



STLOUISARTWORKS
CREATING. OPPORTUNITIES.

Impact Study Final Report



December 2015

Acknowledgements

Researchers and Report Authors:

Principal Researcher: Christine Klein, Ph.D.

Research and Evaluation Assistant: Michael Sophir, MSW

ArtWorks Staff

Executive Director: Priscilla Block, MFA

Program Manager: Jessica Graham, MSW

Site Supervisor: Donica England

Grants Managers: Susan TeStroete, MSW and Jacob Volkmar, MPA

Office Managers: Alayne Yates and Dawna Wharton

Media and Events Manager: Vicki Kahn

Art Therapist

Natalie Coriell, ATR, LPC

Much appreciation is extended to all the youth and teaching artists who participated in the research project, contributing their time and insights.

This project was funded in partnership with the St. Louis County Children's Service Fund's Discovery Initiative.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
ARTWORKS PROGRAM PROFILE	3
Artistic Disciplines	4
IMPACT STUDY OVERVIEW.....	5
PROJECT PARTICIPANTS.....	6
RESEARCH DESIGN AND METHODOLOGY	7
Methodology	7
Instruments	7
Methods and Data Collection.....	8
Research Questions	8
SURVEY RELIABILITY AND VALIDITY	9
Reliability.....	9
Validity	9
DATA ANALYSIS.....	10
Quantitative Data Analysis.....	10
Qualitative Data Analysis	10
FINDINGS.....	11
Summer Survey Results	11
Summer Drawing It Out Results	12
Program Impacts on Well-being	13
HYPOTHESIS AND RESEARCH QUESTIONS.....	16
Can We Accept the Hypothesis?	16
Research Question Responses	17
RECOMMENDATIONS	19
Art Therapy	19
Teaching Artists Training	19
Program Structure and Activities	20
Future Use of Instruments	20
REFERENCES AND RESOURCES.....	21
References Cited	21
Resources Used to inform ArtWorks Well-being Survey Development.....	21
APPENDIX A: ArtWorks Well-being Survey – Recommended 26-item version for future use ...	22
APPENDIX B: Summer Pre-to-Post Means and P-Values using Paired Samples T-Tests	25

EXECUTIVE SUMMARY

The art they create is important, but it is really just a channel through which they learn to be assertive, confident, and articulate... I can see the apprentices begin to imagine their futures differently and understand that they have the power to rise above their current situations. – Summer 2015 Teaching Artist

With STL ArtWorks I'm working together with people that I share an interest with, and I'm working on things that I actually care about, and that just really means a lot to me. – Summer 2015 Apprentice

St. Louis ArtWorks' intervention strategy strives to improve the behavioral health and well-being of underserved youth ages 14-19 as they take on the role of apprentice in developing commissioned artwork and items for public sale. The program is designed to provide for self-expression while instilling a sense of competence and connections to the larger St. Louis community. In partnership with the St. Louis County Children's Service Fund's Discovery Initiative, researchers measured the impact of this strategy.

Impact Study Goals:

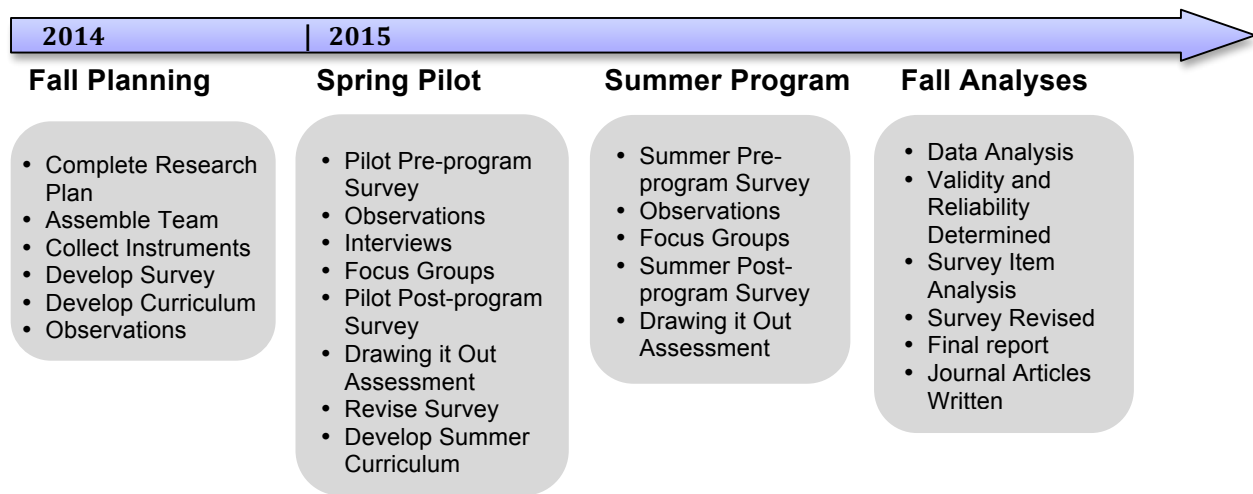
- Identify and develop appropriate behavioral health and well-being outcome measures for the ArtWorks program
- Document the program's impact on participants' well-being
- Guide program improvements based on study data

Methods and Measures

Using a mixed methods approach, researchers triangulated data from observations, interviews, focus groups, program records, and three outcome measures:

- **ArtWorks Well-being Survey (AWS)** - developed specifically for this study; designed to measure the program's impact on well-being
- **Warwick-Edinburgh Mental Well-being Scale (WEMWBS)** (used with permission) - a 14-item positively-worded survey used to validate the AWS
- **Drawing it Out** – a qualitative measure of program impact involving an artistic response by apprentices; developed by the Boston Youth Arts Evaluation Project (BYAEP) (2012)

Project Timeline



Program Impacts on Well-being

Program impacts were determined from results that have been confirmed from multiple data sources.

Apprentices:

- ✓ Developed a more positive **future outlook**.
- ✓ Developed a **sense of competence** and improved their **sense of self-worth**.
- ✓ Became more **open to new situations**.
- ✓ Felt more **empowered to make a difference in their community**.
- ✓ Met and learned to work with **peers from different backgrounds**.
- ✓ Improved **social skills**, gained **social confidence**, and developed **close personal relationships** with peers.
- ✓ Improved their **coping skills**.

Program Recommendations

Based on the Impact Study findings, researchers recommend that ArtWorks:

- Hire an art therapist to support programming
- Integrate art therapy activities into the curriculum
- Consider extending the summer program beyond the current six weeks
- Increase Teaching Artist training to include topics and practices designed to improve mental health outcomes

ARTWORKS PROGRAM PROFILE

The Project Context

St. Louis ArtWorks provides underserved youth ages 14-19 with paid apprenticeships in the arts, community collaborations, and employment training. The program is designed to meet youth's social, emotional, and psychological needs and to improve their behavioral health and well-being.

Through ArtWorks, apprentices develop commissioned artwork and items for public sale. This intervention strategy is designed to provide for self-expression while instilling a sense of competence and connections to the larger St. Louis community.

