B	B	I
Add transitions to a video	A	A	I	A	B	B	I	I	A	N	I	I	B	B	B	I

Note:

N=No knowledge (I don't know how to do this)

B=Basic (I can do this with help)

I=Intermediate (I can do this independently)

A=Advanced (I can teach someone else how to do this)

Of the eight youth interviewed, three had been in the Podcast Crew from the beginning; the other five had only been involved over the summer. The three youth that had the longest experience were asked how what they learned and experienced on the Podcast Crew helped them in school the previous year (see their responses below). One youth reported having to write a script for English class and that he/she drew from the experience of having to develop coherent, meaningful storylines or scripts for the Podcast Crew. Another youth reflected on learning about topics for Podcast Crew, such as the global food crisis, and transferring this knowledge to school work. The third youth mentioned that knowledge gained through the Podcast Crew didn't help directly in school, but was useful during an informal conversation he/she had with a teacher about video editing and realized *"I basically learned what they learned in a video editing class."*

Helped in School

- I don't know. Yeah, like for the script especially for English class. We have to write what we want and what people should say. In English class I had to write a play and it was really useful. I had to work with five others and I had a book and I knew what to do. Someone came in and taught us how to write a script. (Youth 4)
- Yes it has especially with all of the topics that we researched cuz what we do is we start broad and then we narrow it down and so everyone learns one subject and then shares it so that would be like learning ten different things in the small timeframe. And so like some of the random things that you learn at the workplace, at the work environment, you go to school and you learn about it at school and like it's really helpful to do it that way cuz you're learning a lot from, from other people [and using it]. An example, I would have to say, it was global food crisis. And we had the United Nation, a United Nations topic was global food crisis, and so I was researching that here at first and then went onto school and then I was on top of my game cuz I knew a little bit more about it than most students. (Youth 6)

Indirectly helped in school

- I wouldn't say directly, no. I'm trying to think if there's an instance. I remember one time I was talking to the, I never took a video class at school but I was talking to the teacher who taught video. I was actually able to kind of talk with him about this and where do you learn this? I was like "oh I do this at the Science Museum" and he was like, "Wow." I basically learned what they learned in a video editing class. That's the only thing I can really relate back to school. I don't think it's really done anything like directly. (Youth 7)

Youth learned a variety of skills and content through their work on the Podcast Crew. Youth were asked how they thought they would use what they learned in the future. Four youth talked about how they would use the video editing and camera skills they learned for future school or college projects. *"I have to do a senior project so I was thinking if the Youth Program Manager could be my mentor so I could do a documentary again or if not than just shoot some photos, I mean some videos and make like a storyboard out of it."* One youth plans to use what was learned about shot types for a future job *"because I want to be a photographer."* Another youth mentioned using video production skills to create a video application, *"some things that we would apply for, certain things require a video and I could use the knowledge I gained from there to help me make a video for an application."* Finally, another youth mentioned that his/her improved research skills will be valuable, because now he/she knows that you should look in more than one resource when researching a topic. *"It just makes my life more wiser out in the world, you know."* This same youth also talked about what he/she had learned about infectious disease(s), specifically malaria and mosquitoes, as being useful in the future. See Appendix J for full comments of how youth will use what they learned in the future.

Future Plans

All of the youth plan to go on to college after high school. As shown in Table 9, four of the youth plan to go to college and four plan to go on after college to graduate or professional school.

Table 9: Podcast Crew Youth Future School Plans (n=8)

Future school plans	Number of Youth
I'm not sure if I'll finish high school.	0
I plan to finish high school but don't think I'll go to college.	0
I'd like to go to a trade school or vocational school after high school.	0
I'd like to go to college after high school	4
I'd like to go to college and then go on after college to graduate or professional school	4

Youth reflected on other aspects of their future as well. They talked about what they are interested in studying in college and how their Podcast Crew experience has affected their future school plans. As illustrated in Table 10, half the youth (four out of eight) are interested in studying a medical-related topic. Other areas of study that youth are interested in included computer science; United Nation, communication, or dance; and economics or social sciences. One youth was not sure what he/she would like to study, but is interested in photography as a minor. When asked if the Podcast Crew affected their decision to pursue their area of study, none of the youth said it had a direct effect. Two youth mentioned that they like creating movies and possibly doing something related in their profession if it came up, although it didn't seem like it was something they were going to directly pursue. Another youth mentioned how talking to the Youth Program Manager about college choices was useful, although the youth acknowledge that the actual work of the Podcast Crew didn't effect his/her interest in what she plans to study. One youth acknowledged that although the Podcast Crew didn't have an effect on his/her educational interests, it still provided important experiences that will be useful in the future. *"Podcast was there to give me experience in photographing, researching and more of leadership, communication with friends and stuff. I would say that's a good experience towards my life in the future."*

Youth also talked about the job or occupation they plan to have when they are 30 years old. The youth who are interested in studying a medical-related topic in college are also interested in going into the medical field for a profession (Table 11). Other career plans include creating video games, economics, and having their own business (photo shop or grocery store). One of the youth wasn't sure what career he/she plans to have, just that he/she wants to do something successful. When asked if the Podcast Crew has had an influence on their future career plans, one youth said that the Podcast Crew didn't influence their future job decision, but provided knowledge and skills that will be useful for their career as a nurse or pediatrician. *"More knowledge like how I was able to work with other people, so that worked; that was with my social skills. And we also did infectious diseases so I learned information from there too."* Additionally, three youth reported that their Podcast Crew experience has given them technical skills for a potential job related to video or photography, but that these jobs would not be their first choice.

Table 10: Future Post-Secondary School Plans (n=8)

Youth	Post-Secondary Area of Study	How Podcast Crew has affected future education decisions
Youth 3	Nursing	In a way it does, but then I don't think I'm gonna go towards that direction. Cuz what if I do want to feel more something or if I'm gonna be filming for as like in nursing; as in we could spread out words. I'd probably use that if we do need or probably just filming different countries about oh, this is what they need. They're like this and I don't know. Somewhere just something about medical with videos.
Youth 1	Nursing	(Question wasn't asked in the online survey).
Youth 2	Nursing	No.
Youth 8	Radiology	Oh no. I mean that thought was in my head since I was a little boy; just to make a better life for me and my family so. Podcast was there to give me my experience in photographing, researching and more of leadership, communication with friends and stuff. I would say that's a good experience towards my life in the future.
Youth 5	Computer Science	No.
Youth 7	Economics, Social Sciences – Political Science, Urban Studies	No. No. Not really... I was choosing colleges around the time I was in Podcast Crew and I can't really think. I talked to The Youth Program Manager a lot about you know, what did you like about Macalester cuz I was looking at other small colleges and just to get an idea of you know. I went to him a lot about well, you know he knew the whole small college experience so maybe; kind of maybe now that I think about it just because I got some advice from The Youth Program Manager or I could you know, ask him questions and stuff. Yeah but not like because of the work I did on Podcast. That I decided to attend film school; not like that kind of thing.
Youth 6	United Nation/Communications, Dance	Sort of. I like doing and directing something. And for filmmaking seems pretty, pretty awesome. And something that I might want to do but it's just cuz there's like The Youth Program Manager brought in I forget her name where she made a documentary about female boxers and this one community thing. And she; it wasn't like a stable job cuz then you'd have to go out and find your client and then make the film and then give the film to them. And then you'd have to go find another client and then it would have to be something interesting that I'm filming. Cuz if it's not interesting then I don't want to film it. Yeah I like doing something and doing it my way.
Youth 4	I don't know my major yet, but my minor is going to be photography. Something with science maybe.	No, not yet.

