

Cyberchase Workshops-In-A-Box
Formative Evaluation
of Outreach After-School Activities for
Leaders and Youth

Report for
WNET Thirteen

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EXECUTIVE SUMMARY OF CYBERCHASE LEADERS' GUIDE EVALUATION
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This formative evaluation gathered feedback from after-school group leaders and their 3rd-5th grade youth in response to two activities included in the *Cyberchase Workshops-In-A-Box*. The user-based feedback will assist with the design of new after-school materials. The general goals for the research were to explore reactions to the workshop guide; assess appeal and difficulties in implementation of two activities; estimate comprehension of activity content; and evaluate leader interest in further activities.

Sample. Four leaders and their after-school groups of 3rd to 5th graders participated in California, four in Florida; and one in Massachusetts. The leader sample of 9 included 6 females and 3 males, with 3 minority representatives. One leader had seen the *Cyberchase* television series and at least three-quarters of the youth sample had. The 66 3rd-5th graders participating in the "Pattern Play" activity included 68% 3rd graders, 59% females and 36% minorities. The 63 3rd-5th graders participating in the "Fences and Fields" activity included 78% 3rd graders, 52% females and 33% minorities.

Procedure. Participants reviewed and implemented two activities from the *Cyberchase Workshops-In-A-Box*: "Pattern Play" and "Fences and Fields." Leaders were interviewed after reading through the *Workshop-In-A-Box* materials; leaders then implemented the two main activities with their after-school groups of five to ten youth, completed a leader and a youth survey after each activity, and were interviewed after their experience.

Reactions to Box materials. After the initial review of the *Workshop-In-A-Box* but before implementing activities, 8 of the 9 leaders reported that they would do at least one of the activities with their youth if they had received them in the mail. On initial exposure, leaders reported liking that directions were clear and that activities appeared easy to do.

Implementation of activities. Two of nine leaders had difficulties following where to stop the tape and suggested integrating such directions into the body of the activity instructions. Three leaders desired that all materials be included in the box to decrease preparation time, and another five noted especially that they would not have wanted to cut short the toothpicks for "Fences and Fields," a task which the researchers did for them.

Comprehension of activity content. All leaders agreed that "Fences and Fields" uses math concepts - perimeter and area. Leaders were split on whether "Pattern Play" uses math skills, with five saying yes and four saying no. Two of those who felt "Pattern Play" used math referred to the final handout problems rather than to the instrument pattern-making activity; two leaders also felt that the handout was difficult for their third graders.

A large majority (70%) of youth could not describe an interesting thing learned from "Fences and Fields," even though 55% said that the activity felt like math to them. Only 25% of the youth noted something about "perimeter" and/or "area" in their answers about what they learned; 10% responded with an answer indicating some relationship between perimeter and area. Half of the sample could describe learning something inter-

esting from “Pattern Play,” mainly learning “about patterns” (23%), or that you can make patterns or music with sound (11%) or that there are different patterns (8%). Half of the youth said that the “Pattern Play” activity felt like math to them, but those who reported watching *Cyberchase* previously were less likely to say the activity felt like math.

Appeal of activities. The activities were rated relatively high in appeal both by leaders and their students. On a scale of 1 to 5, where 5 means “liked very much,” “Pattern Play” was rated at 4.2 (leaders) and 4.3 (students). “Fences and Fields” was rated at 4.2 (leaders) and 4.1 (students). Girls (mean = 4.6) liked the latter activity significantly more than boys (3.6).

Leaders liked “Pattern Play” because their youth enjoyed the activity and it encouraged youth participation. Two leaders noted specifically liking the video. Two cub scout leaders were less enthusiastic because of control issues with their boys-only groups. Six of the nine leaders would recommend the activity because of their kids liked it. Those hesitating to recommend the activity were concerned with the effects of group size and gender on staying with the task. The participating youth liked most making music, noise or sounds and watching the video, but one-fifth of the sample disliked the video.

With respect to “Fences and Fields,” leaders liked most the curriculum concepts and the video. Six of the nine leaders would recommend the activity, emphasizing the entertainment and educational aspects. Those hesitating in their recommendation were concerned with the activity’s preparation time and school-like feeling. Youth liked most watching the video and doing the hamster cage activity, but girls liked the experience significantly more than boys. One-third of the boys did not like the hamster cage activity.