Field trips to area museums, parks, businesses, and organizations add to the sense of community while providing essential information and inspiration for the youth's artwork. Workshops on communication, nutrition, financial literacy, and other topics help youth develop the skills needed for their future well-being.

In partnership with the St. Louis County Children's Service Fund's (CSF) Discovery Initiative, psychoeducational group activities led by an art therapist provided apprentices with opportunities to express their emotions through art, learn about emotional regulation, and gain deeper insight into their own identity development.

ArtWorks' Hypothesis:

We believe that providing a safe haven for self-expression through the arts with caring adults in an out-of-school time apprenticeship model with community collaborations results in positive impact on the mental health of participants.

ArtWorks operates in a multidisciplinary team model with a social worker overseeing each teen's progression from admission through completion of the program. During this CSF-funded Impact Study, the team consisted of an art therapist, professional teaching artists, MSW manager/social worker, site supervisor, lead researcher, and research assistant.

The stories provided throughout this report use examples from Impact Study observations, focus groups, and interviews to paint a picture of the program and the apprentices, providing the context of the study.

Apprentice Profile - Richard

Richard appears to take longer to learn tasks than other apprentices. He is quiet during the first art therapy activities, and speaks softly when he does speak. Later during the formal critique, he doesn't offer feedback to others. Richard struggles with art skills and requires frequent help from the teaching artists. Outside of ArtWorks, he works with a school counselor on anger management.

By the end of the session, Richard expresses more confidence. He completes two rain barrels and is proud of his work. He is self-motivated and takes more initiative. Richard looks forward to participating in another ArtWorks session.

Artistic Disciplines

Each group consists of about eighteen ArtWorks apprentices and focuses on a particular artistic discipline. Teaching Artists (usually two per group) guide apprentices in their work on commissioned and individual pieces. Descriptions of the one spring and six summer disciplines included in the Impact Study provide an overview of the apprentices' work.

Pilot/Rain Barrels

Apprentices in the spring pilot group painted rain barrels for sale to the general public in



May. A field trip to Bellefontaine Cemetery and Arboretum helped apprentices generate inspiration for their Missouri flora and fauna themed rain barrels.

Printmaking

Apprentices created a four-image series of cards to be used by the Anti-Defamation League (ADL) and The National Conference for Community and Justice of Metropolitan St. Louis (NCCJ STL) to educate and train communities on important systemic issues facing our region. For the Metropolitan Sewer District (MSD), apprentices took original photographs to create prints for community-based art.

Poetry/Video

Apprentices in this group produced stop-motion videos incorporating poetry with the theme "Why Should We Care?" as they explored issues of personal leadership focusing on national, state, and local current events. Apprentices used re-purposed objects to create "Found Art" pieces for the public Summer Sale.



Installation Art

Building on the ArtWorks' Dream theme, apprentices designed and installed a large outdoor artwork on the fence at the new ArtWorks' building at 5959 Delmar. (See photo at top of report cover.) Using design and weaving skills developed for the fence, apprentices also created individual needlework pieces for sale to the public.

Sculpture

As a team, apprentices in this group designed a large public sculpture for installation at Queeny Park based on the Water Matters theme with the Nature Conservancy and Ozark Land Trust. Individually, apprentices created practical art pieces using repurposed bicycle parts and built birdhouses for sale to the public.

Pocket Park

Apprentices learned how people interact with public spaces and criteria for design of public parks to create a 3D model for a pocket park to be built in Pagedale for Great Rivers Greenway. Two-dimensional designs from multiple perspectives were created in the process and sold at the public sale.



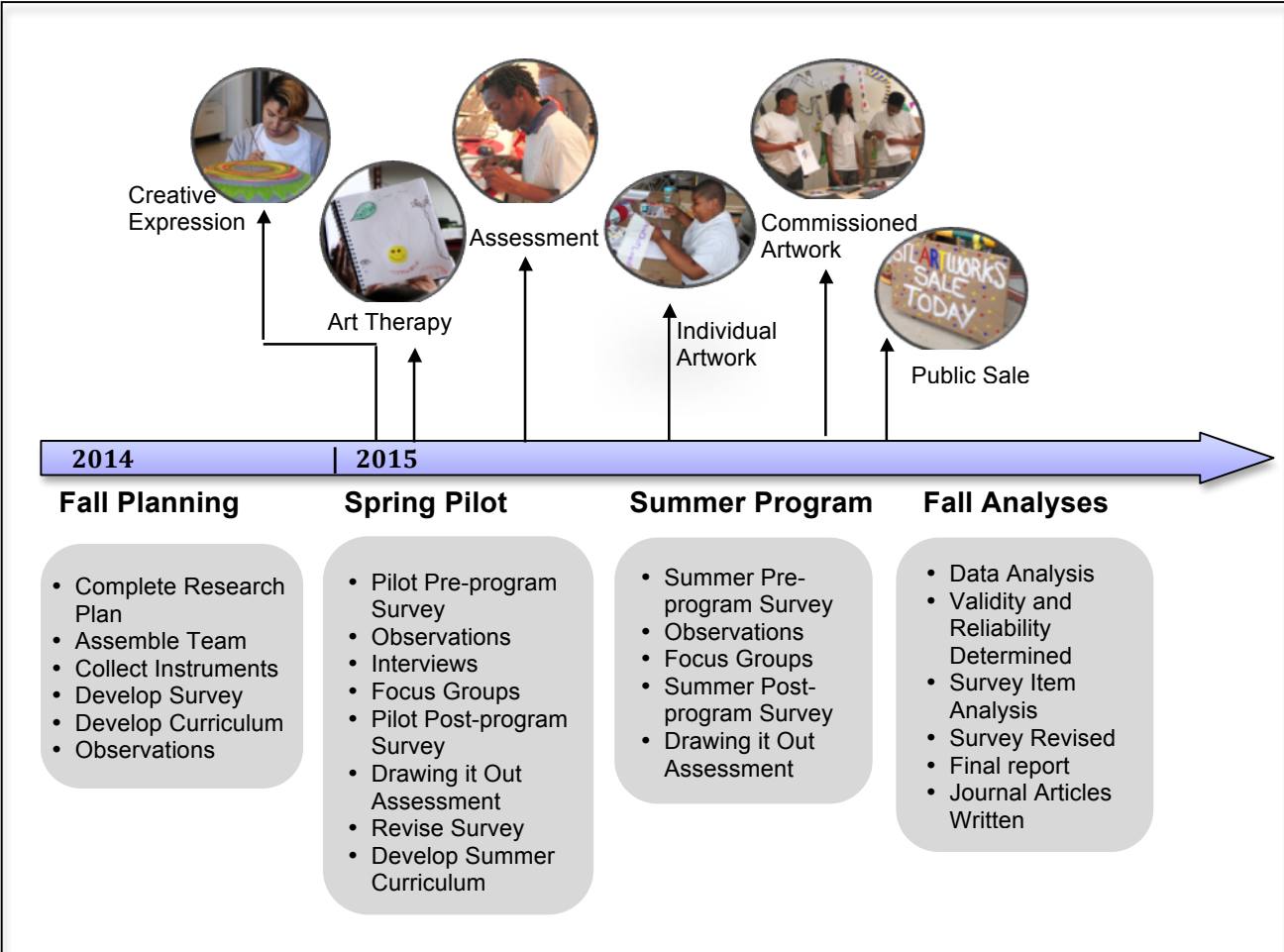
Video

This group of four apprentices and one Teaching Artist documented the summer and produced videos to share the ArtWorks Program. They spent time with each of the other five groups and interviewed apprentices for their videos.

