Executive Summary

2018 JumpStart Theatre Research Executive Summary
Overview and Background

The Educational Theatre Foundation (ETF), in partnership with iTheatrics and Music Theatre International (MTI), initiated the JumpStart Theatre (JST) program in Ohio and Kentucky in 2015. The three-year, scalable, pilot program was designed to build sustainable musical theatre programs where previously there were none.

ETF contracted with the Centers for Research on Creativity (CRoC), based in Los Angeles, to assess the impact of the JumpStart Theatre program on the student, teacher, and school community’s growth in social and emotional skills while participating in a middle school musical theatre program.

CRoC followed three schools (Gamble Montessori High School, Holmes Middle School, and Finneytown Middle School) during three academic years (2015-16 through 2017-18) of the regional JST program pilot, plus an additional school (Felicity-Franklin Middle School) for two years, using qualitative assessment (from observations of teachers in the professional development bootcamp sessions of the JST process, at school rehearsals and performances, and teacher and administrator focus groups and student interviews), combined with CRoC’s Next Generation Creativity Survey Model (NGCS), which measures creative skills and dispositions across six self-reported and three demonstrated vectors of creativity. [See Chart 1.] The data and conclusions from each of the three years of study, as well as an overall holistic summary, are available here.
The following charts provide statistics on student involvement in JumpStart Theatre and audience attendance at the research schools over the 2015-16, 2016-17, and 2017-18 school years.

Charts 2-6

### Cincinnati JumpStart Theatre Research School Statistics as of December 2018

<table>
<thead>
<tr>
<th>School Name</th>
<th>Year</th>
<th>School</th>
<th>Total Enrollment</th>
<th>Audience</th>
<th>JST Students</th>
<th>JST % of Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gamble Montessori High School</td>
<td>2015-16</td>
<td><em>Once on This Island JR.</em></td>
<td>448</td>
<td>200</td>
<td>31</td>
<td>7%</td>
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<tr>
<td></td>
<td>2016-17</td>
<td><em>Annie JR.</em></td>
<td>410</td>
<td>500</td>
<td>41</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>2017-18</td>
<td><em>Into the Woods JR.</em></td>
<td>448</td>
<td>550</td>
<td>31</td>
<td>7%</td>
</tr>
<tr>
<td>Finneytown Middle School</td>
<td>2015-16</td>
<td><em>Honk! JR.</em></td>
<td>692</td>
<td>275</td>
<td>31</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>2016-17</td>
<td><em>Flat Stanley JR.</em></td>
<td>668</td>
<td>500</td>
<td>29</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>2017-18</td>
<td><em>Suessical JR.</em></td>
<td>668</td>
<td>876</td>
<td>30</td>
<td>4%</td>
</tr>
<tr>
<td>Holmes Middle School</td>
<td>2015-16</td>
<td><em>Annie JR.</em></td>
<td>753</td>
<td>125</td>
<td>26</td>
<td>3%</td>
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<tr>
<td></td>
<td>2016-17</td>
<td><em>Schoolhouse Rock Live! JR.</em></td>
<td>736</td>
<td>150</td>
<td>23</td>
<td>3%</td>
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<tr>
<td></td>
<td>2017-18</td>
<td><em>The Little Mermaid JR.</em></td>
<td>736</td>
<td>300</td>
<td>35</td>
<td>5%</td>
</tr>
<tr>
<td>Felicity-Franklin Middle School</td>
<td>2016-17</td>
<td><em>Honk! JR.</em></td>
<td>281</td>
<td>580</td>
<td>44</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td>2017-18</td>
<td><em>The Music Man JR.</em></td>
<td>271</td>
<td>350</td>
<td>69</td>
<td>25%</td>
</tr>
</tbody>
</table>

*Enrollment data for 2017-18 not available; used same as 2016-17.

### Totals by Year - Research Schools

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Enrollment</th>
<th>Audience Attendance</th>
<th>JST Students</th>
<th>JST % of Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>1,893</td>
<td>600</td>
<td>88</td>
<td>5%</td>
</tr>
<tr>
<td>2016-17</td>
<td>2,095</td>
<td>1,730</td>
<td>137</td>
<td>7%</td>
</tr>
<tr>
<td>2017-18</td>
<td>2,123</td>
<td>2,076</td>
<td>165</td>
<td>8%</td>
</tr>
<tr>
<td>History to Date</td>
<td>6,111</td>
<td>4,406</td>
<td>390</td>
<td>N/A</td>
</tr>
<tr>
<td>Average School in 2017-18</td>
<td>531</td>
<td>519</td>
<td>41</td>
<td>8%</td>
</tr>
</tbody>
</table>
Research Methodology and Focus

Based on extensive research by CRoC personnel, as well as other work on the cognitive neuroscience impact of musical theatre education, CRoC established its research plan for JumpStart Theatre to encompass four focus areas.

1. **Student growth**, particularly in self-efficacy, empathy, collaboration, critical thinking, creativity, and problem-solving in JumpStart Theatre

2. **Teacher implementation** of JumpStart Theatre

3. **Teacher support and growth**

4. **Administrative support, growth, and plans for sustainability**

Major Themes

Student Growth

CRoC observed student growth in the following domains (demonstrated consistently throughout the qualitative observations, student reflections, teacher focus groups and surveys, and more).

1. **Ownership and Agency**
   
   CRoC frequently observed students demonstrating high levels of agency, independence, and ownership in all aspects of the creative process; teachers were intentional and designed co-creative learning opportunities, and students independently demonstrated agency and ownership even when unprompted. Examples in the full report include:
“Students were asked to think about and consider the space they would need to cover, how they would get to their exits without blocking their faces or their fellow actors, and each student worked to know their entrances and how to come on stage as their character, not as a student who fears missing their cues.”

2. Creative Problem-Solving
The quality and frequency of observations of creative problem-solving behaviors indicate that students demonstrated these skills regularly and independently. Examples include:

“Getting the students to focus on and pay attention to the cues in the music and in the dialogue while also staying focused on keeping in character and interacting with their families or groups is proving difficult. However, one student creatively offered to add levels into their standing so that the students could still watch what was happening while also interacting with their groups.”

3. Empathy
JumpStart Theatre students demonstrated empathy for their characters and, at times, for their peers. Examples include:

“With one student, the ability to detect the emotion that should be present, down to feeling angry at outside sources but also finding anger within himself was profound.”

One teacher spoke about her students’ interaction with a special needs student: “[Many] students won’t take the time to make relationships with students like that. But … when some of the kids see how smart he is, they start to want to become friends with him. And they did that during the show, because they had those opportunities that they would never have had before.”

4. Confidence
As one of the most common goals of teachers for their students with the JumpStart Theatre program, CRoC observers and teachers all reported tremendous growth in students’ confidence throughout the three-year program. Examples include:

(Of a previously challenging student who has participated in JumpStart Theatre for three years): “He knows he’s playing a pivotal part, not only in the show but in the program as well, and it is amazing to see this student, who the teachers will tell you struggled before, grow into such an incredible student.”

A student also noted an increase in confidence due to the program:

“I like all the skills in life you can get from it. ‘Cause I have to do public speaking all the time and presentations. And just learning how things get put together is very helpful. And, like, confidence is really key to what you do.”
5. **Collaboration**

The JumpStart Theatre program created space for students to work together productively and to collaborate meaningfully. Examples include:

“Each student struggled with their spacing, but I noticed discussion between the students in each group. They were marking who they were with and finding their own solution to remembering who they were with and who they stood between.”

6. **Sense of Community**

Students fostered an authentic sense of community within their JumpStart Theatre programs. Examples include:

“What’s obvious is just the enjoyment and fun and community that the kids appreciate being a part of this whole work, this group, this play. It’s more about that than anything, for a lot of them. ‘I’m a part of something, I’m a part of a bigger community, I’ve collaborated.’ I thought our student who spoke yesterday hit on that. It helped her make friends, it helped her reach out and feel more comfortable with her peers. And the bus ride [to the Showcase performance] was a big party – they were happy to be together. I think that’s something we’re always celebrating, whenever we see it. It’s a sense of community.”

Additionally, students’ sense of community was demonstrated when they would regularly congratulate one another and clap after finishing a scene or when motivating their peers to persist and improve.

One particularly useful mechanism to encourage students’ sense of community was bringing former JumpStart Theatre students back to assist in set design and mentoring current students. A teacher reflected on this in a focus group:

“There were many times that we brought [the former students] from the high school club that had been a part of the [JumpStart Theatre] production in the past to tutor kids one-on-one in memorization of lines, characterization techniques, … helping them build confidence.”

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**Teacher Growth**

1. The JumpStart Theatre Bootcamp teacher training workshops are critical mechanisms to support teachers in implementing the JumpStart Theatre program, with these evident benefits (listed here with a descriptive example of how the benefit was manifested).

   - **Building a Sense of Community and Community of Practice:** Teachers were encouraged to share techniques, support one another, and problem-solve together, leveraging their experiences to advance their craft as musical theatre practitioners and teachers.

   - **Creating Comfort with Discomfort and Growth:** Some exercises are designed to be a little bit “silly,” providing the opportunity to make nonconsequential mistakes and building trust, which was helpful to
teachers and impactful when they reapply the exercise with students. Teachers pointed out that “they all came into the camp feeling uncomfortable and awkward, and they could now empathize with their students when they returned.”

**Advancing Technical Skills:** Technical skills are demystified with practical, clear, and codified tools and tips that are practiced by all teacher participants and connected to a broader purpose in musical theatre.

**Cultivating Resourcefulness and Creative Leadership:** Bootcamp exercises empower teachers with creative problem-solving skills and with the knowledge “that even with zero costumes, materials, or stage effects, [they could tell] a story in the purest fashions, through body language and placement.”

**Emphasizing the Mission to “Tell the Story”:** Strongly ingrained throughout the training, when teachers learn to convey it to students, a lot of pressure is taken off and kids are more able to enjoy the experience. One teacher noted, “For my ELL [English Language Learning] students, if they can tell a story without words, they can feel involved without the added stress of lines in a language unfamiliar to them.”