Interest in future activities. Five of the nine leaders were interested in receiving further *Workshops-in-A-Box*. Those not interested were concerned about their time, the academic-bent and level of difficulty of the activities for their mostly third grade participants. Seven of the nine leaders were interested in receiving activities to help their youth understand about spending, saving and budgeting money. Six of nine leaders preferred to receive instructions by mail because of computer and printer access, color ink expenses, download speed and time limitations. Two leaders preferred downloading from the web because of efficiency and saving trees. The remaining leader had no preference either way.

Conclusions. The following conclusions are based on only nine leaders and should be considered tentative in their recommendation power. The activities, on average, were appreciated by both the leaders and their youth. Continue the current approach of clear explanations of simple hands-on activities that are set up and complemented by video from the series. To improve the workshop, leaders preferred provision of all materials and integration of the start-stop video directions into the activity instructions. In terms of learning outcomes, one-third to one-half of the youth could describe something interesting that they learned from the experiences, but half of the youth and a few leaders did not feel there was math in the activities. Participating may have been enjoyable but the impact on learning was relatively low compared to impact of the in-school and at-home activities. This difference may result from the fact that the after-school participants were third graders while the evaluations in school and at home used fourth graders. Consider how the workshops can present a simple take-away message for younger participants. Five of the nine leaders were interested in other workshop activities, and seven were interested in future money activities and preferred receiving such activities via mail.

INTRODUCTION

This formative evaluation gathered feedback from after-school group leaders and their 3rd-5th grade youth in response to two activities included in the *Cyberchase Workshops-In-A-Box*. The user-based feedback will assist with the design of new after-school materials. The general goals for the research were:

- To explore reactions to the workshop guide generally;
- To assess appeal of the two activities;
- To pinpoint difficulties in the implementation of the two activities;
- To estimate comprehension of the activity content.
- To evaluate leader interest in further activities.

METHOD

Sample demographics and background information

After-school groups were recruited in Sacramento, CA, Harvard, MA, and Miami, FL. Leaders from Sacramento and Harvard were part of daily after-school programs in elementary schools, designed to offer a blend of indoor and outdoor play and activities. The Sacramento leaders reported that the *Cyberchase* activities fit into the kind of activities that they might typically do although they don't usually use television; on the other hand, the Harvard leaders were not comfortable with what they considered "academic" activities and only one of the four recruited leaders completed the procedure in the time frame provided, despite supervisor support and researcher prodding. The Miami participants included leaders and co-leaders of two Brownie and two Cub Scout groups. These leaders offered that they are always looking for activities for their groups, and one even asked about the possibility of earning a *Cyberchase* badge.

Of the 9 participating leaders, 6 (67%) were females and 3 (33%) were minorities. Only one leader had watched *Cyberchase* on television prior to participating in this project.

Sample Distribution	Females	Males	Minorities
Leaders (n = 9)	6	3	2 Hispanic females, 1 black male

The 66 3rd-5th graders participating in the "Pattern Play" activity included 68% 3rd graders, 59% females and 36% minorities (Hispanic, African-American, Asian).

The 63 3rd-5th graders participating in the "Fences and Fields" activity included 78% 3rd graders, 52% females and 33% minorities.

Sample Distribution Activity	Gender		Minorities	Grade		
	Females	Males		3 rd	4 th	5 th
"Pattern Play" (n = 66)	39	27	17 F, 6 M	45	17	4
"Fences and Fields" (n = 63)	33	30	14 F, 7 M	49	10	4

Youth who reported ever watching the television show *Cyberchase* included 77% of the sample in “Pattern Play” and 78% of the sample in “Fences and Fields.”

Procedure

During week one of the study, leaders received two *Cyberchase Workshops-In-A-Box* with a leader survey as well as youth surveys for each of the two workshops. Each box included a workshop tip sheet, workshop guide, videotape, youth *Cyberchase* adventure sheet, workshop certificate of completion, and materials related to completing the workshop activities (e.g., handouts, toothpicks). Leaders were interviewed at the end of week one to respond to the Workshop-In-A-Box generally, to review activity procedure and ask about perceived difficulties in implementation.

Leaders were asked to implement the two activities during weeks two and three. The activities could be done in any order, with the youth and leader response surveys completed after each activity. Group sizes ranged from five to ten youth.