IMPACT STUDY OVERVIEW

The overarching goal of this Impact Study, funded by the Children’s Service Fund, was to measure the impact of St. Louis ArtWorks’ youth programming on participants’ mental and behavioral health. Specifically, the goals were to 1) identify and develop appropriate behavioral health and well-being outcome measures for the ArtWorks program, 2) document the program’s impact on the participants’ well-being, and 3) guide program improvements based on study data.

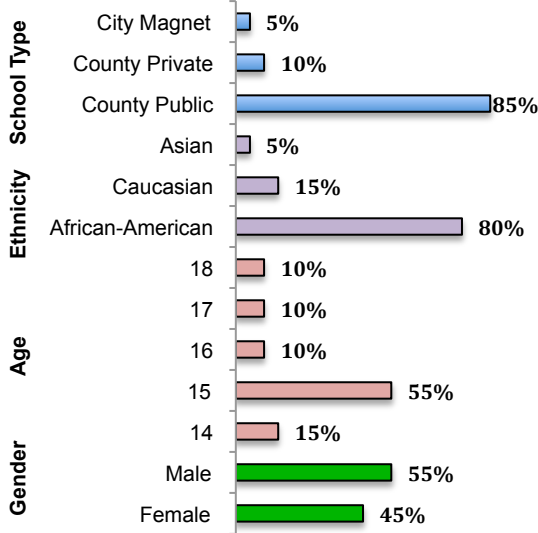
During the *planning phase* in fall 2014, twenty apprentices were recruited and hired for the pilot. During the spring 2015 *pilot phase*, researchers collected data as pilot group apprentices painted rain barrels, participated in self-exploration through art therapy activities, and developed life and employment skills. Building on results from the pilot, the *summer program phase* focused on data collection from the full program. Data analysis was an ongoing process throughout spring and summer, though in the fall 2015 *analysis phase* researchers completed the full analysis of the Impact Study data.



PROJECT PARTICIPANTS

Apprentice and Teaching Artist Demographics

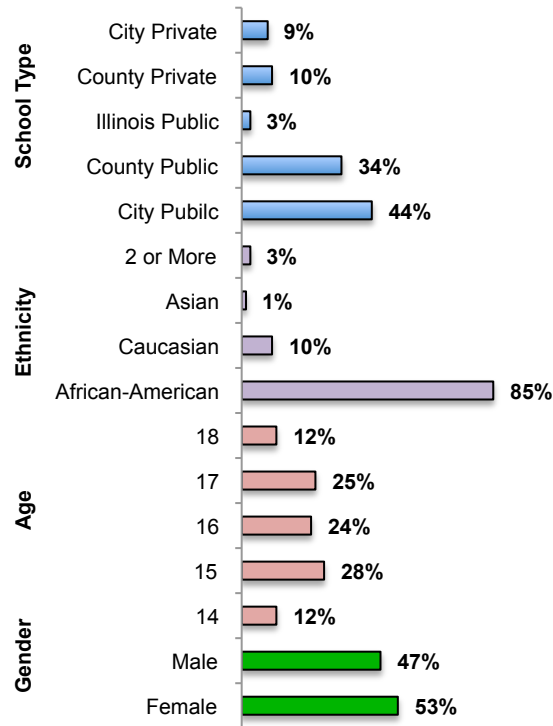
Pilot Apprentices (N=20)



Twenty apprentices were hired for the spring pilot group. When one left the program after the third week, she was replaced by an apprentice on the waiting list. Demographic data reflects the pilot group that completed the spring program. All lived in St. Louis County, though one attended a St. Louis Public Schools magnet school. Two attended private schools in North St. Louis County.

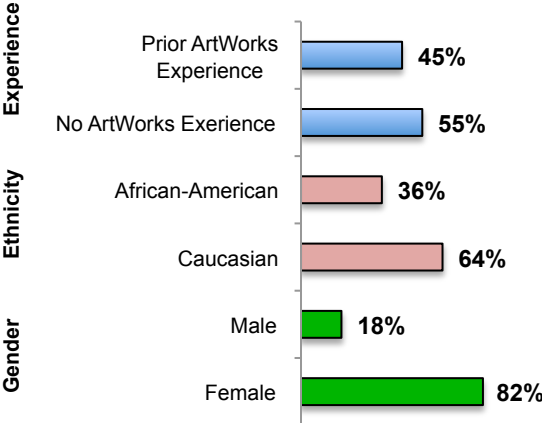
Twelve of the 20 pilot apprentices returned in the summer. Of the 85 apprentices participating in the summer program, 68 (80%) agreed to participate in the Impact Study by signing the informed consent/assent forms, including the 12 from the pilot group.

Summer Program Apprentices (N=68)



Both Teaching Artists for the pilot group were female, one African-American and one Caucasian. Both had prior ArtWorks experience, one as a teaching artist and the other as an apprentice and assistant site supervisor. Demographic data for the summer Teaching Artists are below.

Summer Teaching Artists (N=11)



RESEARCH DESIGN AND METHODOLOGY

Methodology

Naturalistic methodology (Lincoln & Guba, 1985; Guba & Lincoln, 1989) allows researchers to understand the program from multiple angles using a systematic approach for collecting and analyzing data in the context in which it occurs. Processes and activities at ArtWorks were explored through a variety of sources to fully capture the impacts of the program from the viewpoints and perspectives of the people involved. Data collection and analysis were iterative processes.

Researchers analyzed qualitative data using a modified inductive constant comparison approach (Lincoln & Guba, 1985), whereby each set of data was compared with previous data sets to direct the focus of subsequent data collection. Quantitative data were analyzed using descriptive and inferential statistics. In order to develop findings, both qualitative and quantitative data were triangulated to provide stronger validity and credibility for decision-making.

Instruments

ArtWorks employed several instruments to assess program outcomes prior to the Impact Study, including a youth self-report online survey and teacher-report instruments assessing youth job performance, communication skills, and presentation skills. Researchers reviewed all ArtWorks program evaluation instruments and recommended a standardized rubric be added to the teacher-report performance reviews and communication evaluations to improve consistency of ratings.

For this Impact Study, researchers wanted to use an instrument that was specifically tailored towards measuring well-being impact within the context of a youth job-training program centered around the Arts. After careful review of established and effective mental health evaluation instruments, researchers found none meeting all the needs of this project. As a result, researchers developed a new survey instrument based on the relevant aspects of different existing measures. A list of resources helpful in the survey development process can be found in the References and Resources Section on page 21.