2. Teachers experienced growth and learning in terms of:

**Co-creation (Letting go while providing support):** Even when teachers were knowledgeable about how to solve a problem, they challenged their students to make independent, creative decisions. One example:

“One teacher was phenomenal with the students and encouraging them to discover their character on their own. She asked the girl playing JoJo, ‘Is JoJo supposed to be innocent or serious? What do YOU think?’ The question was not addressed to only the girl playing JoJo either, rather the cast that was present was also asked the question and collaboration was encouraged.”

**Confidence:** Teachers are recognizing increased confidence in themselves as JumpStart Theatre leaders, especially after multiple years in the program.

“I am feeling a lot more confident. Last year I felt more panicked, like ‘OH MY GOD, is this going to come together? Is this actually going to happen?’ Now, I feel more like, ‘Yeah, this is definitely going to happen.’”

**Improved Teaching:** Teachers feel as if their skills as teachers have improved, both within the JumpStart Theatre program and in their other classes. Specifically, they are more able to engage their students, push their students’ thinking, and cultivate imaginative and “possibility thinking” orientations by using techniques from the JumpStart Theatre program.

“My biggest takeaway from the three years, and the thing that I’m most appreciative of, is the knowledge that I’ve gained about myself. I have become a better teacher by using what I’ve learned through JumpStart Theatre. I’m a special ed teacher, and I use tableaux with the kids so that they understand the stories that they’re reading in class. We’ve even gotten up and acted some of them out. That’s the hook that I need with some of my kids.”

“It allowed me to teach students how to make do with what you have. So many of the students I work with are concrete in their thought process that they see what is in front of them, but they cannot see what those things can be.”

**Summary of Factors That Enable Teacher and Student Growth**

The CRoC research team cited these potentially influential factors (listed here with a descriptive example of how the factor was manifested) that enhanced the depth of student and teacher growth from the JumpStart Theatre experience.

1. **Guided Structure with Room for Creativity:** The Bootcamps provided teachers tools and empowerment to flexibly apply the tools. This framework created confidence in the teachers which translated to creative learning with their students.
2. **Co-creation among Teachers and Students:** Related to Number 1 above, teachers applied a framework but not a prescriptive solution, which led to co-creation with students and cultivated a sense of community as well as personal ownership.

3. **Strong Teaching Teams:** A clear division of responsibility and strong teamwork among teachers was reflected in organized and effective rehearsals and strong student participation.

4. **Feeling like a Part of a Community:** Teachers noted that community extended even beyond their individual school, to other JumpStart Theatre schools, and increased their enjoyment of and confidence in their school-specific role.

5. **Community Buy-in:** Community support and excitement for the JumpStart Theatre program was evident in urban and rural schools alike. One observer noted, “For the community, this show was the happening thing in town. I remember last year, a lot of the members of the community were excited to see how the students had done, and this year was no different. The people of the community all joked about being at school on a Saturday and how excited the kids were to be there.”

6. **Integration with the Curriculum:** Student growth is strong and possibly more sustained in schools that have formally integrated JumpStart Theatre into the curriculum (i.e., with an elective class in the school day) or with teachers who integrate elements independently into their teaching. One teacher notes, “I teach a literacy enrichment course, so I get struggling readers and writers. When I have students in my class who are also in the musical theatre program, it enriches their academic pursuits in our class more than I can quantify. When we talk about plot, when we talk about tableaux, telling stories — beginning, middle and end — I can use their theatre experiences, what they’re doing in rehearsal, in the curriculum in the classroom.”

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**Administrator Growth**

Two areas of growth among school administrators were observed: (1) an acknowledgement of value in the program; and (2) a commitment to build sustainable structures.

Regardless of the level of going-in enthusiasm on the part of administrators, all found value by the end. One principal said, “I didn’t get it. Well, guess what? I got it. I had an ‘aha’ when I saw that special education kid up there. Our kids need this.”
Administrator support is key to sustainability of the program, and there was tangible evidence of this dynamic in JumpStart Theatre schools. Some have taken action before the program’s conclusion to ensure there is no delay or gap in the program’s continuity. An example is the establishment of a drama club in the high school (even including some funding) to ensure that students who participated while in middle school could continue to develop their interest and skills in theatre. Another example is to fund positions to lead the theatre program.

**Qualitative Summary**

Many of the observed areas of growth appear interrelated and greatly affected by the experiences that teachers had during the Bootcamp and the skills and relationships developed over the course of three years. Thus, JumpStart Theatre appears to be a program of genuine and deep growth for all participants who engage fully and freely — and when teachers model deep engagement and provide the same opportunities to students, the most desirable result occurs: students flourish.

**Quantitative Summary**

The overall sample for the NGCS survey included 99 students involved in JumpStart Theatre at four schools and 99 students at those same schools who were not involved in JumpStart Theatre (as the control group).

A significant finding from the three-year survey scores was that students who participated in JumpStart Theatre achieved higher NGCS scores than the control group both before and after participating in the program. The researchers concluded, “This result is fascinating, yet largely unsurprising. Students who opt to participate in the JumpStart Theatre program are likely to be attracted to creative expression and the arts out of personal interest.”

<table>
<thead>
<tr>
<th>Scale or Measure</th>
<th>JumpStart Theatre N = 99</th>
<th>Control N = 99</th>
<th>JST Outperforms Control Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
</tr>
<tr>
<td>Creative Problem-Solving</td>
<td>3.14</td>
<td>3.09</td>
<td>3.1</td>
</tr>
<tr>
<td>Creative Self-Efficacy</td>
<td>3.34</td>
<td>3.31</td>
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</tr>
<tr>
<td>Collaboration</td>
<td>3.28</td>
<td>3.33</td>
<td>3.2</td>
</tr>
<tr>
<td>Empathy</td>
<td>3.26</td>
<td>3.21</td>
<td>2.96</td>
</tr>
<tr>
<td>Originality</td>
<td>3.3</td>
<td>3.4</td>
<td>3.18</td>
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<tr>
<td>Creative Fluency</td>
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<td>3.16</td>
<td>3</td>
</tr>
<tr>
<td>Creativity in Inventing*</td>
<td>1.1</td>
<td>1.08</td>
<td>0.89</td>
</tr>
<tr>
<td>Critical Thinking*</td>
<td>1.05</td>
<td>1.06</td>
<td>0.94</td>
</tr>
</tbody>
</table>

* = demonstrated, scored 0-2; x = statistically significant gain; o = statistically significant loss; xx = program outperformed control
Small sample sizes are theorized to have hindered consistent statistically significant gains across schools, students and creativity factors, thus the qualitative data from the extensive observations, interviews, and focus groups provide more robust and consistent evidence of the program’s impact.

**Overall Summary and Conclusions**

To summarize, CRoC’s evaluation of the JumpStart Theatre program reveals positive gains and growth for teachers, students, and administrators who participated. Teachers and students have become co-creative collaborators, working together and with confidence to achieve collective success in their musical theatre performances. Students with troubled pasts are transforming into student leaders. The benefits of the program are spilling over into regular classroom teaching and the local community, and school communities are actively pursuing — or planning to pursue — ways to strengthen the JumpStart Theatre program’s sustainability.

*Aiken students perform Seussical JR.*
JumpStart Theatre: Pilot Year Impacts in Three Schools
Cincinnati, OH and Covington, KY

JumpStart Teacher Bootcamp I, October 2015

Educational Theatre Association
Cincinnati, Ohio

Year One Report

September 2016

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Director, Centers for Research on Creativity

Gabby Aренег, MPhil
Research Associate, Centers for Research on Creativity
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Kim Zanti

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DeeAnne Bryll, Ginny Butsch, Jim Palmarini, Kim Zanti

* Backstage Entrance, Finneytown
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Introduction

The Educational Theatre Association (EdTA), based in Cincinnati, is a national nonprofit organization with approximately 90,000 student and professional members. EdTA’s mission is to shape lives through theatre education by honoring student achievement in theatre and enriching their theatre education experience; providing professional development for teachers, including networking opportunities, resources, and recognition; and influencing public opinion that theatre education is essential and builds life skills.

EdTA joined with iTheatrics and several philanthropic partners to offer the JumpStart Theatre program. JumpStart was created and developed by iTheatrics, an educational theatre organization based in New York City, which works with educational communities around the country to build sustainable, in-school and after-school musical theatre programs. JumpStart is modeled after the successful Broadway Junior Musical Theatre Program, founded in 2005, by the Shubert Foundation, iTheatrics, and Music Theatre International, in collaboration with the New York City Department of Education. Three JumpStart teaching artists delivered the program – Marty Johnston, Susan Fuller, and David Kennedy. EdTA teaching artist DeeAnn Bryll contributed to the delivery of the program.

EdTA contracted with the Centers for Research on Creativity (CRoC) based in Los Angeles, California to assess creativity in a musical theatre for middle school program. This report describes CRoC’s evaluation findings of pilot year implementation of the JumpStart Theatre program in three public schools in Ohio and Kentucky. EdTA selected the schools from a competitive application process. These schools agreed to present the program at their school for three academic years (SY 2015-16 through SY 2017-18).
JumpStart Theatre Schools

Each school stated their goals in offering JumpStart Theatre to their students and teachers. These goals are offset as italicized, boxed text.

**Finneytown Middle School, Cincinnati, OH**

*The goal of [JumpStart Theatre] is to provide training that inspires creative thinking, self-confidence, effective communication skills, fluid movement, and voice control. Having the JumpStart program will assist in enhancing our academic programs and provide a creative outlet for our students where none currently exists.*

Finneytown Secondary Campus, which includes both high and middle schools is located in the urban–suburban Finneytown Local School District and serves a total of 700 students. The campus includes The William R. Swartzel Performing Arts Center, a well-appointed theatre shared by both schools.

After-school activities for middle school students are: academic support, craft club, student council, athletics, community service, and marching band. Art program offerings are: band, orchestra, choir, and general arts education.

In this pilot year, JumpStart was offered as the first after-school, drama program. Approximately 30 students participated as actors, production crew (sets, sound, props, costumes) and by promoting the show; 3 teachers participated as director, music director, and choreographer.

Finneytown presented *Honk, JR.*, a 60-minute adaptation of the beloved fable “The Ugly Duckling,” that celebrates through song, dance, and wit the experience of being different.

Parents at Finneytown sold tickets, distributed programs, helped students learn their lines and music, and promoted the show.