Table 11: Future Career Plans (n=8)

Youth	Career at Age 30	How Podcast Crew has affected future job decisions
Youth 3	Oh...plan to work in a hospital. I don't know. I can't see myself yet. Probably in my thirties I would plan to see myself as helping elderly, elder people at a homeless shelter or probably myself feel like a different country helping other different people; other besides myself.	No. In a way, but it was a really good experience. I think I'll remember that. I don't know. It just hasn't come up to me yet.
Youth 1	I want to be a registered nurse or achieve more in life.	(Question wasn't asked in the online survey).
Youth 2	Nursing. I would also or either I would like to go for pediatrician too so.	No. No, I think they just provided me with more knowledge, yeah. More knowledge like how I was able to work with other people, so that worked; that was with my social skills. And we also did infectious diseases so I learned information from there too.
Youth 8	I'm still; I'm still looking for to be a doctor I suppose. Yeah. Because I'm looking for a cure for cancer I suppose so. I'm gonna stay on that yeah.	No.
Youth 5	I plan around 30 to be creating video games.	A little. I'd say if I'm looking for a job and I see that they need someone to shoot video or something like make podcast for just for a job, I'll be interested just for a job to get some money.
Youth 7	Thirty? Oh God. You know I don't know. If I majored in Econ and then went on to maybe get a Master's in something or what I wanted to do is I did kind of want to be an Economist for a while but that whole PhD route sounds brutal. So I'm not sure. I don't think I could actually. I just don't know.	I would say that I would be more comfortable going into maybe a media sector thing doing film or working with film or even you know editing. I can see so much more stuff like behind the camera stuff that I might be able to do. But if not, I don't even know if how I would do it professionally but I would definitely, I wouldn't be like know that; so it probably opened more career possibilities for me.
Youth 6	I honestly don't know. Something successful I hope. Or something that I enjoy doing and just don't complain about. Something successful that's all.	Sure.
Youth 4	Having my own business, but I'm not sure what I want it to be. I want a store: a photo-shop or grocery store that's it.	Yeah! Before I worked here I was thinking of photography, but I always change my mind, but I'm learning all this stuff about photography. So if I couldn't find anything for a job I could be a photographer.

Unintended Outcomes

A variety of unintended outcomes occurred as a result of the Podcast Crew. These include the hiring of two youth elsewhere in the museum for their videography skills, youth using videography skills in school, and an outside website featuring one of the Crew's podcasts.

The Podcast Crew was designed to teach youth technical skills they could use outside of their KAYSC experience. After the Podcast Crew ended, two of the youth were hired as video assistants for two evaluation projects conducted through the Science Museum of Minnesota's Department of Evaluation and Research in Learning. The youth participated in a variety of videographer and professional tasks including preparing the research site on the museum floor, recording visitor use of exhibits and interviews, keeping track of and labeling tapes, and transferring video from the camera to the computer. When asked to comment on involving youth in her project, Gina Svarovsky, Senior Evaluation & Research Associate, said, *"The youth were very professional and had high attention to detail. They were very competent in their video skills and willing to jump in and be flexible with the nature of what they were doing everywhere. We'll call them again when the next phase of the project happens."* Anika Ward, Director of the KAYSC, said the hiring of the KAYSC youth is, *" a real illustration of how Podcast and KAYSC programs empower youth with employable skills that sets the stage for next-level opportunities, within the museum and elsewhere."*

These same two youth are planning on doing Senior projects using skills and knowledge they learned on the Podcast Crew. One youth is creating a documentary about Hmong community members' immigration stories and the other is working with stop motion animation. Both youth have asked the Podcast Crew's Program Manager to be their mentor.

One of the Podcast Crew's podcasts was featured on a local news website, MinnPost. The podcast, *Got Beef? The Story Behind Antibiotics and Livestock*, was featured along with a short description of the podcast. The story can be seen at: http://www.minnpost.com/minnclips/2010/09/14/20778/overuse_of_antibiotics_on_the_farm_leading_to_drug_resistant_bugs

Conclusion

Overall, the youth had a positive experience on the Podcast Crew. They enjoyed a variety of aspects of the Crew experience including using a video camera, the filming process, learning how to write a script, editing their video, working with other Crew members, and researching diseases for the podcast.

The youth gained numerous skills and knowledge from their experience on the Podcast Crew. When asked about the two most important things they learned from the Crew, they focused on job and video production skills, only one youth mentioned knowledge related to infectious disease. The job skills youth mentioned (teamwork, communication skills, and time management) are all important life skills that will help the youth in future jobs they hold. When asked to self-assess their video production skills at both the beginning and end of their Podcast Crew experience, the youth reported an overall improvement across a variety of camera, audio, video preparation, and editing skills. Of the 24 skills youth were asked to rate when they left the Podcast Crew, most of the youth felt they had an intermediate to advanced level of proficiency for 18 of the skills. Developing a shot list, writing a script, adding titles and transitions to videos, and using the pan shot were the only skills to have three to four youth who still felt they couldn't do the skill independently and needed assistance. The youth were least proficient at developing

a storyboard with five of the eight youth feeling that they couldn't create a storyboard without help.

The editing process was the most challenging aspect of podcast development for the youth. It was mentioned both as a least favorite aspect of the Crew and as something the youth would change about their Podcast Crew experience. This was echoed by the youth when talking about the podcast production process (see Reflections on the Podcast Design Process section of this report). Even though youth felt the process was challenging, they still gained editing knowledge and skills. By the end of their Podcast Crew experience five of the youth felt they could do video editing activities independently or could teach someone else how to do these activities.

The Podcast Crew did not directly impact the youths' decision to pursue a future area of study or career. However, four youth said the experience gave them valuable skills that could potentially be useful for a future job. Two youth actually ended up securing temporary work in the museum's Department of Evaluation & Research in Learning because of the video skills they developed through involvement on the Podcast Crew.