The **ArtWorks Well-being Survey (AWS)** was developed as a 50-item scale in spring and revised as a 43-item scale in summer to measure program impact on mental well-being. The survey included both positively and negatively worded items covering a variety of aspects of well-being such as social relatedness, future outlook, competence, and emotional regulation. (See Appendix A, page 22, for the AWS.)

The **Warwick-Edinburgh Mental Well-being Scale (WEMWBS)**, a 14-item positively-worded survey for measuring mental well-being (used with permission), has been validated in various populations (e.g., Tennant et al., 2007). Apprentices completed the WEMWBS at the same time as the AWS to compare AWS results with an accepted measure to establish criterion validity of the instrument.

The **Drawing it Out** assessment, an open-ended artistic response tool developed by the Boston Youth Arts Evaluation Project (2012), asks participants to draw two pictures (before and after involvement in the program) and to “write a few words to tell us the story of what has changed.” This was completed at the end of the sessions for data triangulation with other sources.

Methods and Data Collection

Apprentices completed the **AWS** and **WEMWBS** at the beginning and end of the pilot and the summer programs. They also completed the **Drawing it Out** assessment at the end of the sessions.

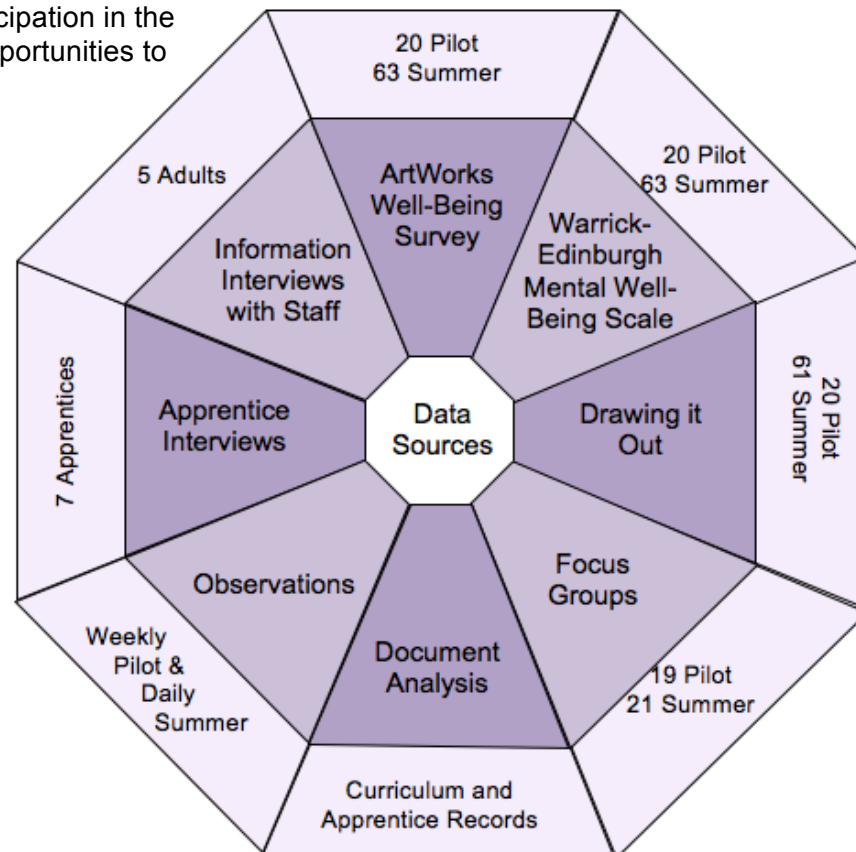
Focus Group Interviews with groups of 9-12 apprentices in the pilot and summer programs provided data on youth's attitudes, interests, and understanding. **In-depth Interviews** with selected apprentices provided data to further explore attitudes, beliefs, and behaviors. **Information Interviews** with four staff members and the art therapist allowed the research team to collect additional perceptions and opinions.

Observational Data from multiple locations allowed for triangulation of the data collected from other sources and informed the focus group and interview questions.

Document Analysis of attendance records and youth's individual assessments provided evidence of participation in the program and additional opportunities to identify trends.

Research Questions

1. What instruments and evaluation tools currently used by ArtWorks effectively measure impact?
2. What instruments available nationally can be used to effectively measure impact? What modifications are needed, if any?
3. What impact does the ArtWorks program have on youth participating in the spring 2015 pilot study?
4. How can results of the pilot study support improvements in curriculum and program delivery?
5. What level of reliability and validity can be achieved on the instruments?
6. What impact does the ArtWorks program have on youth participating in the summer 2015 program?
7. How can the instruments be used beyond the funding period to measure impact?



SURVEY RELIABILITY AND VALIDITY

Reliability

We found high **internal consistency** on the AWS and on the WEMWBS using Cronbach's alpha of Internal Consistency in the spring and confirmed results in the summer as shown in the table to the right.

We found strong **test-retest reliability** when the survey was given over the six-week break between the spring and summer sessions to the returning pilot group apprentices (N=11). The high Pearson Correlation Coefficient ($r=0.83$) indicated stable scores during the break.

	AWS	WEMWBS
Number of Items	43	14
Cronbach's alpha		
Summer Pre-Survey	0.86	0.90
Retrospective Pre-Survey	0.86	N/A
Summer Post-Survey	0.87	0.92

Validity

Face validity was established through the design process with validated measures used as models for survey items. Aspects of well-being that matched the program's expected mental health outcomes were drawn from fall observation data.

Criterion validity was established using the Pearson Correlation Coefficient (r) to compare the results on the AWS to those of the WEMWBS when taken at the same time during the spring and summer program. We found strong criterion validity with correlations from .0.67 to 0.79.

We found two challenges to achieving **construct validity** in the pilot program: socially desirable responding and response-shift bias. Triangulation of summer data indicated that corrective steps taken on the summer survey improved the construct validity.

Socially Desirable Responding: Selection of responses based on what is perceived to be desirable even if this is not an honest response

Response-Shift Bias: When respondents base post-survey responses on different understanding of behaviors and mental processes than they had at the time of the pre-survey

Socially Desirable Responding

To address Socially Desirable Responding (SDR), we: 1) developed a standard script to read prior to survey administration emphasizing the value of honest answers; 2) ensured that all apprentices heard the introduction script; and, 3) changed and eliminated items that may have been more prone to SDR. For example, on the item "I control my temper," apprentices may have felt in a work setting that they needed to agree with the statement. This item was changed to read, "When I'm stressed, I know how to calm myself down," which should produce more honest responses.

Response-Shift Bias

An increase in apprentice's self-awareness by the end of the program could change the way apprentices interpret the survey items and could result in scores that mask improvement. To minimize this bias on the summer survey, a post-then-pre format was developed for use at the end of the summer program. This format has been found to be effective at reducing the response-shift bias in evaluating change over durations of months (Howard et al, 1979).