In addition to in-school performances, the cast performed two songs from the play, “A Poultry Tale” and “Warts & All” at the JumpStart Theatre Showcase, held in May, 2016 with all three schools at Gallagher Center on the campus of Xavier University in Cincinnati.
James N. Gamble Montessori High School, Cincinnati, OH

We welcome more creative arts opportunities for our students to grow socially, emotionally, and academically.

James N. Gamble Montessori High School (Gamble) embraces Montessori educational values that encourage the development of 21st century skills, including:

• Curiosity and Creativity
• Critical Thinking and Problem Solving
• Flexibility and Adaptability
• Leadership, Teaming, and Collaboration
• Independence, Initiative, and Self-Direction
• Prioritization, Productivity, and Accountability
• Personal and Social Responsibility

Located in the urban Cincinnati Public School District, the high school (9-12) and junior high school (7-8) share the campus that serves a total of 410 students.

After-school programs include cheerleading, athletics, science clubs, video game clubs, art club, student government, Key Club (Kiwanis Service), and Korean Club.

In this pilot year, JumpStart was offered as the first after-school, drama program. Approximately 30 students participated as actors, production crew (sets, sound, props, costumes) and by promoting the show; 3 teachers participated as director, music director, and choreographer).

Gamble presented Once On This Island, Jr., a 60-minute musical that explores themes of prejudice and class through the story of a boy and girl who fall in love, though they hail from different sides of the island.

Parents at Gamble helped build the set, gather show materials, and choreograph the show. They also sold tickets, distributed programs, helped students learn their lines and music, and promoted the show.
In addition to in-school performances, the cast performed two songs from the play, “Human Heart” and “Why We Tell The Story” at the JumpStart Theatre Showcase, held in May, 2016 with all three schools at Gallagher Center on the campus of Xavier University in Cincinnati.
Holmes Middle School, Covington, KY

We are always looking for ways to engage students in their learning so that they make the positive connections with adults and peers necessary to be successful. The demographics of our school (91% free and reduced priced lunch) often preclude many of our students from having enriching learning experiences outside of our school walls. Our goal is to give out students all the experiences and opportunities that many of their more affluent peers have access to - helping them unlock the promise of their potential. The JumpStart program would help us give our students a chance to feel that they belong, experience success, and showcase talents that may not always be evident in the traditional classroom setting.

Holmes Middle School is part of the Covington Independent Public Schools, the largest independent school district in the state of Kentucky. Holmes Middle (6-8) shares its campus with Holmes High School (9-12) on the site of the oldest public school in Kentucky, built in 1853. Holmes Middle serves a total of 716 students.

The Community Learning Center at Holmes provides before- and after-school opportunities (academic enrichment, youth development, and family and community engagement), including Art Club, Dance Troupe, and Glee Club. JumpStart is the middle school’s first after-school drama program.

Approximately 30 students participated as actors, production crew (sets, sound, props, costumes) and by promoting the show; 3 teachers participated as director, music director, and choreographer).

Holmes presented Annie!, a 60-minute adaptation of the Broadway favorite that follows an orphaned girl, filled with a sense of possibility and gritty determination, as she makes her way in the big city, finding home and family along the way.

Parents at Holmes made costumes, found props, and established a partnership with Twinhofel Middle School to exchange resources. They also sold tickets, distributed programs, helped students learn their lines and music, and promoted the show.

In addition to in-school performances, the cast performed two songs from the play, “Hard Knock Life” and “Tomorrow” (reprise) at the JumpStart Theatre Showcase, held in May, 2016 with all three schools at Gallagher Center on the campus of Xavier University in Cincinnati.
School Selection Process

Educational Theatre Association opened applications for JumpStart Theatre in the fall of 2015. Schools were required to commit to the program for three consecutive years.

Six schools applied; three were selected based on 5 indicators (on a scale of 1 – 4):

- Administrative Support
- Indicated Student Interest
- Confirmed Team
- Programmatic Needs
- Intangibles

Additionally, each school qualifies for Title I funds, which means that the school’s high percentage of low-income families makes it eligible for federal education funds, distributed through state agencies. For instance, at Gamble, 70% of the student population is eligible for the free or reduced priced lunch program.

Two research assistants (RAs) were recruited through University of Cincinnati and Northern Kentucky University to conduct observations and assist with NGCS administration to students. CRoC trained both RAs (in person and via Skype) to carry out observations specific to the EdTA Evaluation Plan, developed collaboratively between CRoC and EdTA.
CROC's Approach to the Question of Creativity

Conceptions and definitions of creativity, both stated and implied, range widely. Some scholars and authors, including Professors Howard Gardner (1993) and Mihaly Csikszentmihalyi, (1996) focus on extraordinary creativity – the production of masterworks of art, music, dance, or theater.

Others focus on inventions that impact the way we live and work on a global scale – the bread-slicing machine (1928), the hybrid car (2000), and the Swiffer mop (1996) as examples. While we may dream of producing a fresco for the front portico at New York's Metropolitan Museum of Art, or of penning the next best-selling novel, or choreographing dance performances for Alvin Ailey, these are not the types of invention we commonly find in school and after-school creativity programs.

The ideas that the JumpStart Theatre program brings to creative education focus on smaller acts of invention, which are nonetheless skills and behaviors that fit common, general definitions, of creativity. These definitions focus on two qualities – creative processes lead

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to ideas or things that (1) are new or novel, and (2) have value. That is, a creative idea is an original or unusual idea that can be put to some use or purpose that has value to someone. We can substitute product or invention for idea in this definition. A creative invention is novel or unusual, and it accomplishes something of value. Of course, we dispute how new something must be and how valuable something must be, in order to count it as creative, and just who should make such judgments.

Next Generation Creativity Survey Model
Quantitative Evaluation Method: The Next Generation Creativity Survey

**Design for a better test.** The instrument that James Catterall, Ph.D. and Mark Runco, Ph.D of the Centers for Research on Creativity created for this work is intended to measure creative skills and dispositions as well as supportive attitudes (e.g. interest in collaboration), first at the time when program students begin the JumpStart program and then again when they finish. Growth in scores between the pre- and post-administrations provides indications of the effects of programs on their participants.

A signature improvement in testing that the Next Generation Creativity Survey brings is the opportunity for students to display creative thinking and creative behavior through tasks required by the survey. These tasks include creating a character from a script, speculating on what life would be like if a novel condition or conditions prevailed, and drawing and explaining self-portraits showing the student inventing, designing, or solving a problem.

Following Amabile’s (1996) Consensual Assessment Model, we gather expert educators including classroom teachers and teaching artists to make judgments about the creativity of student responses to these tasks. Following Runco, we also examine the creativity of children’s drawings.
As a footnote to the Consensual Assessment Technique, Amabile and her colleagues and followers have reported that, “In study after study, these expert ratings, done completely independently of one another and without rubrics of any kind, have yielded quite satisfactory inter-rater reliabilities.” (Baer, Kaufman, and Gentile, 2004). We have used both double ratings and single ratings to assess individual demonstrated creativity and have found both sufficiently reliable.

We include a Torrance-like set of questions eliciting student self-reports of their own creative practices and orientations. We also include scales probing the development of student attitudes and behaviors that are believed to be important ingredients in their students’ success. These are measures of collaboration, empathy, creative self-efficacy beliefs, and creative problem solving. These elements align with what is known as the social psychology of creativity.

**Human judgment to assess creativity.** Our use of actual student work to elicit appraisals of creative thinking and problem solving requires a design to measure and report on the qualities of this student work. The NGCS employs a professional scoring staff for this purpose. The scores on student tasks were averaged to yield actual scores. As Amabile implies, if you want to know about someone’s creative capacity and potential, you cannot improve on letting her create while watching the process and appraising the product(s)\(^3\).

**NGCS ITEMS AND SCALES**

**Creative problem solving** – approaching problems by testing alternative solutions, without rush to judgment, willingness to be wrong while speculating.

**Creative self-efficacy** – e.g., agreement with “I can usually solve a difficult problem if given enough time.”

**Creative fluency** – e.g., agreement with “I find it easy to think of lots of ideas.”

**Originality** – e.g., agreement with “My ideas for solving problems are often unusual.”

We also measure psychological states or dispositions supporting creative behavior:

**Collaboration attitudes and skills** – e.g., agreement with, “I like listening to the ideas of other students." Or, "I like to contribute to group projects."

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Empathy – e.g., agreement with, “I can usually tell how someone else is feeling.”

Or, "I care about helping others who are having difficulties."

Student work items making up the six “demonstrated creativity” scales
In this section of the survey, students respond to open-ended questions and prompts by writing their analyses and conclusions and by drawing themselves doing creative activities, such as inventing, designing, and solving problems.

Critical thinking. This is shown in the evidence students present to defend their opinions about what an artist may have intended in a displayed work of art on the survey.

Demonstrated creative fluency (associative thinking) – the ability to envision implications of novel, hypothetical circumstances, e.g., "What if all animals spoke English and Spanish?" or "What if all roads and streets were rivers and streams?" Fluency also means demonstrated capacity to generate innovative and potentially useful or aesthetic ideas. Coming up with more, rather than fewer, ideas when asked to generate them shows demonstrated creative fluency.

Value of creative ideas – ideas that are potentially useful or aesthetic in quality
Our scoring team rates the value of ideas and suggested designs. (Because we rate multiple responses from different tasks for the demonstrated creativity scales, we use ratings for each of the tasks, for which raters are typically in tight agreement. By this we mean using a scale such as: 0 - Not original, 1 - Somewhat or in part original, 2 - Definitely original – e.g., the share of ideas deemed original

Demonstrated originality – producing new or novel ideas.

Creative representations – student drawings of self, "inventing, designing, or solving a problem" is rated by scorers for fluency, originality, and overall creativity.

Overall drawing response – quality of student responses to the assigned self-portrait of themselves inventing or designing something.
Quantitative Results: NGCS Survey Results

Please note: the terms 'program' and 'JumpStart' are used interchangeably to identify students who participated in the musical theatre productions. Students who did not participate in the musical theatre production are referred to as 'control' students.

In this section, we present and discuss results from the Next Generation Creativity Survey. First, we present the results for all JumpStart Theatre programs combined and then present the results for the three participating schools separately. The following display shows the number of program and control student surveys we collected. CRoC attained a sample of 78 treatment student surveys and 83 control surveys in all, for a total of 161 completed, matched (pre-/post surveys). The survey numbers were relatively balanced overall and within the three schools combined.