Appendix A

Videos used for front-end study

Time to Stop is a rap video about infectious diseases throughout history. It speaks to the fact that while we have successfully eradicated or at least reduced some infectious diseases, others have appeared. The chorus, or message of the video, is “educate, vaccinate, reduce the rate, eradicate.” The video was created by Saint Paul Neighborhood Network (SPNN) adult staff as part of the grant and features youth actors from the KAYSC.
<http://www.diseasedetectives.org/videos>

The Facts presents both the misconceptions and concerns of the H1N1 swine flu vaccine and the facts that dispel those misconceptions and concerns. The video was also created for the grant by adult staff at SPNN and stars a professional youth staff from SPNN.
<http://www.diseasedetectives.org/videos>

Nanotechnology: What's the Big Deal? provides an overview of nanoscience and the potential opportunities and challenges presented by nanoscale technology. The video was created by and stars adult staff at the Oregon Museum of Science and Industry for the Nanoscale Informal Science Education Network. The video was created to stand-alone or be part of an exhibition.
<http://vimeo.com/11362918>

Sew What? is a youth-created production shot in a documentary style. It features a 16-year-old boy who describes the obstacles he's faced in his home life and within his community in the Westhaven Projects. He talks about how sewing is an escape from his situation and provides him hope for the future. <http://il.youtube.com/watch?v=Zd9WxA1WMJM>

Appendix B

Videos created by the Podcast Crew

*All of these videos can be found at: <http://www.diseasedetectives.org/videos>

Kitty Andersen Youth Science Center provides an overview of the Kitty Andersen Youth Science Center (KAYSC) at the Science Museum of Minnesota, where the Podcast Crew works. This video follows two Podcast Crew youth as they discover and learn about the KAYSC. To help explain the KAYSC, the video features clips from interviews with KAYSC youth who describe their experience in the Center and the work of their individual crews.

Annie's Talk Show is structured in a talk show format and stars Podcast Crew youth. The talk show host is a young energetic lady who interviews a virus, anti-virus, bacteria, vaccine, and a booster shot. The guests describe how they affect the human body either by making people sick or preventing disease. Commercial breaks advertising "The Fortress Face Mask" and the importance to "Wash Your Hands!" are also included in the podcast.

Mystery Microbes in the Cell Lab follows a Podcast Crew youth through her experiment aimed at answering the question, "Does hand sanitizer really work as well as they advertise?" While in the Science Museum of Minnesota's Cell Lab, she talks with one of the KAYSC's Cell Lab crew members about the Cell Lab and what she experienced in the hand sanitizer experiment. Through her visit to the Cell Lab she discovers that simply washing one's hands with soap and water is more effective than anti-bacterial hand sanitizer.

Got Beef? The Story Behind Antibiotics and Livestock features interviews with a D.V.M. from the Minnesota Department of Health and a meat buyer from a local food co-op, Mississippi Market. These experts explain why antibiotics are being used more frequently in livestock, the benefits and risks to both livestock and humans, and the prevention of drug resistant bacteria strains.

Malaria Worldwide features experts from the Minnesota Department of Health and the Metro Mosquito Control District. These experts examine the social, political, and economic impacts of malaria worldwide as well as various methods of prevention. The podcast also presents information on the symptoms of malaria and the influence of climate change on the spread of the mosquitoes and the disease. This documentary includes interviews and a stop-motion animation.

Appendix C

What were some challenges your team encountered while working on your podcast? (n=7)

Note: Some youth provided more than one answer.

(5) Setting up interviews

- And if we do a form of documentary we're gonna have to find people to interview. And a lot of them weren't willing to have an interview with us and so it was kind of hard. And there wasn't a lot of malaria experts in Minnesota just cuz it doesn't happen here a lot; but it does. And it was really hard to find a specialist in malaria because we went to the Minnesota Health Department and they just look at the population of mosquitoes. It wasn't about malaria although mosquitoes are tied with malaria. It didn't, they couldn't say anything about malaria that it was a parasite. They knew it was a parasite but then they didn't know the affects of malaria. And so it was kind of difficult to do malaria because there wasn't a lot of malaria experts and then kind of just stuck there for a moment until Sean came and he helped us. (Youth 6)
- It was our interviews. We were hoping to get a lot more interviews but again with time management we couldn't contact that many people. And I think that's all; just we were hoping for more interviews. (Youth 2)
- Getting interviews. Cuz we found the places but most people turned us down. We got a lot of no's before we got some yes's. That's bound to happen. (Youth 5)
- We were supposed to go downtown and talk with people on the street, but no one wanted to be the scouter and our subject is malaria and we weren't sure if people would know about it. But, we were lucky enough to find someone who knew about malaria. (Youth 4)
- Some challenge would be probably setting up time. To schedule with other people as in, as the farmer from the U of M, University of Minnesota, their farm land. (Youth 3)

(2) Editing

- I'll say editing. Yeah. That was a difficult one. That's the first time I had to edit. But the first time I ever seen editing was working with the Ryan, the first podcast; the romantic comedy. He was good though. It was quick. I was keeping my eyes on it. But then [other Podcast Crew members] and I, they had experience. [Other Podcast Crew member] and I had little experience. (Youth 8)
- After that, finding the interviews and the technical stuff, it seems difficult but it's really not that bad. And once you get the interviews it just gets easier once you start. Once you get the ball rolling, it just you know snowballs and eventually you'll have a video. (Youth 7)

(2) Identifying a podcast type/topic

- I said before just not knowing where we're going; so we think of our topic for malaria so we thought of our topic and then we wrote we researched on it and then we just kind of stuck there in that state for a while cuz we didn't know what we were going to do. Like

what should we do next? Should we, should we act or should we have like a form of documentary? (Youth 6)

- Oh man. Um...probably coming, like I said, probably coming to a consensus of what it was gonna, what was going to be our central message? Not so much like we were sitting there arguing around a table; well, I think this should happen. It was just more we all had an idea of what was going on with this issue but like I said, none of us knew so much about that we wanted to take an extreme stance either way. But we ended up on the side of antibiotics you know cuz we want to make a video that really relates closely to infectious diseases and that kind of makes it challenging for us to come up with these ideas just because none of us really know much about infectious diseases. So I guess the brainstorming is probably the hardest part of the whole process is just coming up with the idea and that's the most difficult part. (Youth 7)

(1) *Other*

- That was a pretty harsh day [the day they visited the University of Minnesota farmer] but had fun. Probably the weather when we were there; it was pretty humid too. Um...the weather was okay I mean I had shorts on, sandals on, was not real fine with the farmer. He's like you know if you was working out, not let you work with sandals and you know you would be stepping on scats, which are cow poops. (Youth 3)