After completing both activities, interviews with leaders focused on difficulties implementing the activities and perception of such activities as using math skills as well as interest in other *Workshops-In-A-Box*, money-related activities and best methods of receiving activities.

Analysis

Mean youth ratings were assessed for influences of gender, ethnic background and familiarity with *Cyberchase*. Youth open-ended responses were sorted and coded by key-word / phrase, and categories obtaining 5% or more of the sample are reported.

RESULTS: LEADERS' REACTIONS TO GUIDE GENERALLY

Initial Leader Appeal

In the pre-activity interview, leaders discussed what they liked and did not like about the guide generally. All leaders agreed that the guide was clear and activities appeared easy to implement; for example:

"It was very clear. It seemed very easy to follow. I was able to do it for myself and understood what to do. The instructions were clear to me."

"I think it was very specific. I think I can do it, without having to read the instructions. They were very good."

"The workshop guides were pretty self explanatory. I was impressed. They weren't difficult to figure out once I got a sense of what the different packets and pieces of paper referred to."

Two (22%) leaders referred to liking the math involved:

"The math lesson looked fun. There is a lot of problem solving in the TV show."

"The activities appeal to different learning styles and can be used to reinforce concepts already learned."

Things that were not liked included having to find or prep materials (5, 56%) and figuring out where to stop and start the video (3, 33%); for example:

"It would be helpful if all supplies were included in the box."

"It was sort of hard to get all the materials together. I had a really hard time finding Styrofoam cups and beans. It made it a little off-putting to have to search out the materials."

"The directions about cutting the toothpicks seems a little unrealistic. [researchers cut toothpicks ahead of time for the leaders] I can see a lot of people saying forget it."

"Thanks for cutting up the toothpicks. I don't see why they couldn't be cut in the original kit so leaders don't have to do that."

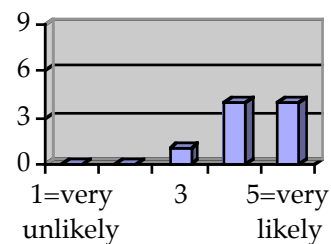
"It took awhile to figure out how to use the video."

"Confusion as to where to stop in the video – in some places it asks you to stop the video more than once. The sequence was confusing, spread over several pages, had to turn and find your place. The directions for the stop and start of the video should be integrated into the activity sections so you don't have to flip pages."

Initial Potential to Participate

Before actually doing an activity but after reading through the guide, leaders were asked how likely it is that they would do at least one of the activities with their youth if they had received the guide in the mail and not as part of an evaluation project. Choosing on a scale of 1 to 5, where "5" is "very likely" to do an activity, 4 (44%) of the leaders chose "5", saying they were "very likely" to do at least one activity. The mean response was "4.3" (see chart for full distribution). The leaders of the Brownies and Cub Scouts pointed out that they are "always looking for ideas." The one (11%) leader choosing a "3" felt that the activities were too academic for her after-school program.

Likelihood of Doing Activity



Leaders' Perception of Math in Activities

In the post-activity interview, leaders were asked if they felt that the two activities used math skills. All leaders reported that "Fences and Fields" used math concepts including perimeter (3), area (2), circumference (1) and space (1). Leaders were split on whether "Pattern Play" used math skills, with five (56%) saying yes and four (44%) saying no. Two of those who felt "Pattern Play" used math referred to the final handout problems rather than to the instrument pattern-making activity.

RESULTS: FENCES AND FIELDS

Implementation

In the pre-activity interview, none of the leaders foresaw any difficulties in implementing this activity; however, many pointed out that they would not have enjoyed cutting up the toothpicks, which the researchers did prior to delivering the workshop boxes. None of the leaders reported any difficulties in implementing the activity with their groups, although two had to work through their initial confusion of when to stop the tape.

Appeal

In the post-activity written survey, leaders were asked how much they liked doing the activity and what they liked or disliked about it. The 9 leaders' quantitative appeal ratings ranged from "liked very much" (5) to "it was okay" (3), with a mean appeal rating of 4.2. Written responses (see table below) indicate that leaders liked most the curriculum concepts (4, 44%) and the video (3, 33%).