Number of Usable NGCS Surveys (per school, total)

<table>
<thead>
<tr>
<th># of Usable Surveys</th>
<th>Program Students</th>
<th>Control Students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finneytown</td>
<td>20</td>
<td>24</td>
<td>44</td>
</tr>
<tr>
<td>Gamble</td>
<td>29</td>
<td>29</td>
<td>58</td>
</tr>
<tr>
<td>Holmes</td>
<td>29</td>
<td>30</td>
<td>59</td>
</tr>
<tr>
<td>All EdTA</td>
<td>78</td>
<td>83</td>
<td>161</td>
</tr>
</tbody>
</table>

Note: a usable survey is one that had both pre- and post-surveys completed, such that pre- and post-survey data align for each student. Changes in student performance could then be noticed by comparing pre/post data. One survey at Holmes was unusable as the student was in detention. Two surveys at Holmes were unusable because the student was either removed or quit the play.

At Finneytown, pre-surveys were administered to program and control students in a classroom environment; post-surveys were administered in a larger media room classroom. At Gamble, pre- and post-surveys were administered in a large auditorium. At Holmes, pre-surveys were administered to program students in a classroom. Pre-surveys were administered to control students after-school in the lunchroom area. Post-surveys were administered to both groups in the lunchroom area.

NGCS Results for All Schools

Table 1 shows the composite pre- and post-scale scores for all JumpStart or EdTA students and all control students combined. Where scales increased from pre- to post- scores, we show a small “x” for insignificant gains and a large “X” for substantial gains. The small x’s show increased scores but these increases are not considered statistically significant. With small samples such as these, the standards for statistical significance require large gains.
Nonetheless, the score gains are worth noting and may illustrate a meaningful positive change over time. The program students showed gains in four scales: creative problem solving, empathy, creativity in art interpretation, and critical thinking. The control students showed gains in creative problem solving, collaboration, and originality – all of these gains were small.

We can see the strength of the control group design when we compare results for program students with results for control students. The right hand column indicates the nine scales where the JumpStart students out performed the control students. This occurs when the program student scores increase more than the comparison student scores, or when the program school scores decline less than the control student scores. Figure 1 shows a listing of these nine scales.

<table>
<thead>
<tr>
<th>SCALE OR MEASURE</th>
<th>EDTA ALL</th>
<th>Gain?</th>
<th>ALL CONTROLS</th>
<th>Gain?</th>
<th>EDTA Out-performs Control Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
<td></td>
</tr>
<tr>
<td>Creative Problem Solving</td>
<td>2.98</td>
<td>3.08</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creative Efficacy</td>
<td>3.22</td>
<td>3.16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaboration</td>
<td>3.21</td>
<td>3.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td>3.15</td>
<td>3.21</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Originality</td>
<td>3.31</td>
<td>3.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creative Fluency</td>
<td>3.14</td>
<td>3.13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How would the world be different?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of suggestions (fluency)</td>
<td>5.7</td>
<td>5.2</td>
<td>5.68</td>
<td>3.86</td>
<td>XX</td>
</tr>
<tr>
<td>Percent creative (originality)</td>
<td>74</td>
<td>72</td>
<td>0.81</td>
<td>0.87</td>
<td>X</td>
</tr>
<tr>
<td>Creativity in Art Interpret.</td>
<td>0.89</td>
<td>0.92</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>1.17</td>
<td>1.39</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Drawing Response</td>
<td>2.92</td>
<td>2.65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creativity in Drawing</td>
<td>1.11</td>
<td>1.03</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1: shows the composite pre- and post-scale scores for all JumpStart students and all control students combined. A small "x" represents statistically insignificant gains. A large "X" represents statistically significant gains. The final column with two X's indicates the scales in which program students outperformed the control students.
The logic of these comparisons lies in the fact that we don’t know the full range of influences on our scales over the course of a program. Score declines amounting to less for program students than comparison students suggest a measure of relative resiliency for the program students and, as such, positive indications for the program.

But this interpretation is not definitive. We cannot unambiguously say that EdTA outperformed the control school in some areas under this logic—especially where JumpStart students started out at a higher score or very high score. If EdTA scores were substantially higher from the start, it suggests that the samples may not be comparable or may not support a good comparison. For a good comparison with the control group, both groups need to start with similar scores or abilities. For example, with “Originality” program students started at 3.31 and dropped to 3.27; meanwhile the control started at 3.17 and dropped to 3.09—maybe the drop was not as steep in Jumpstart students, but the original starting point was significantly higher.

As another example, the average collaboration score in all EdTA programs dropped from 3.21 to 3.11. We ask, “why would perceived collaboration drop over time in the EdTA program?” It is possible that some students realized how difficult collaboration can be in the program and perhaps they rated themselves higher in the beginning before the program, only to learn during and after the program that their collaboration skills could improve. A review of our qualitative observations could show this but we have not seen concrete evidence yet from these sources.
Figure 1

Creativity Domains in Which EdTA Students Out-performed Control Students

Self-reported Creativity Scales

- Creative Problem Solving
- Creative Self-efficacy
- Empathy
- Originality
- Creative Fluency

Demonstrated Creativity Indicators

- Fluency with Ideas
- Creativity in Art Interpretation
- Critical Thinking
- Creativity in Drawing

Figure 1: summarizes the scales and domains where the JumpStart students outperformed the control students by showing larger gains, or less erosion, over time. CRoC considers a “gain” as any positive change in score over time, i.e. a higher post-test score than a pre-test score on a given scale. EdTA student gains include five of six of our self-reported creativity scales and four of six of our demonstrated creativity scales.
NGCS Results for Holmes

Table 2: Holmes EDTA Student performance VS. Holmes Control Student Performance

<table>
<thead>
<tr>
<th>SCALE OR MEASURE</th>
<th>HOLMES</th>
<th>Gain?</th>
<th>Holmes Controls</th>
<th>Gain?</th>
<th>Holmes Out-Performs Its Control Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELF-REPORTED CREATIVITY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creative Problem Solving</td>
<td>2.96</td>
<td>3.07</td>
<td>XX</td>
<td>2.84</td>
<td>2.92</td>
</tr>
<tr>
<td>Creative Efficacy</td>
<td>3.28</td>
<td>3.17</td>
<td></td>
<td>2.83</td>
<td>2.74</td>
</tr>
<tr>
<td>Collaboration</td>
<td>3.27</td>
<td>3.10</td>
<td></td>
<td>3.22</td>
<td>3.20</td>
</tr>
<tr>
<td>Empathy</td>
<td>3.39</td>
<td>3.26</td>
<td></td>
<td>2.83</td>
<td>2.48</td>
</tr>
<tr>
<td>Originality</td>
<td>3.29</td>
<td>3.28</td>
<td></td>
<td>3.18</td>
<td>2.76</td>
</tr>
<tr>
<td>Creative Fluency</td>
<td>3.20</td>
<td>3.00</td>
<td></td>
<td>2.77</td>
<td>2.64</td>
</tr>
</tbody>
</table>

DEMONSTRATED CREATIVITY

<table>
<thead>
<tr>
<th>How would the world be different?</th>
<th>HOLMES</th>
<th>Gain?</th>
<th>Holmes Controls</th>
<th>Gain?</th>
<th>Holmes Out-Performs Its Control Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>N of suggestions (fluency)</td>
<td>6.56</td>
<td>4.42</td>
<td></td>
<td>5.25</td>
<td>2.70</td>
</tr>
<tr>
<td>Percent creative (originality)</td>
<td>0.72</td>
<td>0.85</td>
<td>X</td>
<td>0.67</td>
<td>0.72</td>
</tr>
<tr>
<td>Creativity in Art Interpret.</td>
<td>1.00</td>
<td>0.89</td>
<td></td>
<td>1.00</td>
<td>0.73</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>1.50</td>
<td>1.39</td>
<td></td>
<td>1.09</td>
<td>0.68</td>
</tr>
<tr>
<td>Overall Drawing Response</td>
<td>3.33</td>
<td>3.11</td>
<td></td>
<td>2.18</td>
<td>1.70</td>
</tr>
<tr>
<td>Creativity in Drawing</td>
<td>1.22</td>
<td>0.94</td>
<td></td>
<td>0.91</td>
<td>0.90</td>
</tr>
</tbody>
</table>

x = small gain; X = large gain; XX = Program Outperforms Control

Table 2: shows analogous statistics for the Holmes students versus their control students. Holmes shows fewer scale score gains, but shows eight scales where their students outperformed their comparison counterparts. As with all students, Holmes students showed a strong gain in creative problem solving.

As indicated in Table 2 and listed in Figure 2, Holmes program students outperformed control students in five of the six demonstrated creativity scales through larger gains or small losses over time.
But we also note with the Holmes program students that the group started out significantly higher than the control group on a number of scales.

As we discuss above, this raises questions about whether the two samples are reasonable to compare given their stark differences at the start.