Appendix D

Was there any part of the process you wished the Podcast Youth Crew Manager would have been more involved with? Why do you wish he would have been more involved? (n=7)

Note: One youth provided more than one answer

Points where Youth Program Manager could have been more involved

- To make cuz he just teaches oh, this is how you work it out; the camera. This is how you edit in the computer. This is what you do like just the basic roles. I mean I think he could have done better with that role. Since there's only the older people. I mean they all know how to touch the computer stuff. While me, [other Podcast Crew members], and some of the Cell Lab people were just like well, we don't know how to touch it. We're not in the comfortable station of okay, whatever. But I think he could have done was like everybody just sat at the computer individual and then we'll all just touch all the programs that we're gonna be learning about so we could have got used to it or be more comfortable with it. So I think we could have done something like that before Podcast even started. So kind of like an intro to Podcast. (Youth 3)
- I would like our teachers to see our work put together. So it's like he help us, tell us like how to give us the right path, you know towards a great video. And from there he see our work that he helped with. Instead of him there helping us with it and it's like our project when it's all modeled you know things like that. (Youth 8)

No

- No. I actually liked how he led us to make it our own video instead of his telling us exactly what to do cuz then we would just follow his orders and not go through the process on our own cuz he already knows how it goes but we don't. And so he would; he did it at the beginning where he was okay. He would lead us and to do it our own but then towards the end we were already doing it on our own and he was just there to supervise. (Youth 6)
- No. I think he gave us enough support to where we were able to do it by ourselves, but he was still there too. He was still there with us along the way of the whole podcast. So I think he did; I appreciate him just doing what he did. (Youth 2)
- I don't know. He was involved with everything. He helped us out with everything so I guess not. (Youth 5)
- I don't know. I like the way how it is. My team did pretty good on it. (Youth 4)
- Not, I'm trying to think; not really. I think he did a really good job as a manager. (Youth 7)

Appendix E

Is there anything you would have changed about the process your team went through to develop your podcast? (n=7)

- The only thing that I would change is us having only a certain amount of time to shoot and to edit cuz I think when you have the same amount of time to shoot and edit, but we need a little more time with editing because editing takes a little more time. And footage you just go out there and get films of people talking, but I'd change the editing time just cuz we need a little more editing time. And it takes longer. (Youth 6)
- I wouldn't say change; just more time. As for like time for the process of making the podcast. Even though it wasn't; we might have not had that much facts; or in the video, on the sideline, we had facts that we couldn't put in there. The end was okay. It was just for the entire project I guess. Cuz I'm saying like researching, interviews, putting things together and make the animation. From the result we had, we came out good. At the same time it's like we could have came out really good you know. (Youth 8)
- Yes. I would change a lot. Like what I'd say if I was to change, I would change like we could of done more footage while you know we just sat and talked and chilled you know we could have had some people went out and shoot some fast food place or something and then some of them would stay inside and gather information; some would edit the video while some of the people leave so then we'll be finished and getting back on track. I mean cuz I feel like wherever we go everybody's going along and I'm like its okay if everybody goes along but then what about the rest of the footage? Are we gonna make it on time or not?... I would have just like have to say for personal if we were, if both of the teams like the malaria and the food group and we all processed it one topic but different subjects as in like they could talk about something else while we talked about something else but it's the same topic. But we'll look towards deeper and the other group would look kind of like the intro and we'll do deeper in the middle between so that we'll all gather the same information. So that we wouldn't have much, so then the malaria group wouldn't have to go with the cow group to the cow station or we wouldn't have to go with the malaria to the malaria stations. I'm trying to say that we could have, we could have had just like look more into, more deeper into one topic but then two groups would have separate thoughts about it. Like separate like. But not the same topic but like the same topic but different like suggestion of how or questions they have. Kind of like two ways going deeper. So it looks like a real documentary instead of like a short documentary. (Youth 3)
- Well like I just said with the two production needs a lot of people. You need people just on hand you know and that's the fun part; going around shooting. The editing part is more solo you need no more than two people on the computer really. I know we want everybody's input and all that but it really; yeah you just end up sitting there. It's actually almost more distracting. I got more work done when I came in and got on the computer by myself than I do when I'm down there with three other crew members kind of just watching what I'm doing and commenting. So I would have changed that. Other things I would have changed during production; you know I can't really think of much. That was probably my biggest thing is just the editing process and how much, how many people needed to be there. Other than that it seemed to work. Everything worked pretty smoothly. (Youth 7)

- I would say get more pictures of or more B-roll shots and like more footage of water. That's what we needed more of cuz that's where mosquitoes breed and you can leave that on and stuff like that. Well cuz like some parts of the interview; well our first interview was, we didn't have a tripod and it's very shaky and it was not professionally done and so we should have got a lot of B-roll to put in so that you can hear the guy talking but then you see other footage you know. We didn't get enough so we had to put parts instead of actual interview in. (Youth 5)

No changes

- No. I think we did pretty good. We work very well as a team. (Youth 4)
- I don't think so. No I liked, I liked how we did it. It was, I think it was good what we got from the way that we did it. It was good because the process that we went through we also learned a lot from it and we learned what would work and what wouldn't work. So I think it was a good learning experience for all of us. (Youth 2)

Appendix F

What was your favorite thing about being on the Podcast Crew? Why was it your favorite? (n=8)

Note: Some youth provided more than one answer.

Aspects of the video production process

- Favorite thing being on the Podcast Crew is the videos and how to work with the camera. I never had a camera to work with so that's a good experience from the first start. So that's good to me. That's what I liked about it. Yeah, it was new and taking pictures. Everyone liked taking pictures so. Working with the camera, you can go outside and interview people as well as hold the camera and just, it's actually fun though. Plus to work with podcasts and to research diseases that might be interested to me. (Youth 8)
- It's fun using the video cameras and digital technology. I use it at home every single day and now I get to use more technologies. For my career I was thinking about digital photography and this has really helped me with that and my skills with technology. I'm glad I got to do this. I also learned how to write a script. They taught us in school, but working here I learned more about it. (Youth 4)
- I would say it was shooting video. No, just shooting video. Just fun I guess. (Youth 5)
- Well I really liked doing the whole production especially filming cuz we're not like sitting down or like writing a script or trying to think of ideas. I actually like doing the actual shooting and hands-on stuff and being about looking for people to interview. (Youth 6)
- Being in the Podcast Crew was really fun; learning the new technology even though I came in late. I only did kind of some of the footage and but after editing and kind of knowing the technology or short cuts, I mean its pretty fun. Kind of new technology I never used. So it was pretty fun. (Youth 3)
- My favorite thing? I guess probably you know when we really got into making you know the videos and crunch time. It was just cool being able to work on an actual project versus like when I was with my previous Crew it was all just show up and you know work with the guests. So that was probably my favorite thing. (Youth 7)