Leaders' Appeal Responses:

Those who liked very much said:	Those who liked somewhat said:	Those who liked okay said:
The children seemed very interested in the shape making activity. The video helped the kids relate to the game/activity.	I thought the activity was age-appropriate for the students it was made for. It would have been nice to include second graders to introduce them to perimeter/area relationship.	I like how the kids related to the video and carried it over into the lesson.
Excellent example of area and perimeter.	I thought the video was entertaining and was successful in getting across the ideas of area and perimeter.	
The different possibilities with the same number of fence pieces was interesting.	Individual and group work was used for the activities.	
	Too old for the age group [3 rd] (re: area) but they still paid attention. Where to stop and what to do when stopped was not entirely clear.	
	Confusion about when to stop video and what to do. Activity was a little hard for 3 rd graders to grasp.	

In the post-activity written survey, participating youth were asked:

- ❖ How much did you like doing the activity?
- ❖ What did you like most about the activity?
- ❖ What did you not like about the activity?

The 63 youths' quantitative appeal ratings ranged from "disliked very much" (1) to "liked very much" (5), with a mean appeal rating of 4.1 . There was a gender difference in appeal, with girls (mean = 4.6) liking the activity significantly more than boys (mean = 3.6). From the open-ended responses, we learn that 10 (33%) boys did not like the hamster cage activity; 5 (17%) boys did not like the video; and 4 (13%) boys did not like anything in their experience.

Their written responses reveal that children overall liked watching the video more than doing the hamster cage activity.

What Youth Liked Most About the Activity:

- 41% liked most watching the video.
- 25% liked the hamster cage activity;
- 22% (mostly girls) liked "everything;"
- 8% (all boys) liked "nothing;"
- 3% (all boys) liked "skating in the cartoon."

Over half (59%) of the youth were unable to describe something they did not like about the activity. One-fifth of the sample, mostly boys, disliked the hamster cage activity.

What Youth Did Not Like About the Activity:

- 59% did not describe something they disliked about the activity;
- 22% (mostly boys) did not like the hamster cage activity;
- 10% (mostly boys) disliked the video;
- 6% (mostly boys) disliked "everything;"
- 3% did not like the skating.

Leaders were asked how much they would recommend this activity to other leaders. Of the 9 leaders, 6 (67%) would recommend the activity, 3 (33%) would recommend the activity “somewhat.” Leaders recommended the activity for its entertainment (5, 56%) and educational (5, 56%) aspects.

Leaders’ Recommendations

Recommend	Recommend somewhat
Some kids really enjoyed the workshop and were eager to do another one!	This activity seems more like school work or class work than the other activity – Pattern Play.
I would recommend the activity because it’s easy, fun and kids in this age group, 7-9 year olds, love cartoons.	The video was entertaining and conveyed the point well. I say “somewhat” because of the prep work and clean-up.
Do individually, not in teams. Run the tape from beginning to end, not stop and start.	The visual and kinesthetic appeals to students who may not grasp the math concept otherwise.
The children could relate to the problems the children on the show were facing.	
Kept the children quiet and entertained.	
It was educational and it entertained our group.	

Most Interesting Thing Learned

Youth participants were asked to report the most interesting thing they learned from the activity.¹ A large majority (43, 70%) were unable to identify anything that they learned from the activity. Of the remaining youth,

- 6% noted making different shapes from sticks;
- 5% learned “about perimeter and area;”
- 5% learned “about area;”
- 5% learned “about perimeter;”
- 10% (all 3rd graders) responded with an answer indicating some relationship between area and perimeter, as follows:

I learned that ...	Gender	Ethnic Grp	Feels like math?
if you change the area, you don’t need to change the shape.	F	White	Yes
you can change the area and have the same perimeter.	F	White	Yes
the area can get bigger even though it has the same amount of whatever.	F	White	No
the perimeter can stay the same but the space inside can change.	F	Asian	No
it was smaller but it was the same size.	M	Hispanic	Yes
you can change the outside but not the inside.	M	White	yes

Over half (n = 33, 55%) of the responding youth sample said that the activity felt like math to them. The responses were independent of appeal of the activity, gender, grade, ethnicity and previously viewing the series.

¹ Note that most of the sample were 3rd graders whereas the samples for the evaluations of at-home and at-school activities were fourth graders.

RESULTS: PATTERN PLAY

Implementation

In the pre-activity interview, none of the leaders foresaw any difficulties in implementing this activity.