**Figure 2**

**Creativity Domains in Which Holmes EDTA Students Out-performed Control Students**

**Self-reported Creativity Scales**

- Creative Problem Solving
- Empathy
- Originality

**Demonstrated Creativity Indicators**

- Fluency with Ideas
- Originality with Ideas
- Creativity in Art Interpretation
- Critical Thinking
- Overall Drawing Response

**Figure 2**: summarizes the scales in which Holmes JumpStart students out performed their controls over time.
NGCS Results for Finneytown

<table>
<thead>
<tr>
<th>Scale or Measure</th>
<th>Finneytown</th>
<th>Gain?</th>
<th>Finneytown Controls</th>
<th>Gain?</th>
<th>Finney Out-Performs It's Control Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
<td></td>
</tr>
<tr>
<td>Self-Reported Creativity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creative Problem Solving</td>
<td>3.09</td>
<td>3.05</td>
<td>3.07</td>
<td>3.07</td>
<td>tie</td>
</tr>
<tr>
<td>Creative Efficacy</td>
<td>3.37</td>
<td>3.29</td>
<td>3.36</td>
<td>3.27</td>
<td>x</td>
</tr>
<tr>
<td>Collaboration</td>
<td>3.29</td>
<td>3.17</td>
<td>3.33</td>
<td>3.39</td>
<td>x</td>
</tr>
<tr>
<td>Empathy</td>
<td>3.33</td>
<td>3.47</td>
<td>3.04</td>
<td>2.93</td>
<td>XX</td>
</tr>
<tr>
<td>Originality</td>
<td>3.38</td>
<td>3.37</td>
<td>3.05</td>
<td>2.98</td>
<td>XX</td>
</tr>
<tr>
<td>Creative Fluency</td>
<td>3.23</td>
<td>3.26</td>
<td>3.10</td>
<td>2.97</td>
<td>XX</td>
</tr>
<tr>
<td>Demonstrated Creativity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How would the world be different?</td>
<td>6.05</td>
<td>6.15</td>
<td>6.00</td>
<td>6.00</td>
<td>XX</td>
</tr>
<tr>
<td>N of suggestions (fluency)</td>
<td>0.86</td>
<td>0.88</td>
<td>0.81</td>
<td>0.94</td>
<td>X</td>
</tr>
<tr>
<td>Percent creative (originality)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>tie</td>
</tr>
<tr>
<td>Creativity in Art Interpret.</td>
<td>1.68</td>
<td>1.68</td>
<td>1.16</td>
<td>1.27</td>
<td>X</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>3.30</td>
<td>3.32</td>
<td>2.91</td>
<td>3.25</td>
<td>x</td>
</tr>
<tr>
<td>Overall Drawing Response</td>
<td>1.30</td>
<td>1.21</td>
<td>1.21</td>
<td>1.15</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: shows results for the Finneytown JumpStart program. Finneytown participants showed gains in two self-report scales: empathy and creative fluency. They also showed gains in demonstrated fluency, originality, and in the quality of their self-portrait drawing responses. Finneytown participants relatively outperformed their controls in four self-report scales and on the demonstrated fluency scale.
We note that Finneytown control students experienced gains on several scales including collaboration, critical thinking, originality, and overall drawing response. This may be due to factors related to the testing environments, the time of day in which the survey was administered, or the activities students had performed before completing the survey. Alternatively, there may have been an outside circumstance that is partially responsible for program and control students’ growth in these areas. Such circumstances may include class activities and curriculum, school trips, or other events in the community or school environment.

**Figure 3**

Creativity Domains where Finneytown EDTA Students Out-performed Control Students

**Self-reported Creativity Scales**

- Creative Self-efficacy
- Empathy
- Originality
- Creative Fluency

**Demonstrated Creativity Indicators**

- Fluency with Ideas

**Figure 3** summarizes the scales in which Finneytown JumpStart students out performed their controls over time.
NGCS Results for Gamble

<table>
<thead>
<tr>
<th>Scale or Measure</th>
<th>Gamble</th>
<th>Gain?</th>
<th>Gamble Controls</th>
<th>Gain?</th>
<th>Gamble Out-Performs it's Control Students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-Reported Creativity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creative Problem Solving</td>
<td>Pre</td>
<td>Post</td>
<td>X</td>
<td></td>
<td>XX</td>
</tr>
<tr>
<td></td>
<td>2.90</td>
<td>3.12</td>
<td></td>
<td>2.90</td>
<td>2.94 X</td>
</tr>
<tr>
<td>Creative Efficacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>XX</td>
</tr>
<tr>
<td></td>
<td>3.07</td>
<td>3.05</td>
<td></td>
<td>3.09</td>
<td>2.98 X</td>
</tr>
<tr>
<td>Collaboration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>XX</td>
</tr>
<tr>
<td></td>
<td>3.11</td>
<td>3.06</td>
<td></td>
<td>3.01</td>
<td>3.08 X</td>
</tr>
<tr>
<td>Empathy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>XX</td>
</tr>
<tr>
<td></td>
<td>2.85</td>
<td>2.98</td>
<td>X</td>
<td>3.07</td>
<td>3.06 X</td>
</tr>
<tr>
<td>Originality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>XX</td>
</tr>
<tr>
<td></td>
<td>3.25</td>
<td>3.25</td>
<td></td>
<td>3.29</td>
<td>3.32 X</td>
</tr>
<tr>
<td>Creative Fluency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>XX</td>
</tr>
<tr>
<td></td>
<td>3.02</td>
<td>3.16</td>
<td>X</td>
<td>3.07</td>
<td>2.66 X</td>
</tr>
<tr>
<td><strong>Demonstrated Creativity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How would the world be different?</td>
<td>4.90</td>
<td>4.80</td>
<td>5.62</td>
<td>3.00</td>
<td>XX</td>
</tr>
<tr>
<td>N of suggestions (fluency)</td>
<td>0.67</td>
<td>0.51</td>
<td>0.86</td>
<td>0.87 X</td>
<td></td>
</tr>
<tr>
<td>Percent creative (originality)</td>
<td></td>
<td>0.88</td>
<td>X</td>
<td>0.83</td>
<td>0.92 X</td>
</tr>
<tr>
<td>Creativity in Art Interpret.</td>
<td>0.75</td>
<td>0.75</td>
<td>1.17</td>
<td>X</td>
<td>1.16</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>0.58</td>
<td>1.17</td>
<td>X</td>
<td>1.16</td>
<td>1.31 X</td>
</tr>
<tr>
<td>Overall Drawing Response</td>
<td>2.37</td>
<td>1.85</td>
<td></td>
<td>2.62</td>
<td>2.22 X</td>
</tr>
<tr>
<td>Creativity in Drawing</td>
<td>0.89</td>
<td>0.96</td>
<td>X</td>
<td>1.24</td>
<td>0.96 X</td>
</tr>
</tbody>
</table>

x = small gain; X = large gain  XX=Program Outperforms Control

**Table 4:** shows NGCS results for Gamble middle school. Gamble program students showed pre- to post-scale gains in three self-report scales (creative problem solving, empathy, and creative fluency). They also showed absolute gains in demonstrated creativity (creativity in art interpretation, critical thinking, and creativity in drawing). Gamble program students also relatively out-performed their controls in four self-report and four demonstrated creativity scales. Figure 4, on the next page, lists these scales.

We note an anomaly in the Gamble statistics. This is the very low starting score in critical thinking for the Gamble EdTA students and the more than doubling of this score over time. The comparison group started relatively higher, made a substantial gain, but did not out-
perform the Gamble students according to our guidelines. The Gamble students doubled their pre-score, while the control students gained about ten percent.

**Figure 4**

**Creativity Domains in Which Gamble EDTA Students Out-performed Gamble Control Students**

**Self-reported Creativity Scales**

- Creative Problem Solving
- Creative Self-efficacy
- Empathy
- Creative Fluency

**Demonstrated Creativity Indicators**

- Fluency with Ideas
- Creativity in Art Interpretation
- Critical Thinking
- Creativity in Drawing

**Figure 4**: lists the scales where the Gamble program students out performed the control students.
Overall NGCS results

JumpStart program students gained in creativity according to the NGCS scales. The most powerful results were in creative problem solving - both overall and in two of the three participating schools. The same result shows for empathy. Program students consistently out-performed the control students on a majority of the scales according to our definition of performance on these scales – overall and in each school. Our observations suggest that the creative motivation and behaviors of students, as well as their engagement with the program, increased over the course of the program, and the NGCS provides some triangulation suggesting that these observations have validity. And conversely, this suggests that the survey has some general validity when it comes to capturing dimensions of creative growth.

We might expect at the outset that a musical theatre program would impact creative problem solving self-beliefs as well as empathy. From start to finish, the creation of a play production can involve solving many problems on a daily basis. There are many small issues, decisions, and problems that must be addressed throughout the play creation process; involvement in these is likely to boost skills and perceptions of skills.

At the same time, musical theatre and drama present exercises in understanding self and others as characters take on their roles. Empathetic skills are a fundamental part of creating roles for the stage and classroom.

Qualitative Evaluation Methods

CRoC used observations and surveys as qualitative data collection methods to further explore the JumpStart Theatre program in the first year. These methods serve as triangulation to the quantitative data and are detailed in the following sections.

Teacher Bootcamp Observations
Research Assistants (RAs) attended Bootcamps I, II, and III that took place at important junctures in the JumpStart Curriculum. JumpStart Teaching Artists led the Bootcamp sessions, which successively prepared and coached teachers to create the world of the play and to present a complete production with music, sets, costumes, and props. RAs were trained to record their observations of the Bootcamp using a guide. (See Appendix I)

Rehearsal Observations
An RA attended 4 - 5 rehearsals at all of the schools at the beginning, middle, and end of the rehearsal process, using a guide to focus their observations. The work of Sheila Page is shared with each RA to deepen their understanding of creative behaviors that they might observe. (See Appendix II, III, IV)
Performance and Share Out Observations
An RA attended 1 performance at each school using a guide to focus their observations. (See Appendix II, III) Additionally, the Principal Investigator attended the JumpStart Showcase and recorded his observations.

Teacher & Teaching Artist Surveys
Eighteen JumpStart teachers completed a pre-survey at Bootcamp I in October, 2015. Due to the practical demands made on time at the end of the program, the identical post-survey was delivered online to the same teachers via Survey Monkey. At the time of this report four responses were collected. Surveys were also delivered online via Survey Monkey to four Teaching Artists. At the time of this report two responses were collected. We collected data with both teacher and teaching artist surveys in order to compare teachers and Teaching Artists perceived experiences with our observations of the program.

Qualitative Results
In this section, we detail the findings generated from observations and surveys. Our findings are largely focused on the opportunities for and demonstrations of creativity and creative learning during the JumpStart rehearsals and performances with a brief summary of the philosophies and guiding ideas presented during the Bootcamp.

Bootcamp Philosophies
In the Bootcamp training, teachers engaged in participatory and experiential learning. Several RAs noted this as a significant and influential teaching strategy:

“They make the teachers experience everything themselves first, giving each teacher a musical theatre teacher’s handbook, but discouraging anyone from just sitting down and going through it until after they had participated in all of the warm-ups and singing, dancing, and acting activities of the day. This way, when the trainers asked the teachers at the end of each activity what they learned from it, and how it could be useful in their classes or rehearsals, the teachers are able to speak more directly to its application, as they have just experienced and learned what the students are supposed to learn from it to.”
In addition to learning the value of ‘warm-ups’ and other rehearsal activities by engaging as participants, teachers learned that the JumpStart program is largely process-oriented. The Bootcamp facilitators encouraged teachers to embrace ‘simplicity,’ to focus on ‘telling the story,’ even if the means of telling the story were non-traditional, and to avoid ‘overreaching’ or striving for perfection. In teacher post-surveys, several confirmed that they felt as if the JumpStart Theatre program taught them “the importance of telling a story through movement, voice, song, and dance” and how to “efficiently tell a story without saying anything at all.” Teaching Artists also indicated that they felt that the program had helped teachers to “just get up on their feet [and] learn how to tell a story.”