Working with other crew members

- My favorite for being on the podcast crew was the team, because I had a great time hanging out with them and they are my friends. (Youth 1)
- My favorite thing was hanging with the crew and getting ready to do our new Podcast, our new video and getting ready and coming up with ideas and calling for interviews and just setting everything up. Because we, we worked together as a group and I think that's why we've become so close was because we, we all put a little bit of our opinions in there so it made it more successful. (Youth 2)
- It got kind of cool and the teamwork atmosphere and stuff. (Youth 7)

Appendix G

What was your least favorite thing about being in the Podcast Crew? Why was it your least favorite? (n=8)

- I hate editing. I don't want to do editing. It's so long and boring and like but like at the same time I like doing editing because I like doing what's in my head and doing it myself instead of telling someone else to do it cuz if I told someone else to do they'd see it differently. They would do it differently so I'd rather just do it myself. But I don't like editing cuz it's so long. (Youth 6)
- The editing. Yeah it took a long time but at the end it's worth it, but just the whole process of sitting there every day and looking through footage over and over again. It gets you very tired. This, the video that we just finished, it took a good two weeks. Yeah and we just looked through all our footage. (Youth 2)
- Least favorite thing was all the hours of editing and sitting in front of the computer. Its boring cuz it's repetitive, but after you get it all done its okay. (Youth 5)
- Least favorite thing was kind of like; it's cool all over in the most part. But it's not in a way you have to do your things from your own time. And research and I like researching so it's good. Yeah the homework. You had to research. Get the right stories and piece that together. Cuz I sometimes be on top of my things so if I research and get all my information that time, I'll do it at nighttime. Finishing tomorrow and be done; show my partners so everything would be caught up so. (Youth 8)
- Brainstorming, because it's hard sometimes. And because podcast is a new thing for everyone. (Youth 1)
- Some of my least would be like sometimes we don't really focus on what we're doing. We always go, sometimes go out of topic but then we always come back to it. But then I feel like it's a natural thing so. I don't really have a least favorite Podcast. Because we have so many things that we don't barely meet each other with every day. We only meet three times a week and we're so busy during footage and we don't, sometimes we don't have time to talk to each other. (Youth 3)
- When I first started I felt like I was kind of I wanna say; when I was told about the crew they made it sound like it was going to be a new crew full of different people from all over. And then I was just kind of put on and it was just me and these five other girls who were all on another team and just got transferred here. So I was like well this kind of sucks cuz if I had known it was going to be like this I wouldn't have joined. So that in the beginning was really annoying. But eventually it got better. So yeah that's probably my least favorite is that the beginning the whole transition from my previous crew to this. And then I was like well this isn't what I was told it was gonna be. But it still ended up being cool. (Youth 7)
- I don't think I have one. It's really fun. I just want to come here. It's my first job and I'm happy I work here. (Youth 4)

Appendix H

If you could have changed anything about the podcast crew experience, is there anything you would have changed? (n=7)

Note: Some youth provided more than one answer.

- The part when we edit it. There's too many people and some watch one person because the computer is only one person. One or two of us edit the video and others just watch and give suggestions. They could be out getting the next video. (Youth 4)
- Maybe another camera or something cuz we'll have two cameras but and everyone was just, everyone was like; well maybe camera equipment. Maybe a little bit more equipment cuz when we had our laptop we, someone was like editing but then someone else needed to use it too at the same time, but then we would have to wait because we had to wait for that footage. Like if you were a cameraperson you'd give them, the laptop person, the footage and then you'd have to wait and then you're not doing anything so you just wait and you watch. And there's some people who are working and some people who are sidelined because there's nothing to do. There's not like they have, they can't use computers at the same time. So equipment; that's all. (Youth 6)
- Probably just those first couple of months. I really wish it was how it was described. I was told we were gonna have a crew. They were gonna take a couple kids from like all the crews in the YC, the leadership crews and then put them together. And instead it was just whatever; I don't even remember what their crew was called; like water something or no. I forgot what their crew was called but it was just them five and then me and I was just the new guy out of nowhere. So just those first months were really rocky and I was like I want to go back to Park Crew just because it was uncomfortable but that's probably it. That's another thing that's been kind of troubling with this crew is I feel we should have had, we had the broad team but then there should have been a editing team and then a production team cuz when you get four people sitting around a computer and one's actually doing something the other three people are just sitting there like oh, my God. What am I doing? So that was a challenge. Oh, well probably if it was just more how it was originally. Like how I thought it was gonna be if we did actually have. If it was a more diverse group probably because, not ethnically diverse cuz it had that, but just skill wise it seemed like we had too many people who were not; well everybody was afraid of the camera the first time at the beginning. They were afraid of being in front of the camera and nobody was comfortable with that. And if maybe we had more people who were more outgoing, more like if we had a couple people who want to be in front of the camera, a couple people who want to be behind. I don't know. Just like a bigger; probably a bigger crew. Skill sets and yeah. Instead of just I don't know. I thought it was kind of messy how they did it. And that's why I feel it proved, it improved a lot more when we merged with the Cell Lab or those people in the Cell Lab. Then it really got going cuz we had more people who's; it was just more interesting coming to work every day. Yeah. I probably actually just want more time to actually do more videos. I feel like we're getting better but now we're being kind of...it's just ending so fast. Because at the beginning those videos were kind of crappy cuz none of us really knew what we were doing and now they're improving a lot more. But it's just ending. So that's probably it; just change those few months and probably give it more time. (Youth 7)
- What I would change would be if we could of have got things all listed as in to be scheduled, right time, when to talk; when to have a team meeting and then to work on a

project; having time everybody has to come in and if they don't, we just leaving you know. Cuz we kind of start pretty late. We say we do meet at 1:00 and then people come kind of late sometimes. I mean I understand that, but then I think that if we wanted to since there's only a certain amount of time for Podcast. I think we could have done more than that. We could have did a listing and get and ask people about interviews you know. We just go and take footage or something instead of calling them and scheduling a date when we could of did that ahead of time. (Youth 3)

Nothing

- I don't think I would have changed anything. I really enjoyed it. It was fun. (Youth 2)
- Nothing. It wasn't perfect; it's just that you gotta have those mistakes so you can learn from them and so learn things from the mistakes and then everything else was good. (Youth 5)
- There've been times when we was tired. That's just the morning. I don't know. It seems okay to me. (Youth 8)

Appendix I

What are the two most important things you learned from your time on the Podcast Crew? (n=8)

Teamwork

- Probably how to interact with other people with my co-workers. We're friends now and we get to do all these things together and take turns. (Youth 4)
- Probably a lot of like the early; when we sat around and we tried to develop ideas as to what we were going to do with this Podcast; kind of teamwork. (Youth 7)
- Teamwork. We had to; we had to work together that day. It was pretty much the rough-cut day that we spent most of our time that day just editing the video and we had to really work together to get that done. (Youth 2)