DATA ANALYSIS

Quantitative Data Analysis

Researchers used Microsoft Excel and NCSS Statistical Software to analyze the survey data. Results from one pilot apprentice and four summer apprentices were excluded from analysis in comparing pre to post survey results. Their responses followed a clear pattern indicating that they did not read the survey items, thus invalidating their responses.

Descriptive statistics with sum and mean composite scores were calculated for each scale and subscale. Pre-to-post gain scores were calculated for the overall scales and

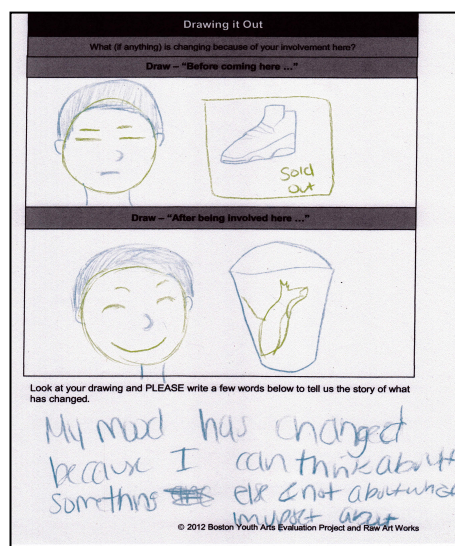
subscales to use for between-groups comparisons. Inferential statistics were used to examine differences across time and between groups. Researchers analyzed differences in scores using the t-test and one-way analysis of variance (ANOVA). Researchers ran pre-to-post analyses comparing the post-survey both to the original pre-survey (taken at the beginning of the summer) and to the retrospective pre-survey (taken at the end of the summer). They also looked at specialized differences based on attendance and number of sessions in the program.

Qualitative Data Analysis

Drawing It Out (DIO)

Researchers coded each Drawing it Out summer assessment for (1) the Nature of Impact (positive, negative, or neutral/mixed) and (2) the Type of Impact (well-being focused, skills focused, or undefined). When impact on skills and well-being were both present and equally prominent, the response was coded as well-being. For example, the response on this page was coded as positive impact on well-being.

Researchers achieved a high level of agreement on DIO coding (98% for nature of impact and 87% for type of impact).



Observation, Focus Group, and Interview Data

Qualitative data were gathered systematically throughout the program. Both researchers conducted extensive program observations using an agreed-upon protocol. Staff and apprentice interviews along with apprentice focus groups were audio-recorded and then transcribed for analysis.

The researchers coded the qualitative data into common themes/patterns, such as community connection and emotional state. For the pilot data, researchers entered the data into NVivo, a software program designed for qualitative and mixed-methods research. This allowed researchers to run reports based on specific themes for easy comparison to other data sources.

FINDINGS

Summer Survey Results

Apprentices completed the AWS (43 items) at the beginning of the summer program (Pre). At the end of the program, they then completed a retrospective post-then-pre survey on which they were asked to think about now at program end (Post), and to think back to before they started the program (R-Pre). Overall scores improved significantly from the retrospective post-then-pre test and were consistent with other data collected. Overall scores did not significantly differ between the original pre to post. The WEMWBS, administered in a pre-post format, did not show a significant change from pre to post. (See Appendix B, page 25 for detailed item means and p-values.)

	Pre	R-Pre	Post
AWS (43 item)	3.67	3.46 *	3.68
WEMWBS	3.86	n/a	3.83

* p<0.001 for R-Pre to Post comparison

Four survey items stood out in the analysis of both formats, and all were improvements. These items yielded a statistically significant unidirectional change on both the pre-to-post and retrospective pre-to-post comparisons (p<0.05 for all comparisons, except the last two items with pre-to-post improvement at p<0.1).

Item	Pre	R-Pre	Post
When I think about the future I am worried. *	3.59	3.56	3.93
I have a number of good qualities.	4.21	4.22	4.39
I am often nervous in new situations. *	2.61	2.51	2.86
I can make a difference in the St. Louis community.	4.02	3.73	4.17

**Negatively-worded item (means in table are reversed for negatively-worded items so that higher scores indicates improvement)*

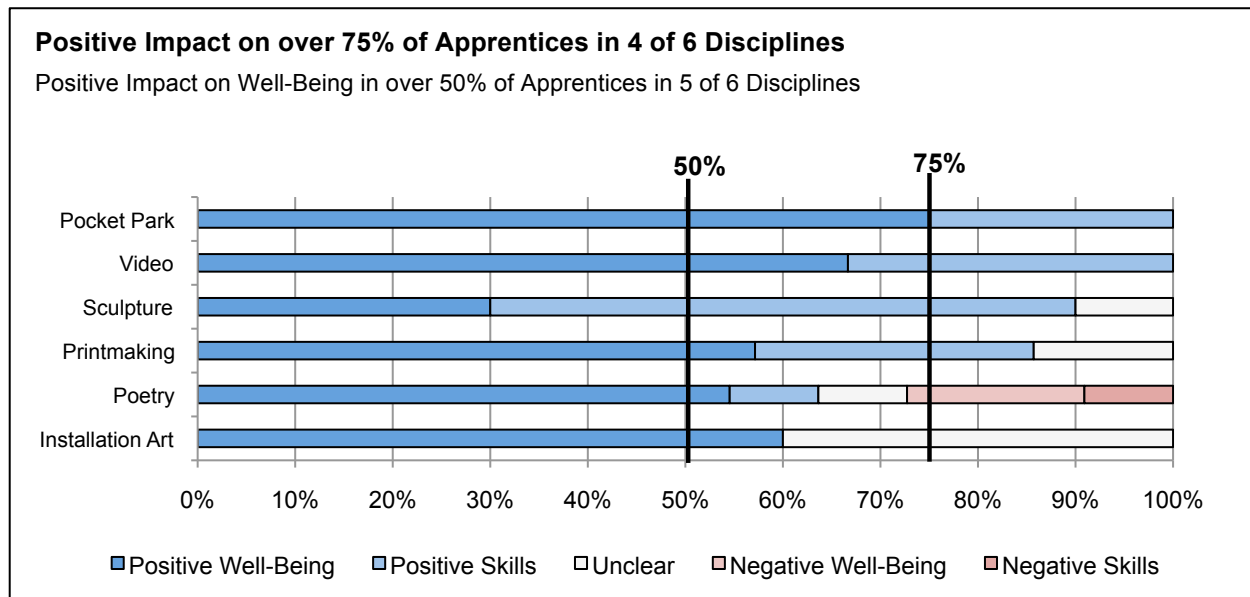
Group Differences

There were no significant differences based on **gender**, **grade level**, or **attendance**. However, there were differences based on **artistic discipline**.

Gain scores on the AWS were lower for the Sculpture group than the other five groups, with a significant between group difference (Welch's Test of Means Allowing for Unequal Variances, p<0.01). Further research examining the differences between groups would be needed to identify the key program elements that could lead to successful replication of the program in other settings.