Based on the Bootcamp training philosophies, it was clear that the JumpStart program does not aim to produce or expect artistically exquisite performances. Instead of focusing on a perfected end product, teachers were encouraged to focus on the process. Furthermore, teachers were encouraged to develop strategies to maintain student engagement, provide opportunities for creative exploration and improvisation, and to overcome the “rehearsal doldrums.” Some of these strategies included placing students in unusual or leadership roles or experimenting with different ways to perform or communicate (with or without words, gestures, etc.) in particular scenes. In this sense, the Bootcamp encouraged teachers to be creative in their approach to the musical production as a means to promote their students’ creativity.

Data from the teacher pre-survey also reveals that despite their hesitation or lack of confidence in their understanding of theater performances and techniques, teachers were enthusiastic about learning how to successfully develop and manage a new theater program. Their enthusiasm was reflected in their engaged participation throughout the Bootcamp.

**Rehearsals**

*Creativity & Time*

Across all three schools, time appeared to be the greatest factor affecting rehearsal success, student engagement, creativity, and final performances. In the pre-program surveys, most teachers expressed concerns about having enough time to successfully complete the theatrical production. They also frequently mentioned that they were most worried about time management and hoped that their school administration would be supportive with flexible scheduling. The Teaching Artists also indicated that teachers sometimes had a hard time grasping the need for a schedule, experienced schedule conflicts, or struggled to know how much time was necessary for each aspect of the show production and preparation. One teacher expressed a similar sentiment in a post-survey:

“We had another school donate many of our costumes and props but they were not available until the very close to the performance which made rehearsing with these..."
things very stressful. This could easily be fixed for future performances now knowing how much time is needed for students to interact with these items. [...] EVERY single thing needs to be planned, well scheduled and followed to the letter.”

When asked to reflect on what they learned during the JumpStart process, the same teacher reflected:

“There was so much more that goes into it than I ever realized. The person in charge of or responsible for the performance needs to have specific uninterrupted time dedicated to the play. There is too much to only have a few after school rehearsals for our students. Our students needed more time, or even time during the day to commit to the play. [I also] learned that we needed more support with scheduling the auditorium and with scheduling rehearsals, which may be able to be covered in future bootcamps.”

Given the importance of time, in the future, it may be beneficial for Bootcamps to explicitly train teachers on scheduling and time management.

Furthermore, consistent with recent literature on creative learning (Jeffrey & Craft, 2003, 2004), possibility thinking (Craft et al, 2012; Craft, 2013), and teaching through the arts (Denmead, 2009), lack of time in rehearsals and before the final performance appeared to limit student and teacher creativity. Observers repeatedly noted that time seemed to be an important element when cultivating creative risks and improvisation. Even the school that

---


demonstrated tremendous theatrical potential and talent seemed rushed and would have benefitted from more time.

Although every school would have benefitted from more time, when given sufficient time to go beyond rote scene and line rehearsal and to freely experiment, students and teachers exhibited creative improvisation and possibility thinking. One teacher reflected in a post-survey: “I felt most creative in the moments when we were challenged for props or scene changes. I really learned to embrace the simplest of options.” For a list of students’ creative improvisations, see Table 5.

Table 5

<table>
<thead>
<tr>
<th>Domain of Improvisation</th>
<th>Example of Student Improvisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blocking Experimentation</td>
<td>Using dance moves from another number</td>
</tr>
<tr>
<td></td>
<td>A student playing two characters who were both on stage at once recruited her twin to play one of the characters during that scene</td>
</tr>
<tr>
<td>Character development</td>
<td>An actor played a dog and one playing a policeman added in a back and forth – added bits to make the characters more real</td>
</tr>
<tr>
<td></td>
<td>A lead actor channeled his fidgeting into mannerisms for his character.</td>
</tr>
<tr>
<td>Props</td>
<td>Students use patting to keep time</td>
</tr>
<tr>
<td></td>
<td>A student used a chair to stand on for stairs</td>
</tr>
<tr>
<td></td>
<td>When a prop interfered with stage directions, teachers asked kids to find a way that wouldn’t interfere.</td>
</tr>
<tr>
<td></td>
<td>When there were lighting issues near the beginning, the kids used curtains to show breaks between scenes</td>
</tr>
<tr>
<td>Comedy</td>
<td>A boy playing a villain took the opportunity to do some comedic physical acting</td>
</tr>
</tbody>
</table>

Table 5. Selected Sample of Student Creative Improvisations
Additionally, a lack of time forced each school to cut certain scenes or songs either prior to
the final performance or during the final performance. While this did not inhibit the
‘storytelling’ per se, in at least one school, the time limit prevented several students from
performing in the final observed performance.

Across the three schools, the degree to which creativity was actively cultivated through
teachers’ tasked varied. At one school, in each rehearsal, students were challenged to
collaborate in new ways—either with their older high school peers or in small groups on
specific aspects of choreography—and to experiment with their character communication
and development in a variety of stylistic exercises. For example, students were prompted to
think about ‘what shoes their characters might wear.’ However, at another school,
behavioral issues appeared to distract all participants from engaging fully in the
philosophies of creative practice and there were fewer opportunities for teachers to
intentionally prompt students’ creative character development and exploration.

In each school, even if only briefly, students were allowed to lead and contribute as equals
when developing choreography and staging. Furthermore, when given the autonomy to take
the lead in rehearsals or to improvise in performance, students exhibited more creative
behaviors.

**Carry Over from the Bootcamp**

Although the Bootcamp appeared to be an informative and well-executed training program
for teachers, some of the guiding philosophies or strategies were not maintained
consistently throughout the rehearsals. Only one school consistently used warm-ups and
debriefing sessions to start and conclude each rehearsal; the other schools, especially when
under time pressure, did not engage in warm-ups or debrief discussions.

While some strategies may have been underutilized, the Bootcamp guiding philosophies
were apparent in most rehearsals. One observer noted this in an observation:

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**GAMBLE**

*One key aspect to JumpStart’s program is that as long as the musical “tells the story,”
nothing else really matters. Gamble teachers are able to incorporate that into their musical
seamlessly because the importance of storytelling is woven throughout the dialogue and
songs, especially in the last song of the musical. They end their warm up and start the play
with saying together “Tell the story.”*
Moreover, the notion that ‘there are no right or wrong answers’ appeared very strongly in all of the schools’ rehearsals and final performances. Students were free to improvise, especially during the final performances, and many of the students were unafraid and eager to do so. For example, in Finneytown’s final performance, the observer noted 7 areas of improvisation and commended the students on their alertness and responsiveness to one another’s improvisations; the storyline did not stop, there were no awkward pauses, and often times, improvisation resulted in comedic relief.

**FINNEYTOWN**

“When improvisation was called for, the other actors tended to be right on the ball, maintaining their characters. The audience reacted very well. One dance number that got particular applause was almost totally choreographed by the girl who sang the majority of the song.”

Additionally, because many of the schools experienced obvious setbacks or challenges, it was nearly impossible for teachers or students to expect perfection or the “right” answer. Thus, embracing the failures and the creative experimentation that comes with uncertainty and improvisation seems to have been a highlight and potential point for growth within the program. The culminating performance for Holmes is a prime example of this type of creative improvisation in action:

**HOLMES**

“When there were lighting issues near the beginning, the kids used curtains to show breaks between scenes. The lead put on a brand new ‘nervous’ act that was very effective. The cast was good about pressing on, rather than pausing, when there were small missteps.”

**Challenges**

Each school encountered several challenges throughout the duration of the rehearsals and performance. In all schools, student family transience was a consistent challenge. As a result, there were many understudies and students who performed multiple characters in one show. Behavioral management also affected the degree to which students and teachers could engage in rehearsals and the performance. Student engagement ranged widely and often times, disruptive students distracted the performance and frustrated teachers and students. Technical issues related to lighting, costuming, and scene transitions also
appeared to be a distraction for teachers and students when attempting to engage in creative and collaborative theater practice.

Despite the challenges, the final productions were well received in each community. Audiences were supportive, engaged, and pleased by the performances. Student audience members laughed at the appropriate times; the principal encouraged the performers and praised their efforts and ability to do something positive for the community and school; and one school even received a standing ovation. Furthermore, the final share-out performances of two songs from each participating school’s musical proved very successful. An ample house at Xavier University’s theatre saw polished, costumed performances involving typically 15-20 students from each school. Each number appeared to benefit not only from the rehearsal routines building up to the final shows in each school community, but preparation and polishing for the final share-out resulted in fine performances by all three casts.

**Conclusion**
The JumpStart program yielded value for teachers and students in the process of co-creating and implementing a theatrical performance. Students and teachers had sufficient time to explore creative practice through improvisation and collaboration, though more time may have enabled greater creativity and collaboration amongst students and teachers. Furthermore, the imperfect nature of the process may have created a safe and nonjudgmental environment in which students felt free and confident to improvise and ‘tell the story’ in whatever way possible given the moment in time and resources at hand. In other words, the uniquely imperfect process may have been key to cultivating particular elements of student and teacher creativity.

**Preliminary Conclusions & Recommendations: A Summary of Quantitative and Qualitative Data**

The combined quantitative and qualitative research findings from the first year of EdTA’s JumpStart program illustrate a robust picture of student and school community creative growth. A synthesis of these findings, though tentative, suggests a few key insights about the nature of creative learning through theatre. Student growth in creative problem solving over time may be related to frequency of their improvisations during rehearsals and the final performances. The uncertain environment, in which students frequently dropped out of the show, time was limited, and technical difficulties were common, may have been a crucial factor in developing students’ creative problem solving abilities. When tasked to
improvise a line, a character’s choreography, or scene transitions, students had to use
instantaneous creative problem solving to keep the show moving forward and to continue
to ‘tell the story.’ Furthermore, because uncertainty was a common factor throughout the
rehearsal and final performances, students had the opportunity to develop their
improvisation and creative problem solving skills over time. Because creative problem
solving became the ‘norm,’ students may be more likely to retain these creative problem-
solving skills in the future, beyond the JumpStart program. Further research in years two
and three may provide evidence to validate such a hypothesis.