In the post-activity written survey and interview, leaders were asked what difficulties, if any, they had doing the activity. Using the noise makers to make rhythms was a hit:

“They loved the part of shaking their instruments - when they did the chorus part of it, and one person started and the next one watching the person before them and trying to copy it but not copying it, but doing a band sort of thing. They really liked that part. I added a plastic bag and a cup with a flip lid. And it said something in there about a Styrofoam cup and a pencil in it, so they did it, and they switched so that everybody had a chance to do the ones with the real shaking noise.”

Only two (22%) leaders noted problems with the difficulty level of the “Patterns to the Rescue” handout:

“The students had some difficulties in the last two problems of “Patterns to the Rescue” handout. These were the younger students though. It was really up to me to help the students – not something anything in the guide could do about it.”

“The end handout, the kids had difficulty recognizing the pattern, the numbers. They had some difficulty due to their age.”

One (11%) ran into control problems by distributing the instrument materials earlier than indicated in the directions.

“Keeping the kids focused during the activity. They were more interested in shaking the items than listening to the instructions.”

Appeal

In the post-activity written survey, leaders were asked how much they liked doing the activity and what they liked or disliked about it. The 9 leaders' quantitative appeal ratings ranged from "liked very much" (5) to "it was okay" (3), with a mean appeal rating of 4.2.

Written responses (see table below) indicate that leaders liked most the fact that their youth enjoyed the activity (7, 78%) and that the activity encouraged youth participation (5, 56%). Two (22%) leaders noted liking the video. The two cub scout leaders were less enthusiastic because of control issues with their boys-only groups.

Leaders' Appeal Responses:

Those who liked very much said:	Those who liked somewhat said:	Those who liked okay said:
Fun for me and the kids. No writing or staring at a piece of paper but were games I could play with the kids.	Loved the movie. The kids loved making the instruments.	Interactive – good. Boys would have probably liked more “action” (i.e., jumping/hopping patterns, etc.)
The instructions were simple to follow, the activity included rhythmic patterns which the students enjoyed, and the students had an opportunity to look for patterns in the room.	I liked how the video presented the idea. It is easier for kids to learn something when they are interested in it.	I had a hard time keeping the boys quiet and listening during the activity. They enjoyed the video and seemed to understand the concepts.
Girls enjoyed very much – especially patterns with music.	I felt that I wasn't teaching the students anything new, just reinforcing concepts.	
Watching the girls create patterns with noise.		

In the post-activity written survey, participating youth were asked:

- ❖ How much did you like doing the activity?
- ❖ What did you like most about the activity?
- ❖ What did you not like about the activity?

The 66 youths' quantitative appeal ratings ranged from "disliked very much" (1) to "liked very much" (5), with a mean appeal rating of 4.3. There were no differences in subgroup responses for gender, grade, ethnic group or *Cyberchase* viewing.

Their written responses reveal that youth liked most making music/noise/sounds and watching the video.

What Youth Liked Most About the Activity:

- 30% liked making music, noise, sounds (no mention of patterns);
- 26% liked the video or parts of the video;
- 18% liked everything;
- 11% liked the handout "Patterns to the Rescue";
- 11% liked nothing;
- 8% liked making instruments.

Almost two-thirds (41, 62%) of the youth were unable to describe something they did not like about the activity, but about one-fifth (14, 21%) of the sample disliked the video (see table below for those not liking video plus those not liking anything).

What Youth Did Not Like About the Activity:

- 62% did not describe something they disliked about the activity;
- 15% did not like the video;
- 6% did not like anything;
- 6% did not like making sounds, noise;
- 5% did not like the handout "Patterns to the Rescue;"
- 5% did not like that the video was stopped.

Leaders were asked how much they would recommend this activity to other after-school groups. Of the 9 leaders, 6 (67%) would recommend the activity and 3 (33%) would recommend the activity “somewhat.” Those recommending the activity emphasized that the kids liked it. Those hesitating to recommend the activity were concerned with effects of group size and gender on staying with the task.