Communication skills

- I think; I learned the most important thing that I learned on the Podcast crew was interacting and making interview questions for the interviewer because it just shows like your communication skills and building. (Youth 6)
- To communicate with friends. It's as if we're bonding with friends; that's where I found friends. (Youth 8)
- And then I also like oh, something that I learned; the second one would be actually polling professional people and being professional and setting up your own appointment and telling ok, we'll be there at this time and doing your own schedule. (Youth 6)

Time management

- Time management. We had to, we had to stay on task in order to finish our task for that day or that was due for that day and like sometimes when we would like, when we would spend too much time on one thing, we don't finish something that's supposed to be done that day. So we came close to the rough cuts but we did finish on time so. (Youth 2)
- The most important things I learned in Podcast would be trying to have time management even though you really want like them to finish talking. Re-watching the footage over; editing like as we did you know we have to go over and over again just to listen if it's right; the sounds right. How the movie is gonna work out. (Youth 3)

Video recording skills

- I learn so much. How to function a real big camera in real life at SPNN. It was Great. (Youth 1)
- Well the camera stuff definitely like just being able to take shots, use a camera. That's cool. And now I just you know I feel much more confident using cameras and going forward in the skill. (Youth 7)

Editing skills

- Understand editing, cutting, just piecing together the videos. I guess kind of just being able to you know all the technical stuff but then also have an idea of what it takes to make a video. You know be a video; not just you some film. You know I learned all the stuff like white balance like all these stuff that I had no idea beforehand. (Youth 7)
- Editing is important. Yeah. And b-roll, is very important. Cuz you gotta know how to edit. You don't want to edit and then your video is not good and b-roll is just extra shots that help buy time cuz the thing; cuz your video will roll really fast without it. I mean you have two minutes and you're supposed to get at least five and b-roll will actually add that last two minutes. (Youth 5)

Other

- The other one would be patience. Cuz times could go like really slow sometimes and then you're like oh my God; it's so slow. But then at the same time what you're doing it goes really slow with the clock but if you kind of know what you're doing then it's going fast. So probably patience. (Youth 3)
- Learning how to brainstorm I guess to turn so you got this really broad topic and how to turn that into a very specific video. So some brainstorming skills as well. (Youth 7)
- That a disease can be worldwide even though it can be a small problem. Leadership. We did that every day with the questions. (Youth 8)

Appendix J

How do you think you will use what you learned on the Podcast Crew in the future? (n=7)

- Well I was planning to use it in the future cuz there's I take a video production class too and I'm gonna be taking Video Production II next year and so that'll help me with using the camera and editing and sound stuff and all that great stuff. (Youth 6)
- Well I actually have been thinking about this now that I'm going to college and stuff maybe being able to use cameras. Before I was on this crew I'd never be able to, like let's make a video for a project just because I have no comfort with, I didn't have, I wasn't comfortable with my skills so that now that I have practice with this I could definitely if I'm doing a project for school, make a video for it and then learn how to cut that properly. I haven't [thought about taking video work courses in college], I would if I saw it and you know for maybe an art requirement, I'd try it. I never really thought of going into video as a career so I would do it, yes. I don't know if I will. You know it just hasn't come up I guess. And I don't know, maybe even trying using some fun stuff using cameras just on the side. (Youth 7)
- I learned a lot of computer skills and using and how you editing videos so I would like to maybe in the future for a future project or something, edit a video. Maybe something like that. I have an interest in it, but I haven't really attempted to do anything about it but yeah, I would like to. (Youth 2)
- For the future I was thinking cuz I have to do a senior project so I was thinking if The Youth Program Manager could be my mentor so I could do a documentary again or if not than just shoot some photos, I mean some videos and make a storyboard out of it. (Youth 3)
- Um...well some things that we would apply for certain things require a video and I could use the knowledge I gained from there to help me make a video for an application or something. My sisters they want to, they wanted to like, was it last year they wanted to buy a video camera and shoot video all summer. They never did it so I don't know. (Youth 5)
- It's going to be useful because I want to be a photographer. I know a few things that will help me. Like the angle shots a medium shot or a close-up. I also learned about the third grid. If the person's face is not in the middle it's more interesting to look at and not boring. (Youth 4)
- Researching got better. To help my partners with their research to make a group and a big story cuz this malaria could have went on. We could of made it bigger and everything. Yeah. Like cuz I used to go from one resource and that's it so and then now The Youth Program Manager told like besides one resource is not all the information you should just get cuz it's not that important. It's important but it might not get you the answer you need. So more resources and websites give you more facts, more details and you put that together in your own mind. And now in the future it can help me to master malaria from mosquitoes. It just makes my life more wiser out in the world you know. As for knowing that mosquitoes can be dangerous. Even though they bite you, you don't know if that's the actual one. (Youth 8)

Podcast Crew Exit Interview

1. What was your favorite thing about being on the Podcast Crew? Why was it your favorite?
2. What was your least favorite thing about being in the Podcast Crew? Why was it your least favorite?
3. What are the two most important things you learned from your time on the Podcast Crew? (Probe to make sure they say two things)
4. How do you think you will use what you learned on the Podcast Crew in the future?
5. (Don't ask of Cell Lab youth who started this summer) Did what you learned and experienced on the Podcast Crew help you in school last year? (If yes) How did it help you in school? Give examples if you have any.
6. If you could have changed anything about the podcast crew experience, is there anything you would have changed?
7. Now we are going to think just about the process of creating the meat and malaria podcasts. Describe to me the process your team went through to develop the podcast you worked on. Start at the beginning of the process of when you were coming up with ideas to creating the final video.
8. What were some challenges your team encountered while working on your podcast? How did you overcome those challenges?
9. Is there anything you would have changed about the process your team went through to develop your podcast?
10. What was Peter's role in developing your podcast? How was he involved throughout the process?
11. Was there any part of the process you wished Peter would have been more involved with? Why do you wish he would have been more involved?
12. Do you have anything else you would like to add about your Podcast Crew experience?

The next series of questions are about your plans after high school.

13. Which of the following best describes your future plans? (Show them this question)
- I'm not sure if I'll finish high school.
 - I plan to finish high school but don't think I'll go to college.
 - I'd like to go to a trade school or vocational school after high school.
 - I'd like to go to college after high school.
 - I'd like to go to college and then go on after college to graduate or professional school.
 - Other (please explain)
14. If you plan to attend post-secondary school (college, vocational, or trade school), where do you plan to go?
15. What are you interested in studying there?
16. Has involvement in Podcast Crew affected your future school decisions? (If yes, how has it influenced your decisions?)
17. Thinking about your future, what job or occupation do you plan to have when you are 30?
18. Has involvement in Podcast Crew affected your future job plans? (If yes, how has it influenced your plans?)