In addition to uncertainty, time and autonomy appear to have been important factors in
increasing student creativity. When students had the time to rehearse scenes repeatedly
and the autonomy to take ownership over their character development, choreography, etc.,
they demonstrated more creative behaviors and improvisations. Autonomy and time may
also relate to students’ growth in empathy. When given the time to think deeply about their
characters’ dialogue and motivations and the autonomy to make creative decisions about
blocking, choreography, character expression, and props, students had the opportunity to
engage more deeply with their characters. With time and creative license, students may
have been able to cultivate empathy—or a true understanding—of their characters.

Finally, JumpStart’s special emphasis on ‘telling the story’ (in contrast to perfection), seems
to have been an important underlying value that may have enabled students and teachers to
embrace greater creative experimentation and improvisation. When the expectation for
perfection is removed, space for possibility, innovation, and creativity can emerge.

Looking towards the second year of study, CRoC recommends:

1) JumpStart creates a list of questions or prompts that teachers can use for student
reflection throughout the process.

2) JumpStart emphasizes the importance of not skipping warm up and/or debrief, and
encourages teachers to view these sessions as an integrated, essential part of the
whole process.

3) JumpStart may want to add in a time saving protocol (ie – lining students up outside
classroom in preparation to entering rehearsal space and reviewing expectations,
attitudes, etc.) to facilitate classroom management.

4) JumpStart may want to emphasize the value of improvisation and the link to creative
thinking and problem solving in the Bootcamp training sessions.
5) JumpStart may want to provide a more extensive overview of time management and scheduling strategies in the Bootcamp training sessions.

6) CRoC will add a question regarding the role of music in the theater performances in teacher and student surveys, time permitting.

7) The NGCS Survey is administered in similar conditions across all groups – program and control. Ideally, the survey is administered separately to program and control students at each school site, around the same time of day, in a similar environment with minimal distractions. A classroom setting is optimal.

End of Report
Appendices

I. Bootcamp Observation Guide

1. Record noteworthy teacher responses/reactions to the training.
2. What seems to be the most important that participants are learning in this training?
3. What does the teaching artist(s) do specifically to support teacher learning about JumpStart's approach to the basics of implementing a middle school theatre program?

Sample Bootcamp Observations: All Schools

Noteworthy teacher responses/ reactions to the training:
“Facilitators asked teachers to reflect about how the warm-up exercise benefited the group and their productivity. Then the facilitator asked them to imagine what it would be like to rehearse without a warm-up and then with a warm-up activity. When asked during the end of day wrap-up what they had done well that day, the teachers responded that they: listened, committed to every exercise, focused, and learned to see the big picture, to organize, to choreograph, and that they could dance. When asked what they were going to do now in class or in rehearsal, the teachers answered: use tableaux exercises, do different warm-ups, teach students to focus, keep it simple, teach step-by-step procedures, dictate less, relinquish control, and give their students more empowerment.”

What seems to be most important that participants are learning in this training?
“Common ideas that come up throughout the bootcamp: inclusion, fun, ownership/empowerment, and the idea that there is no right or wrong in musical theatre. The type of facilitators Steve and Martin are play a key role in giving teachers ideas of positive reinforcement for students: showing how to give minimal directions, guiding throughout the exercise and how to promote inclusion among all students regardless of the important of their roles.”

What does the teaching artist(s) do specifically to support teacher learning about JumpStart’s approach to the basics of implementing a middle school theatre program?
“They make the teachers experience everything themselves first, giving each teacher a musical theatre teacher’s handbook, but discouraging anyone from just sitting down and going through it until after they had participated in all of the warm-ups and singing, dancing, and acting activities of the day. This way, when the trainers asked the teachers at the end of each activity what they learned from it and how it could be useful in their classes or rehearsals, the teachers are able to speak more directly to its application, as they have just experienced and learned what the students are supposed to learn from it to.
II. Rehearsal, Dress Rehearsal, and Performance Observation Guide

School:_________________________ Date:_______ Observer:___________________________

1. What demands for creative actions or creative problem solving are placed on students during this rehearsal? (Requests from teaching artists/directors.)

2. Does the rehearsal generally provide sufficient time for creative actions on the part of cast and crew? Give an example.

3. Describe 3-4 creative actions/responses made by students during this rehearsal.

4. Do you recall any student reactions to their own creative actions? E.G. what verbal reactions, comments to cast-mates/crew-mates?

5. Do the teaching artists or Director present creative adaptations to story lines and or spoken lines used in this play?

6. In your observations of this cast and crew, how would you describe the progress they all are making toward a finished production up to this point in time?
III. Sample Rehearsal and Performance Observations

Rehearsal: Finneytown

General overview:
"This was the first rehearsal observed with the participation of senior students as mentors. Students broke into different groups based on what needed to get accomplished. A senior gave a detailed explanation of what needed to be done, along with sharing theory and anecdotes from his experience. Senior mentors worked to teach middle school-ers different aspects, however there was some lack of organization. Much of the organization seemed to be in the lead teacher’s head. Some disruption as the lead teacher checked in with each group, but overall things were quite upbeat. No warm up or wrap up exercise, but students gathered in circle at beginning and end."

What demands for creative actions or creative problem solving are placed on students during the rehearsal?
"The teachers brought in high school seniors to help run rehearsal, and most of it was left to them, though the delivery of lines and making sure blocking was working was something the teachers engaged on. At the end of rehearsal, students were asked to think about what kind of shoes their character would wear.”

Does the rehearsal generally provide sufficient time for creative actions on the part of the cast and crew?
"Absolutely. When practice started, the cast divided into multiple groups and engaged in different parts of the show, which let each group focus more on their actions. This allowed them to tweak the performance and to perfect the blocking.”

Describe 3-4 creative actions/ responses made by students during this rehearsal
“When told to get straight and formal a group of actors added an action that fit with their childish characters, playing up their role. When asked if they knew the choreography, one girl said it should be simple and the students then proved her right, hammering the scene together in very little time. Tech crew decided to lower the pit and use it in an area to work in. When given stage direction by a senior that didn't make sense for the scene, the students were quick to point out the issues with the stage direction and suggest an alternative.”

Do you recall any student reactions to their own creative actions?
“Student reactions tend to be uniformly positive. Students build off each other's ideas.”

Do the teaching artists or Director present creative adaptations to storylines and/or spoken lines used in this play?
“Not in this rehearsal. Teachers seemed to focus more closely on the tech side of things, making sure sound/lighting/props/scenery were progressing.”

**In your observations of this cast and crew, how would you describe the progress they all are making toward a finished production up to this point in time?**

“Progress is being made at a nice pace, yet there isn’t much time to put the play together…”

**Performance: Gamble**

**What demands for creative actions or creative problem solving are placed on students during the rehearsal?**

“For the final performance, students were asked to arrive early, ate there, and then dispersed while waiting for others to arrive. Then they got into costumes and make-up, have a pep talk and warm up before the show.”

**Does the rehearsal generally provide sufficient time for creative actions on the part of the cast and crew?**

“The time between arrival and the start of play is not structured like the rehearsal, but they do have time for a warm up backstage.”

**Describe 3-4 creative actions/ responses made by students during this rehearsal**

“Students ran lines in the music room and then later while eating dinner. There were no teachers involved in either instance, but the students chose to work on improving for their last performance.”

**Do you recall any student reactions to their own creative actions?**

“Some students said that Friday night was perfect. One girl said that being part of the musical was hard, but fun, and another said that it helped with her problems talking to people.”

**In your observations of this cast and crew, how would you describe the progress they all are making toward a finished production up to this point in time?**

“Mr. Frank had a big smile on his face and said that Friday night went really, really well. He expresses his joy and surprise that they were able to put on such a great show because he didn’t think the dress rehearsal went that well. He had gotten mics for the performance to help with volume issues. The cast got a standing ovation.”
IV. Sheila Page on Creativity

BEHAVIORS THAT SUPPORT DEVELOPMENT OF CREATIVITY
CRoC’s approach to data collection through observation is informed by the work of Ms. Sheila Page, HMIE, Education Scotland. What follows is her framework for defining creative attributes, which can be applied to student learning, teacher learning, and teaching for creativity.

CREATIVE ATTRIBUTES
The following attributes are not exclusive to the development of creativity skills, nor do they represent a linear process. However, taken together, they point the way towards learning behaviors that support the development of creativity skills.

People who are creative tend to be:
- Inquisitive
- Open-minded
- Imaginative
- Able to identify and solve problems
- Confident in their right and ability to
- Influence change

CREATIVE LEARNING BEHAVIORS
Inquisitiveness:
- Being curious
- Noticing deeply
- Registering patterns
- Making connections between elements
- Referring to previous knowledge
- Researching productively

Open-mindedness:
- Formulating good questions:
  - What if....?
  - Why does....?
  - Suppose that...?
  - Who says...?
- Challenging assumptions or the status quo
- Identifying problems
- Exploring multiple viewpoints
- Functioning in uncertain situations
Use of Imagination:
- Lateral thinking
- Using analogy
- Hypothesizing
- Playing with several possibilities
- Synthesizing and refining multiple options and viewpoints

Delivery of constructive solutions:
- Planning
- Inventing
- Crafting, delivering and presenting
- Applying discipline and resilience
- Evaluating solutions against initial problem
- Evaluating impact of solutions
- Identifying next steps in refinement or development process

Confidence:
- Motivated and ambitious for change
- Confident in validity of own viewpoint
- Able to identify impact of creative process on:
  - personal development
  - project outcomes
- Able to apply creative process to other situations
- Able to lead and work well with others

###
Capturing Student and Teacher Creative Growth through the After-School JumpStart Theatre Program
Cincinnati, Ohio • Felicity, Ohio • Covington, Kentucky

Educational Theatre Association

Year Two Report
October 2017

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*Front Cover Photo: The cast of Finneytown Middle School's 2017 production of Flat Stanley.
Photo Credit: Susan Doremus*
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Curtain call: The cast of Holmes Middle School's 2017 production of School House Rock!
Photo Credit: Susan Doremus
1. Introduction

The Educational Theatre Association (EdTA), based in Cincinnati, is a national nonprofit organization with approximately 100,000 student and professional members. EdTA’s mission is to shape lives through theatre education by honoring student achievement in theatre and enriching their theatre education experience; providing professional development for teachers, including networking opportunities, resources, and recognition; and influencing public opinion that theatre education is essential and builds life skills.