Leaders’ Recommendations

Recommend	Recommend somewhat
The kids really loved looking for the patterns. I liked this particular workshop better than fences.	More physical activity that was similar to making the music from ordinary objects. The students loved it.
Activity was fun and kept the kids interested and entertained.	Would not recommend for a group over 15 kids. It would lose the message.
I would recommend the activity for perhaps the lower age group K-2, because the cartoon helps reinforce shapes. Students begin learning about shapes in the pre-K. Excellent activity.	3 rd grade boys are difficult to keep sitting for a long period of time. When they received the noise makers, it was hard to keep them focused on making a pattern with the noise.
I feel the cartoon is a good way to get kids interested in a topic/subject, but some 5 th graders seemed almost insulted by the cartoon for some reason. I think they wanted a little more action.	
Good for a group of young girls since they can release their energy in a productive way.	
The girls loved watching and learning from Cyberchase.	

Most Interesting Thing Learned

Youth reported the most interesting thing they learned from the activity. Half (33, 50%) of the sample felt they learned nothing, but 23% (15) said they learned “about patterns” and 11% (7) learned that you can make patterns or music with sound.

What Youth Learned from the Activity:

- 50% felt that they learned “nothing;”
- 23% learned “about patterns;”
- 11% learned that you can make patterns/ music with sound.
- 8% wrote that there are “different patterns.”
- 6% said patterns connect to math;
- 3% learned how to make an instrument.

About half (n = 31, 49%) of the responding youth sample said that the activity felt like math to them. The responses were independent of appeal of the activity, gender, grade, and ethnicity. This response is not statistically independent of previous viewing of *Cyberchase*. Youth who reported watching *Cyberchase* previously were less likely to say the activity felt like math to them (Fisher’s exact test = .04).

Felt like math?	Yes (n, %)	No (n, %)	Total (n, %)
Have seen series	20, 42%	28, 58%	48, 100%
Have not seen series	11, 73%	4, 27%	15, 100%

RESULTS: FUTURE ACTIVITIES

Interest in Receiving More Workshops-In-A-Box

Leaders were told that there are four more *Cyberchase* math workshop activities available and were asked if they would like to receive these other activities. Five (56%) leaders were interested in receiving such materials; three (33%) had reservations and one (11%) was not interested. Full responses are presented in the table below.

Interest in Receiving More Workshops

YES	YES AND NO	NO
I would definitely do them, because they certainly help the students with basic math and algebra skills. I don't think they are so aware of that what they are really doing math. The mystery type angle is good.	I would say not immediately, but I think they enjoyed it. It was something they enjoyed.	No. We are really not academic in our program. Maybe in the winter time, but now we really try to get the kids outside on the nice days. We wouldn't be interested, although these were fine.
Yes, if they were as well put together as these.	Yes, maybe. We felt some of the children did not grasp concepts. Nearer the end of the year, early May, children will be more ready and mature.	
Yes, I really enjoy an alternative way to teach math with hands-on activities, and I liked the use of the TV show. That was a different way to teach too.	Yes but the reason I might not is the limited time I have at my job. To be able to get a group of kids to sit down for 90 minutes after school can be hard. The TV part is easy, but the part where they have to do worksheets seems too much like work to them.	
Sure.		
Definitely.		

Interest in Receiving Financial Activities

Leaders were asked if they would like to receive activities to help their youth understand about spending, saving and budgeting money. Seven (77%) leaders were interested in receiving such materials. Full responses are presented in the table below.

Interest in Receiving Financial Activities

YES	NO
Yes, that's great. I did an activity for Junior Achievement with kindergarten about concepts of money, savings, quantity and it went very well. The hardest thing for the kindergartners was recognizing the penny, dime, nickel and quarter.	No because I think that is more appropriate for sixth and up, when allowances, etc, come in. We only have through 5 th grade here.
Definitely. I think these kinds of activities are fun.	No.
Yes, that would be very good for them at this age. Never too early.	
Yes, those skills are important.	
Without a doubt because that is something that they need in their life. I think that would be great.	
Absolutely. I think that's very important for kids. Actually, there is a section in our Cub Scout books about saving and spending money and how to buy a car and go grocery shopping. I think it's very important especially in our area [FL]. Kids don't equate money to anything; it's just I want and I want. I think it's very important.	
Yes.	

As a final follow-up question, leaders were asked to specify the best way for them to receive activity instructions – by mail or downloading from a website. Six (67%) leaders preferred to receive instructions by mail because of computer and printer access, color ink expenses, download speed, and time limitations. Two (22%) leaders preferred downloading from the web because of efficiency and “saving trees.” The remaining leader (11%) had no preference either way.