Podcast Crew - Skills Checklist

Name: _____

Date: _____

	No Knowledge (I don't know how to do this)	Basic (I can do this with help)	Intermediate (I can do this independently)	Advanced (I can teach someone else how to do this)
Camera Skills:				
• Set manual settings for exposure				
• Set manual settings for white balance				
• Set manual settings for focus				
• Use a close-up shot				
• Use a medium shot				
• Use a wide shot				
• Use a high angle shot				
• Use a low angle shot				
• Use a pan shot				
• Use a zoom shot				
• Use a tilt shot				
Audio Skills:				
• Identify different types of microphones (shotgun microphone, hand-held microphone, lavalier microphone)				
• Choose the appropriate microphone for a shot				
• Monitor audio quality				
• Monitor audio levels				

	No Knowledge (I don't know how to do this)	Basic (I can do this with help)	Intermediate (I can do this independently)	Advanced (I can teach someone else how to do this)
Video Editing Skills:				
• Capture video off of the camera onto the computer				
• Select quality shots from video footage				
• Arrange shots in a way that makes sense to tell a story or make an argument				
• Add titles to a video				
• Add transitions to a video				
• Prepare a video to post on the web				
Video Preparation Skills:				
• Develop a list of interview questions				
• Conduct in-person interviews with adults				
• Conduct in-person interviews with other youth				
• Write a script				
• Develop a storyboard				
• Develop a shot list				
• Identify message, argument, or main question of a video piece				



Recommendations for Creating Videos for a Teen Audience

Amy Grack Nelson

Department of Evaluation & Research in Learning

September 23, 2010



**Science
Museum**
of Minnesota®



Recommendations Development Process

One of the goals of the SEPA grant RR020439, “Emerging Infectious Disease: Podcasting the Youth Experience,” was to develop recommendations for creating video podcasts meant for a youth audience. The recommendations provided guidance to the Podcast Crew as they created video podcasts to accompany the Disease Detectives exhibition. The recommendations will also live beyond the life of the grant and guide other Kitty Andersen Youth Science Center (KAYSC) teams that produce videos for a youth audience.

The recommendations were developed using a two-phase process. The first phase was a front-end study to create the initial recommendations for the Podcast Crew to use during their production process. The second phase occurred at the end of the project to revise and expand on the recommendations using the data from the formative evaluations of the five Podcast Crew podcasts.

Phase One: Front-end Study

A front-end study was carried out at the beginning of the grant, before the Podcast Crew youth began their video production work. The purpose of the study was to create the initial recommendations. The study design was composed of four separate group discussions with high school youth from KAYSC. Two of the groups were composed of KAYSC youth from the Cell Lab Crew and Leadership Team and each group contained five youth. The Podcast Crew youth composed the other two groups, one with three youth and one with two. The Crew was split into two groups for the front-end study because some youth were unable to attend the first discussion so an additional time was added. None of the youth in any of the four groups had participated in video production in the KAYSC at the time of the group discussions.

During each group discussion, youth viewed four videos and provided feedback on what they liked and didn’t like about each video. The videos varied in content, format, and production quality (see Appendix for descriptions of the videos *Time to Stop*, *The Facts*, *Nanotechnology: What’s the Big Deal?*, and *Sew What?*). Each of the four groups viewed the videos in a different order so that the order of the videos wouldn’t bias results. After each video, youth were asked the following questions:

- What did you like about the video? What characteristics of the video do you think would be appealing to teens?
- What didn’t you like about the video? What characteristics wouldn’t be appealing to teens?

Youth worked individually to come up with their responses to the questions. They then shared their responses with the rest of the group and discussed why they liked or disliked something about the video. Using a sticky wall, youth placed their ideas under the corresponding like or dislike column for the video. This allowed the group to look at any emerging themes in the data and go into deeper discussions about what they liked and didn’t like about the video. This process was then repeated for the other three videos so that the group discussions ended with like and dislike data for each video.

The data from the four group discussions were analyzed to come up with the initial recommendations. All responses for an individual video were analyzed together and put into themes under features youth liked or disliked about that video. Each response was identified by which group discussion it came from so that it was apparent if the responses under a particular theme came up in more than one discussion. The result was four documents, one for each video that included the like data and corresponding themes and dislike data and themes. The final step was to look across all four documents to generate recommendations for creating videos meant for a teen audience. The resulting recommendations document was shared with the Podcast Crew so they could refer to the recommendations while creating their video podcasts to accompany the Disease Detectives exhibition.

Phase Two: Integrating formative evaluation data

Phase two involved integrating the formative evaluation data from the five podcasts created by the Podcast Crew. Each of the five podcasts went through a formative evaluation process. The formative evaluation involved KAYSC youth (not on the Podcast Crew) viewing the podcasts and participating in interviews. During the interviews, they commented on what they liked and didn't like about each video. The like and dislike data from the formative evaluation of each podcast was coded similarly to the front-end study data. For each video, the responses were put into themes for what youth liked and disliked about that particular video. The data for these five videos was reviewed along with the data from the four videos in the front-end study. Looking across data from all nine videos, the recommendations were revised and finalized, resulting in recommendations for presenting information, featuring people in a video, directing, and editing.

Limitations

The process of creating the recommendations had some limitations. One limitation was that youth involved in reviewing the videos were all from the KAYSC, meaning they were museum employees. This group of youth was used because the museum has a limited teen audience (only 8% of Science Museum of Minnesota visitors are between 13-20 years old¹), which would have made it difficult to gather data from teen visitors within the podcast production timeline of the grant. Instead, the KAYSC youth were chosen because they provided a diverse group of high school youth that were readily available and would be likely to visit a science museum, the audience the videos were meant for. A second limitation was that youth participating in the front-end study may have known some of the youth in the *Time to Stop* video since KAYSC youth starred in the video. This may have influenced their review of that video, however the evaluator stressed that the youth should not worry about being critical of the video because their peers just showed up and acted in the video, they were not involved in development of the video in any way. The video was created and produced by adult staff at St. Paul Neighborhood Network.

1. Ellenbogen, K. & Cohn, S. (2008). *Science Museum of Minnesota visitor study*. St. Paul, MN: Science Museum of Minnesota.



Recommendations for Presenting Information

Conveying message/storyline

- Ensure overall message, storyline, or purpose of the video is clear and easy to understand.
- Introductions and conclusions can help to reinforce the message.
- Consider repeating the message or key word(s) throughout the video. For example, if it is a rap the message can be repeated in the chorus.
- Choose messages or storylines that are relevant and of interest to a teen audience.