During the summer program, three of the main five disciplines received psychoeducational activities led by the Art Therapist, allowing for a comparison of survey scores. Overall scores and improvement did not vary significantly based on whether or not their discipline participated, though scores differed on a few items. The nature of the individual artistic disciplines and the way the teaching artists ran the group seemed to have a larger impact than whether or not the apprentices in their discipline participated in the psychoeducational activities.

Summer Drawing It Out Results



Results of the Drawing it Out were positive, with 57% of apprentices’ drawings focused on positive well-being impact and 25% focused on positive skills impact. Another 13% indicated no change or the nature of the impact was unclear. Two apprentices’ drawings indicated a negative well-being impact and one a negative skills impact. The graph above shows the focus of the drawings by percentage of apprentices in each discipline.

The three apprentices indicating a negative impact were in the Poetry discipline. Unfortunately, just a day or two before administering the Drawing it Out tool, conflict began to arise between a teaching artist and a few apprentices.

When apprentices indicated impact in both skills and well-being, the response was coded as well-being impact. Unlike the other disciplines, the greatest impact on apprentices in the Sculpture discipline was on skills with more apprentices in the group focusing their responses on skills (60%) than well-being (30%). This group difference is consistent with lower AWS means for the Sculpture group and is perhaps due to the nature of the discipline.

Program Impacts on Well-being

Program Impacts presented here include results that have been confirmed from more than one data source (AWS, WEMWBS, focus groups, interviews, observations, or Drawing It Out). For example, if results from the survey suggested an impact that was not substantiated by data from another data source then the potential impact is not described as a finding. All AWS results compare retrospective pre scores with post scores unless otherwise noted.

Apprentices:

- ✓ Developed a more positive future outlook
- ✓ Developed a sense of competence and improved their sense of self-worth
- ✓ Became more open to new situations
- ✓ Felt more empowered to make a difference in their community
- ✓ Met and learned to work with peers from different backgrounds
- ✓ Improved social skills, gained social confidence, and developed close personal relationships with peers.
- ✓ Improved their coping skills

Apprentices developed a more positive future outlook.

Items on the AWS related to future outlook (“When I think about the future, I am worried,” “I feel confident I will be able to get into the college of my choice,” and “I feel confident in my ability to get a job in the future”) all saw significant improvement at $p < 0.01$. Drawing it Out results also indicated increased positive future outlook. Teaching Artist feedback supported this finding as well: “I can see the apprentices begin to imagine their futures differently and understand that they have the power to rise above their current situations.”



Recognizing Strengths

The Art Therapist introduces the activity by asking apprentices to express, without words, the strengths and positive attributes they bring to the group. Then, standing in a circle, each shares what they created and ties their piece to the design of the apprentice next to them, forming one inter-connected banner.

In reflecting on the experience, one apprentice says that often in her life she is concentrated on her deficits or trying to balance her strengths and weaknesses; “I really liked the activity because it forced me to focus on my strengths and what I do well,” allowing her to form a more positive viewpoint of herself. Another apprentice reflects that at school, she’s an over-achiever who feels she always has to take the lead and now sees that everyone at ArtWorks is an individual with their own strengths and talents.

Apprentices developed a sense of competence and improved their sense of self-worth.

Three survey items regarding self-worth and competence with strong internal consistency ($\alpha > 0.7$) showed significant improvement during the summer session on the pre-program survey compared to post-program results (means of 4.03 pre to 4.17 post, $p < 0.05$). Observations confirmed this finding, noting that apprentices demonstrated great pride in their work when sharing their work with clients during commission meetings and with the public during the final sale.



Apprentices became more open to new situations.

AWS results indicate that after participating in ArtWorks apprentices are less nervous in new situations (summer means improved from 3.49 to 3.14, $p < 0.001$) and can adjust more easily to new situations (means improved from 3.66 to 4.03, $p < 0.001$). Four apprentices from the Pocket Park discipline stressed growing more open through the program on the Drawing it Out measure. Teaching Artist feedback supported this impact and pointed to the importance of new experiences: “Exposure to different

ways of thinking and different cultures and experiences leaves them forever changed.”

[The group activities] help you come out of your comfort zone so you become a better person.
-Apprentice

Apprentices felt more empowered to make a difference in their community.

The summer AWS results indicate significant improvement on the items “I can make a difference in the St. Louis community” (from 3.73 to 4.17, $p < 0.001$) and “I feel like I am part of the St. Louis

community” (from 3.64 to 3.88, $p < 0.05$). Observations indicate the importance of clients in building the sense of being part of a larger community.

Apprentice Profile - Diesha

At the beginning of the pilot session, Diesha is perhaps the most disengaged of the apprentices, not fully participating in activities or on the field trip to Bellefontaine Cemetery and Arboretum. She often appears tired and down.

During an early art therapy activity exploring images of self, Diesha hesitates to share with the group. When encouraged, she quietly shares that her mood changes a lot throughout the day. Several others acknowledge feeling the same way when the art therapist asks.

As the session progresses, Diesha becomes more active. By the time of the formal critique in March, Diesha participates by offering feedback to others. By the final sale in May, Diesha is more involved in the program.

Apprentices met and learned to work with peers from different backgrounds.

In focus groups and interviews, several apprentices commented on getting to know peers from different schools and backgrounds that they would not otherwise have gotten to know. Results on the AWS indicated significant improvement on the item “I am uncomfortable working with

people I don't know” (from 3.14 to 2.56 in summer, $p<0.001$). In interviews with teaching artists, one key benefit of the program was said to be the opportunity for youth to get to know others with different perspectives on art and different career goals.

Apprentices improved social skills, gained social confidence, and developed close personal relationships with peers.

Observations and focus group results confirmed AWS findings that apprentices developed new friends and social skills through the program. Results from survey items showed significant improvement on items such as “I have a hard time making friends” (from 2.53 to 2.29, $p<0.05$) and “I often feel left out” (from 2.84 to 2.52, $p<0.05$). Forty percent of summer apprentices focused their Drawing it Out

responses on positive changes in social well-being. For instance, one apprentice drew a before picture of himself alone, away from a group of people. Then, for “after being involved here,” he drew himself around others and smiling. In describing his drawing, he wrote “I've become nicer and now can talk to people without caring what they think. I also know lots of more people.”

Apprentices improved their coping skills.

Summer results from the AWS item “When I'm stressed, I know how to calm myself down,” showed significant improvement (from 3.36 to 3.68, $p<0.01$). The item “When I get angry, I stop listening” improved though with less significance (from 2.90 to 2.76, $p<0.1$). These items were added to the AWS in the summer based on observations from the pilot group's art therapy activities. For example, one

apprentice who aspires to start a catering business said the art therapy activity on coping skills helped her to “know what to do in different situations where people do come to you and rub off on you the wrong way...I know I would have to still be professional.” And, if someone came into the catering business and was rude, she said she would “still stay calm and collected, ‘well, maybe I can help you in a different way.’”