SUMMARY AND DISCUSSION

Nine leaders of upper-grade elementary after-school groups reviewed and implemented two activities from the *Cyberchase Workshop-In-A-Box*: “Pattern Play” and “Fences and Fields.” Leaders were interviewed after reading through the box materials; leaders then implemented the two activities with their youth, completed a leader and a youth survey after each activity, and were interviewed after their experience. From 63 to 66 youth participated in each activity review.

Reactions upon initial exposure

After the initial review of the *Workshop-In-A-Box* but before implementing activities, 8 of the 9 leaders reported that they would do at least one of the activities with their youth if they had received them in the mail. On the initial exposure, leaders reported liking that the directions were clear and that the activities appeared easy to do.

Implementation of activities

In implementing the activities, two of the nine leaders had difficulties following where to stop the tape and suggested integrating such directions into the body of the activity instructions. Three leaders desired that all materials be included in the box to decrease preparation time and another five noted especially that they would not have wanted to cut short the toothpicks for “Fences and Fields,” which the researchers did for them.

Perception of math in activities

All leaders agreed that “Fences and Fields” uses math concepts - perimeter and area. Leaders were split on whether “Pattern Play” uses math skills, with five saying yes and four saying no. Two of those who felt “Pattern Play” used math referred to the final handout problems rather than to the instrument pattern-making activity; two leaders also felt that the handout was difficult for their third graders.

A large majority (70%) of youth could not describe an interesting thing learned from “Fences and Fields,” even though 55% said that the activity felt like math to them. Only 25% of the youth participants mentioned something about “perimeter” and/or “area” in their answers about what they learned; 10% responded with an answer indicating some relationship between perimeter and area. Half of the sample could describe learning something interesting from “Pattern Play,” mainly learning “about patterns” (23%), or that you can make patterns or music with sound (11%) or that there are different patterns (8%). Half of the youth said that the “Pattern Play” activity felt like math to them, but those who reported watching *Cyberchase* previously were less likely to say the activity felt like math.

Appeal of activities

Both activities were rated high in appeal by leaders and their youth. With respect to “Fences and Fields,” leaders liked most the curriculum concepts and the video. Six of the nine leaders would recommend the activity, emphasizing the entertainment and educational aspects. Those hesitating in their recommendation were concerned with the activity’s preparation time and school-like feeling. Youth liked most watching the video and doing the hamster cage activity, but girls liked the experience significantly more than boys. One-third of the boys did not like the hamster cage activity.

Leaders liked “Pattern Play” because their youth enjoyed the activity and it encouraged youth participation. Two leaders noted specifically liking the video. Two cub scout leaders were less enthusiastic because of control issues with their boys-only groups. Six of the nine leaders would recommend the activity because of their kids liked it. Those hesitating to recommend the activity were concerned with the effects of group size and gender on staying with the task. The participating youth liked most making music, noise or sounds and watching the video, but one-fifth of the sample disliked the video.

Potential for further activities

Five of the nine leaders were interested in receiving further *Workshops-in-A-Box*. Those not interested were concerned about their time, the academic-bent and level of difficulty of the activities for their mostly third-grade participants. Seven of the nine leaders were interested in receiving activities to help their youth understand about spending, saving and budgeting money. Six of nine leaders preferred to receive instructions by mail because of computer and printer access, color ink expenses, download speed and time limitations. Two leaders preferred downloading from the web because of efficiency and saving trees. The remaining leader had no preference either way.

Conclusions

The following conclusions are based on only nine leaders and should be considered tentative in their recommendation power. The activities, on average, were appreciated by both the leaders and their youth. Continue the current approach of clear explanations of simple hands-on activities that are set up and complemented by video from the series. To improve the workshop, leaders requested provision of all materials and integration of the start-stop video directions into the activity instructions. In terms of learning outcomes, one-third to one-half of the youth could describe something interesting that they learned from the experiences, but half of the youth and a few leaders did not feel there was math in the activities. Participating may have been enjoyable but the impact on learning was relatively low compared to impact of the in-school and at-home activities. This difference may result from the fact that the after-school participants were third graders while the other evaluations used fourth graders. Consider how the workshops can present a simple take-away message for younger participants. Five of the nine leaders were interested in other workshop activities, and seven were interested in future money activities and preferred receiving such activities via mail.