Include factual information

- Provide factual information about the topic being covered, especially information that might be new to youth or different than what they might learn in school.
- If the video is heavy on factual information, ensure there is a balance between delivery of information and entertainment.

Direct viewers to additional resources

- If appropriate, provide information about where people can get more information, such as a website.
- If including a website, make sure the web address is spoken as well as written on the screen.

Formats to consider

- Rap is a creative way to convey knowledge, especially if the lyrics are catchy and memorable. If creating a rap, make sure the lyrics match the beat.
- Posing questions and answering them with clips or interview segments was a format youth liked (see *The Facts*, *Mystery Microbes in the Cell Lab*, and *Kitty Andersen Youth Science Center* videos).
- Including personal stories of youth can be inspirational and create an emotional connection to a teen audience (see *Sew What?* video).



Recommendations for People Featured in Video

Ensure speaker/actors are interesting and engaging

- Ensure people in the video are enthusiastic, lively, show emotion, and look interested in what they are doing.
- Help individuals feel comfortable being filmed so on camera they appear relaxed, their actions look natural, and they deliver their lines smoothly. One way to do this is to ensure actors have rehearsed their lines and interviewees are aware of the questions they will be asked.
- Additional qualities of an effective speaker include use of hand motions, communicating with the eyes, and speaking clearly.

Include more than one person

- Feature more than one person in the video, but make sure there aren't too many people in one shot.
- Consider including people that help tell the story. For example, if a youth is talking about their family, you may want to include images or footage of their family.

Use experts

- Interview “experts” to help tell the story or deliver the message. This way youth creating the video don't need to rely on finding all the information themselves, but can draw from the expert's knowledge.

Include teens

- Use teens in the video to deliver a message or tell a story to their own generation.
- If using more than one teen, include a diverse group of youth.



Recommendations for Directing

Film in different settings

- Film in multiple locations or settings to add interest to the video.
- If the entire video is shot in one location, have the speaker move around so they aren't in one place throughout the entire video.

Include examples

- Show examples of what is being discussed in the video – objects, people, places, phenomena, etc.
- Examples provide a visual to what is being explained in the video so that viewers get the information two ways – visually and orally.
- Examples can be in the form of props, images, animations, demonstrations, experiments, or people acting out the information.
- In some cases, it may be useful to provide more than one example to help explain a topic or illustrate the story. For example, if talking about animals and the use of antibiotics, include not only cows, but other livestock that are affected as well.

Use different shots

- Use a variety of shot types to add interest (e.g. different angles, wide shots, close ups, etc.)

Every scene should have a purpose

- Each scene should have a reason for being in the video and be relevant to the overall message or story.
- Scenes that seem unnecessary can be confusing to the viewer.



Recommendations for Editing

Title

- Include a title.
- Ensure title fits well with the content and message of the video.

Section headings

- Section headings can be used to let the viewer know when a topic is changing and provide introductions to the different sections or topics of the video.
- Headings can be formatted various ways including a shot of only the heading or the heading text over an image.

Background music

- Include background music in videos.
- Make sure music fits with the story.
- Music should be something that is appealing to a teen audience.

Visual effects

- Use visual effects, but limit their use. It is possible to have too many visual effects.
- Consider using visual effects to transition between scenes.
- If using transitions, make sure the transitions don't move too quickly.

Subtitles

- Subtitling the entire video might be useful when there is a lot of information portrayed in the video.
- If using a foreign language in the video, make sure it is translated into English in subtitles.



Appendix: Video Descriptions

Videos used for front-end study

Time to Stop is a rap video about infectious diseases throughout history. It speaks to the fact that while we have successfully eradicated or at least reduced some infectious diseases, others have appeared. The chorus, or message of the video, is “educate, vaccinate, reduce the rate, eradicate.” The video was created by Saint Paul Neighborhood Network (SPNN) adult staff as part of the grant and features youth actors from the KAYSC. <http://www.diseasedetectives.org/videos>

The Facts presents both the misconceptions and concerns of the H1N1 swine flu vaccine and the facts that dispel those misconceptions and concerns. The video was also created for the grant by adult staff at SPNN and stars a professional youth staff from SPNN. <http://www.diseasedetectives.org/videos>

Nanotechnology: What’s the Big Deal? provides an overview of nanoscience and the potential opportunities and challenges presented by nanoscale technology. The video was created by and stars adult staff at the Oregon Museum of Science and Industry for the Nanoscale Informal Science Education Network. The video was created to stand-alone or be part of an exhibition. <http://vimeo.com/11362918>

Sew What? is a youth-created production shot in a documentary style. It features a 16-year-old boy who describes the obstacles he’s faced in his home life and within his community in the Westhaven Projects. He talks about how sewing is an escape from his situation and provides him hope for the future. <http://il.youtube.com/watch?v=Zd9WxA1WMJM>

Videos created by the Podcast Crew

*All of these videos can be found at: <http://www.diseasedetectives.org/videos>

Kitty Andersen Youth Science Center provides an overview of the Kitty Andersen Youth Science Center (KAYSC) at the Science Museum of Minnesota, where the Podcast Crew works. This video follows two Podcast Crew youth as they discover and learn about the KAYSC. To help explain the KAYSC, the video features clips from interviews with KAYSC youth who describe their experience in the Center and the work of their individual crews.

Annie’s Talk Show is structured in a talk show format and stars Podcast Crew youth. The talk show host is a young energetic lady who interviews a virus, anti-virus, bacteria, vaccine, and a booster shot. The guests describe how they affect the human body either by making people sick or preventing disease. Commercial breaks advertising “The Fortress Face Mask” and the importance to “Wash Your Hands!” are also included in the podcast.

Mystery Microbes in the Cell Lab follows a Podcast Crew youth through her experiment aimed at answering the question, “Does hand sanitizer really work as well as they advertise?” While in the Science Museum of Minnesota’s Cell Lab, she talks with one of the KAYSC’s Cell Lab crew members about the Cell Lab and what she experienced in the hand sanitizer experiment. Through her visit to the Cell Lab she discovers that simply washing one’s hands with soap and water is more effective than anti-bacterial hand sanitizer.

Got Beef? The Story Behind Antibiotics and Livestock features interviews with a D.V.M. from the Minnesota Department of Health and a meat buyer from a local food co-op, Mississippi Market. These experts explain why antibiotics are being used more frequently in livestock, the benefits and risks to both livestock and humans, and the prevention of drug resistant bacteria strains.

Malaria Worldwide features experts from the Minnesota Department of Health and the Metro Mosquito Control District. These experts examine the social, political, and economic impacts of malaria worldwide as well as various methods of prevention. The podcast also presents information on the symptoms of malaria and the influence of climate change on the spread of the mosquitoes and the disease. This documentary includes interviews and a stop-motion animation.