Coping Skills at Work and Home

After a discussion of coping strategies, the Art Therapist introduces the art activity by asking apprentices to trace the outline of one or both hands in their sketchbooks. She explains that inside the hand outline they are to use words and drawings to show the positive ways that they can cope (the coping skills that they want to hold onto). Outside the hand outline, they are to draw the negative ways they cope (those that they want to let go of).

After the activity, apprentices hold up their drawings for others to see. One volunteers to explain his drawing to the group, which shows two hands converging to symbolize that he wants to cope with difficult situations by being pleasant and calm. They then discuss how to cope when someone is disrespectful and how that may change if that person is a friend, stranger, co-worker, supervisor, or client.

HYPOTHESIS AND RESEARCH QUESTIONS

Can We Accept the Hypothesis?

We believe that providing a safe haven for self-expression through the arts with caring adults in an out-of-school time apprenticeship model with community collaborations results in positive impact on the mental health of participants.

Each component of the hypothesis should be considered before pulling them all together.

Did ArtWorks provide a safe haven for self-expression through the arts?

Observations indicated that ArtWorks provided a safe space and opportunities for self-expression through art during art therapy activities. Other opportunities for self-expression occurred, but varied from discipline to discipline. In focus groups, apprentices indicated they wanted additional opportunities to express themselves and their emotions through their art.

Did ArtWorks provide caring adults?

Youth's opinions of their Teaching Artists and the other adults varied. An apprentice in the pilot group said in a focus group, "everyone behind our work seems to really care about the apprentices because of the programs that we have." From AWS results, apprentice comments, and researcher observation notes, preference appeared to be for developing peer relationships more so than youth-adult relationships. Observations indicated that staff cared about the apprentices, though it is difficult for a mentorship relationship to develop in a six-week program.

Did the apprenticeship model engage in community collaborations?

Community collaboration is a clear strength of the ArtWorks program. The commissions during the summer program led youth to collaborations with partners in the community they didn't even know existed. As one apprentice said in a focus group, "I think a benefit is... meeting the clients and it also shows you that certain organizations, big businesses, actually do care about art. Like MSD, I had no idea they would want like prints or anything."

Did the program result in positive impact on the mental health of participants?

Results from the AWS indicate an overall positive impact on the well-being of the apprentices, as do results from Drawing it Out. By triangulating these results with data from observations, interviews, and focus groups, positive impact is clear, as discussed in the Findings section.

Accepting the hypothesis

From the results of the Impact Study, we can accept the hypothesis based on the positive well-being findings. Building on the original hypothesis, findings suggest that impact may be mediated more through feelings of competence, a more positive future outlook, and developing relationships with peers who have a similar interest in art.

The program has several areas that could be improved to strengthen the outcomes and support the hypothesis. By adding more opportunities for self-expression through art therapy activities integrated into the curriculum, and by providing training for teaching artists in aspects of youth development, the positive impact could be made stronger.

Research Question Responses

1. What instruments and evaluation tools currently used by ArtWorks effectively measure impact?

Prior to the Impact Study, ArtWorks employed several instruments to assess program outcomes, though none were directly designed to measure impact on mental health and well-being. Researchers recommended standardized rubrics for existing measures to improve consistency of ratings. Data collected through ArtWorks program assessment instruments were used to supplement and triangulate data collected for the research project.

2. What instruments available nationally can be used to effectively measure impact? What modifications are needed, if any?

A number of instruments have been demonstrated to effectively measure different aspects of well-being, including the Pediatric Symptom Checklist, the Rosenberg Self-Esteem Scale, and the Youth Experiences Survey 2.0; however, for this Impact Study, researchers wanted to use an instrument that was specifically tailored towards measuring well-being impact within the context of a youth job-training program centered around the Arts. Since none of the instruments reviewed met all of the needs of this project, researchers developed a new instrument, the ArtWorks Well-being Survey, based on the relevant aspects of different surveys. A list of resources that were particularly helpful in the survey development process can be found in the References and Resources Section on page 21.

3. What impact does the ArtWorks program have on youth participating in the spring 2015 pilot study?

Apprentices:

- Gained the skills and confidence for social interactions, both socially and professionally
- Developed close personal relationships with others, including those from different backgrounds
- Found creative ways to express themselves and learned coping skills
- Were exposed to new ideas, techniques, and experiences while developing a sense of competence through artwork as they moved outside their comfort zones

4. How can results of the pilot study support improvements in curriculum and program delivery?

The following changes were made to the summer program based on pilot study results:

- Revision of program evaluation forms with standardized rubrics
- Two separate orientation and curriculum development workshops for Teaching Artists, both attended by the Art Therapist
- ArtWorks Well-being Survey implemented in an online format at the Centene Studio
- Weekly meetings with Teaching Artists included checking-in with the artists and discussion of issues

Data collected during the spring pilot were also used along with summer data to inform the program recommendations presented on page 19.

5. What level of reliability and validity can be achieved on the instruments?

The ArtWorks Well-being Survey was found to have strong internal consistency and strong test-retest reliability. The survey was also found to have strong criterion validity with clear face validity in both spring and summer. Researchers encountered challenges to construct validity during the spring pilot; however, changes made to survey items, format, and administration led to improved construct validity on the summer survey. Details on the reliability and validity of the ArtWorks Well-being Survey can be found on page 9.

6. What impact does the ArtWorks program have on youth participating in the summer 2015 program?

Apprentices:

- Developed a more positive future outlook
- Developed a sense of competence and improved their sense of self-worth
- Became more open to new situations
- Felt more empowered to make a difference in their community
- Learned to work with peers from different backgrounds
- Improved social skills, gained social confidence, and developed close personal relationships with peers
- Improved their coping skills

Details can be found in the Findings section on pages 11-15.

7. How can the instruments be used beyond the funding period to measure impact?

Item analysis of the AWS indicated that removing items related closely to art skills or job skills did not affect the strong internal consistency (despite substantially fewer items) and improved the face and criterion validity. Thus, the revised version of the AWS for future use contains 26 items – 23 from the original 43 AWS items used in the summer and three additional items. Using summer data and the 23 items, criterion validity was found to be slightly higher than the 43-item version when comparing AWS to WEMWBS ($r=0.77$, $p<0.01$), and internal consistency remained strong ($\alpha=0.87$ on the post-program results). (See Appendix A for the final recommended 26-item AWS version).

The researchers recommend ongoing use of the revised 26-item version of the ArtWorks Well-being Survey and the Drawing it Out measure at the end of each session. Using these instruments will allow staff to assess program impact across time, providing new insights into what activities, disciplines, commissions, and teaching artists tend to yield what patterns of impact on behavioral health.

RECOMMENDATIONS

Art Therapy

Hiring an additional staff member trained in mental health to support programming will enhance the program. It will be important for this staff member to be present during most programming times to build rapport and trust with the youth.

Integrating art therapy activities (i.e. activities that focus on using art to foster self-expression to enhance well-being) into the curriculum instead of using stand-alone “art therapy” activities would address the youth’s needs for self-expression, positive peer relationships, self-awareness, and identity formation. For example, a Teaching Artist could facilitate a daily check-in activity. As the Art Therapist recommended:

Routines are a great way to provide support and structure and teach a skill to show consistency. If each apprentice made a mark on a large sheet of butcher paper or board ... when they came in each morning, it would be uncensored – a word that represented them that day, a color they felt that day, or a mark that signified how they were feeling. Therefore, each day they would mark on the board and leave what they needed to at the door.... They would walk-in with what they had and use the check-in to let go of what had happened at home to get in the mindset of work.



Other recommendations by the Art Therapist for supporting mental health through integrated activities include:

Having Teaching Artists ask each apprentice to take a turn stating what he or she thought each other apprentice had done well or some way in which they had grown (as was done by the Video group’s Teaching Artist).

Teaching Artists can facilitate color check-ins, in which apprentices and adults tell the group what color they are that day.

Having a trained person available to help integrate such activities into the curriculum by supporting the Teaching Artists is important. The mental health trained staff member may also support the youth by one-on-one conversations or leading group activities.

Teaching Artists Training

Researchers recommend up to a week of training for Teaching Artists at the beginning of the summer, and a similar training opportunity for those in fall and spring. Some of this time should be devoted to sharing ideas and experiences as Teaching Artists with different backgrounds in art and in education come together. Additional time is needed to focus on the developmental needs of youth. Topics in the added training could include:

- Icebreakers and Teambuilding Activities
- Youth Development
- Art Therapy Activities
- Workforce Development
- Discipline in Youth Work-based Programs

The training should model the way Teaching Artists are expected to work with apprentices. For example, principles of out-of-school time learning should be applied with active learning rather than lectures.

Program Structure and Activities

For some apprentices, social skills development needs to be explicit. Icebreakers in the first days or even weeks will allow youth to get to know each other better so they can identify common interests and challenges. Teambuilding activities will allow youth to develop a stronger sense of community while building important life skills. Integrating these activities into the structure of the program and the curriculum by including an art focus will ease the transition from one activity to another during the course of a day.

ArtWorks maintains a challenging balance between producing high quality commissioned work and meeting youth developmental needs. Should funding allow, extending the program to eight weeks could more easily allow for social and leadership skills to be developed prior to the start of creating the commissioned artworks. Without additional funding, an extra week or even session focused on “soft skills” and leadership training in which youth are not paid could better meet the needs of the youth and the program.

Future Use of Instruments

The researchers recommend ongoing use of the revised 26-item version of the AWS during the last week of each session. (See 26-item AWS version in Appendix A.) The AWS should be administered online when possible, with paper versions given to apprentices who need this accommodation (e.g. visual impairment or reading challenges).

To support program staff in this process, researchers have provided: 1) an online survey template; 2) an Excel spreadsheet for data analysis, and 3) a written guidebook for survey administration and analysis.

Ongoing use of the survey will allow staff to view patterns over time such as differences based on the type of commission, Teaching Artists characteristics, or consistent inclusion of check-in and icebreaker activities. Ongoing data collection will allow researchers in the future to study impact over time and further analyze patterns.

ArtWorks Well-being Survey

Discipline: _____ Home zip code: _____

Gender (check one): Female Male

Grade: 9 10 11 12 HS Grad

Below are statements about thoughts and feelings. On the left, please check one answer (box) per row, telling us how you feel now, after the Artworks program. On the right, check one box telling us how you felt before the program. Tell us whether you strongly disagree, disagree, neither agree nor disagree, agree, or strongly agree with each statement for after and before ArtWorks.

Now, After ArtWorks					Statements	Before ArtWorks				
Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. I like the art I make.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. I can make a difference in the St. Louis community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. I am often nervous in new situations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. There are several adults I trust and look up to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. I struggle to find ways to achieve my goals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. I can freely express my ideas and opinions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. I feel confident I will be able to get into the college of my choice.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Researchers also recommend continued use of the Drawing it Out measure to assess the nature of the impact (positive, negative, neutral) for each discipline, and to determine the type of impact that apprentices choose to express. Trends over time can later be assessed in conjunction with results of the AWS, providing new insights into what aspects of the program lead to the greatest positive impact on mental and behavioral health.

REFERENCES AND RESOURCES

References Cited

- Boston Youth Arts Evaluation Project (BYAEP). (2012). *Boston Youth Arts Evaluation Project Handbook and Workbook*. Boston, MA.
- Guba, E. G. & Lincoln, Y.S. (1989). *Fourth Generation Evaluation*. Newberry Park, CA: Sage Publications.
- Howard, G.S., Ralph, K.M., Gulanick, N.A., Maxwell, S.E., Nance, D.W., & Gerber, S.K. (1979). Internal invalidity in pretest-posttest self-report evaluations and a reevaluation of retrospective pretests. *Applied Psychological Measurement*, 3(1), 1-23.
- Lincoln, Y. S. & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage Publications.
- Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., Parkinson, J., Secker, J., & Stewart-Brown, S. (2007). The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): development and UK validation. *Health and Quality of Life Outcomes*, 5(1):63.

Resources Used to inform ArtWorks Well-being Survey Development

(All links checked December 1, 2015)

Basic Psychological Needs Scale (BPNS), Edward L. Deci & Richard M. Ryan
www.selfdeterminationtheory.org/questionnaires/

Big Five Inventory (BFI) (2008) John Oliver
www.ocf.berkeley.edu/~johnlab/index.htm

Boston Youth Arts Evaluation Project Handbook and Workbook (2012) Boston Youth Arts Evaluation Project (BYAEP) www.byaep.com

Rosenberg Self-Esteem Scale (1965) Manny Rosenberg
www.wvnorton.com/college/psych/psychsci/media/rosenberg.htm

The After-School Initiative's Toolkit for Evaluating Youth Development (2004) The Colorado Trust and National Research Center, Inc.
www.uwex.edu/ces/4h/evaluation/documents/EvaluationToolkitJun04.pdf

The Pediatric Symptom Checklist (1982) Massachusetts General Hospital
www.massgeneral.org/psychiatry/services/psc_home.aspx

The Strengths and Difficulties Questionnaire (SDQ) (2005) Robert Goodman www.sdqinfo.com

The WHO-Five Well-Being Index (WHO-5) (1998) Psychiatric Research Unit, World Health Organization Collaborating Centre, Frederiksborg General Hospital
www.psykiatri-regionh.dk/who-5/who-5-questionnaires/Pages/default.aspx

Warwick Edinburgh Mental Well-being Scale (WEMWBS) (2006) NHS Health Scotland, University of Warwick and University of Edinburgh
www.healthscotland.com/scotlands-health/population/Measuring-positive-mental-health.aspx
The Warwick-Edinburgh Mental Well-being Scale was funded by the Scottish Government National Programme for Improving Mental Health and Well-being, commissioned by NHS Health Scotland, developed by the University of Warwick and the University of Edinburgh, and is jointly owned by NHS Health Scotland, the University of Warwick and the University of Edinburgh. Permission obtained 11/7/14.

Youth Experience Survey 2.0 (2005) University of Illinois at Urbana-Champaign
youthdev.illinois.edu/?page_id=189