In 2015, EdTA, in collaboration with New York City-based companies, iTheatrics and Music Theatre International (MTI), created the JumpStart Theatre Program, a three-year scalable pilot program designed to build sustainable musical theatre programs where, previously, there were none. JumpStart Theatre is modeled after the successful Broadway Junior Musical Theatre Program, founded in 2005, by the Shubert Foundation, iTheatrics, and Music Theatre International, in collaboration with the New York City Department of Education. Four iTheatrics teaching artists delivered the program – Marty Johnston, Susan Fuller, Cindy Ripley and Steven Kennedy. EdTA teaching artist program mentors DeeAnne Bryll and Becca Kloha Strand contributed to the delivery of the program.

EdTA contracted with the Centers for Research on Creativity (CRoC) based in Los Angeles, California to assess the impact of the JumpStart Theatre Program on the student, teacher, and school community’s growth in creativity while participating in a middle school musical theatre program. This report describes CRoC’s evaluation findings of the second year of implementation of JumpStart in four public schools in Ohio and Kentucky. EdTA selected the schools from a competitive application process. These schools agreed to present the program at their school for three academic years (SY 2015-16 through SY 2017-18).
1.1 JumpStart Theatre Schools
Each school stated their goals in offering the JumpStart Theatre Program to their students and teachers. These goals are offset as italicized, boxed text.

**Finneytown Middle School**, Cincinnati, OH

*The goal of [JumpStart Theatre] is to provide training that inspires creative thinking, self-confidence, effective communication skills, fluid movement, and voice control. Having the JumpStart program will assist in enhancing our academic programs and provide a creative outlet for our students where none currently exists.*

Finneytown Secondary Campus, which includes both high and middle schools is located in the urban-suburban Finneytown Local School District and serves a total of 700 students. The campus includes the William R. Swartzel Performing Arts Center, a well-appointed theatre shared by both schools.

After-school activities for middle school students are: academic support, craft club, student council, athletics, community service, and marching band. Art program offerings are: band, orchestra, choir, and general arts education.

In this second year of the program, approximately 13 students participated as actors, production crew (sets, sound, props, costumes) and by promoting the show; three teachers participated as director, music director, and choreographer.

Finneytown presented *The Musical Adventures of Flat Stanley JR.* a 60-minute production that celebrates travel, adventure and making the most out of your situation through song, dance, and wit.

Parents at Finneytown sold tickets, distributed programs, helped students learn their lines and music, and promoted the show.

In addition to in-school performances, the cast performed at the JumpStart Theatre Showcase, held at the prestigious Aronoff Center for the Arts on Walnut Street, in downtown Cincinnati.
James N. Gamble Montessori High School, Cincinnati, OH

We welcome more creative arts opportunities for our students to grow socially, emotionally, and academically.

James N. Gamble Montessori High School (Gamble) embraces Montessori educational values that encourage the development of 21st century skills, including:

- Curiosity and Creativity
- Critical Thinking and Problem Solving
- Flexibility and Adaptability
- Leadership, Teaming, and Collaboration
- Independence, Initiative, and Self-Direction
- Prioritization, Productivity, and Accountability
- Personal and Social Responsibility

Located in the urban Cincinnati Public School District, the high school (9-12) and junior high school (7-8) share the campus that serves a total of 410 students.

After-school programs include cheerleading, athletics, science clubs, video game clubs, art club, student government, Key Club (Kiwanis Service), and Korean Club.

In this second year, approximately 30 students participated as actors, production crew (sets, sound, props, costumes) and by promoting the show; three teachers participated as director, music director, and choreographer).

Gamble presented *Annie JR.*, a 60-minute musical that explores depression era themes of finding optimism, hope and a better life, in the face of unemployment and homelessness.

Parents at Gamble helped build the set, gather show materials, and choreograph the show. They also sold tickets, distributed programs, helped students learn their lines and music, and promoted the show.

In addition to in-school performances, the cast performed two songs from the play, “NYC” and “You’re Never Fully Dressed Without a Smile” at the JumpStart Theatre Showcase, with the three other participating research schools, at the Aronoff Center for the Arts in Cincinnati.
Holmes Middle School, Covington, KY

We are always looking for ways to engage students in their learning so that they make the positive connections with adults and peers necessary to be successful. The demographics of our school (91% free and reduced priced lunch) often preclude many of our students from having enriching learning experiences outside of our school walls. Our goal is to give our students all the experiences and opportunities that many of their more affluent peers have access to - helping them unlock the promise of their potential. The JumpStart Theatre program would help us give our students a chance to feel that they belong, experience success, and showcase talents that may not always be evident in the traditional classroom setting.

Holmes Middle School is part of the Covington Independent Public Schools, the largest independent school district in the state of Kentucky. Holmes Middle (6-8) shares its campus with Holmes High School (9-12) on the site of the oldest public school in Kentucky, built in 1853. Holmes Middle serves a total of 716 students.

The Community Learning Center at Holmes provides before- and after-school opportunities (academic enrichment, youth development, and family and community engagement), including Art Club, Dance Troupe, and Glee Club. JumpStart is the middle school’s first after-school drama program.

Approximately 40 students participated as actors, production crew (sets, sound, props, costumes) and by promoting the show; three teachers participated as director, music director, and choreographer).

Holmes presented School House Rock Live! JR., a 60-minute production.

Parents at Holmes made costumes, found props, and established a partnership with Twenhofel Middle School to exchange resources. They also sold tickets, distributed programs, helped students learn their lines and music, and promoted the show.

In addition to in-school performances, the cast performed two songs from the play, “Just a Bill” and “Conjunction Junction” at the JumpStart Theatre Showcase, held at the Aronoff Center for the Arts in Cincinnati with the three other participating schools.
Felicity-Franklin Middle School, Felicity, OH

Felicity-Franklin Middle School, herein known as “Felicity,” responded to the 2016 “All Call” for applications to JumpStart Theatre. From the start, they were notably enthusiastic; the principal and three teachers attended the interviews, which was uncommon with other school applicants. JumpStart Theatre recognized the importance of administrative buy-in and added Felicity to the study in the second year of implementation.

Felicity-Franklin Middle School (grades 5-8) is located in the village of Felicity, Ohio in Southeast Clermont County, 35 miles east of Cincinnati. The population of the village is under 1,000 residents. The school serves 281 students housed in a K-12 building. The school is similar to the other schools in the study in relation to school day structure and the fact that this is its first year with middle school theatre. It is also distinctly different from the other JumpStart Theatre Program schools in that it is located in a rural setting with an entirely Caucasian student body.

Unemployment in Franklin Township is among the highest in Ohio with the principle industry being agriculture. Furthermore, Clermont County—where Felicity is located—had nearly 100 fatal drug overdoses in 2015, one of the highest rates in the state. As a result, many students in Felicity are cared for by secondary providers—grandparents, aunts, and friends of parents who have either died from, or who are struggling with, drug addiction. Despite these community hardships, there is a strong sense of community and caring for the students with a well-known principal who is native to the area.

The mission at Felicity-Franklin Middle School is to ensure:
• Success in acquiring academic skills;
• Teamwork with students, parents, school personnel, and community;
• Ambition toward achievement of academic and personal goals; and
• Respect for ourselves, family, school, and community.

The school offers extracurricular sports activities including volleyball, soccer, tennis, track, softball and baseball. It also offers choir. JumpStart Theatre is the school’s first theatre program. Approximately 50 students participated, with a majority cast in the production of Honk! JR. The students performed before a packed audience. Honk! JR. was a major event for the community and many families donated materials, painted sets, and helped make costumes.
1.2 School Selection Process
Educational Theatre Association opened applications for JumpStart Theatre in the fall of 2015. Schools were required to commit to the program for three consecutive years. Six schools applied; three were selected based on five indicators (on a scale of 1 – 4):

- Administrative Support
- Indicated Student Interest
- Confirmed Team
- Programmatic Needs
- Intangibles

Additionally, each school qualifies for Title I funds, which means that the school’s high percentage of low-income families makes it eligible for federal education funds, distributed through the states’ departments of education. For instance, at Gamble, 70% of the student population is eligible for the free or reduced priced lunch program.

Two research assistants (RAs) were recruited through University of Cincinnati and Northern Kentucky University to conduct observations and assist with Next Generation Creativity Survey administration to students. One RA continued from the first year of the study and the second was hired for the second and third year. CRoC trained both RAs (in person and via Skype) to carry out observations specific to the EdTA Evaluation Plan, developed collaboratively between CRoC and EdTA.

2. Evaluation Focus & Methods

In this second year evaluation report, the Centers for Research on Creativity (CRoC) examined the JumpStart Theatre Program’s impact on student, teacher, and school community creativity, attitudes towards theatre, and growth. More specifically, the research team aimed to gauge student self-efficacy, empathy, self-understanding, social skills, creative problem solving, and theatre knowledge, and to illuminate the ways in which teachers implemented and embodied the JumpStart Theatre Program throughout the production period.

CRoC researchers used several data generation methods, including student creativity assessments, teacher surveys, and professional development bootcamps, and rehearsal and performance observations, as tools to capture evidence of the hypothesized increase in creativity and growth. Each data generation method is detailed in the following sections.
2.1 Capturing Creativity through the Next Generation Creativity Survey (NGCS)

The research team used CRoC’s signature student creativity assessment, the Next Generation Creativity Survey (NGSC), to measure student creativity, problem solving, originality, self-efficacy, empathy, and dispositions to collaboration.

Before expanding upon the details of the NGCS’s design, it is essential to clarify CRoC’s approach to understanding human creativity. Conceptions and definitions of creativity, both stated and implied, range widely. Some scholars and authors, including Gardner (1993)¹ and Csikszentmihalyi (1996)² focus on extraordinary creativity – the production of masterworks of art, music, dance, or theater.

Others focus on inventions that impact the way we live and work on a global scale – the bread-slicing machine (1928), the hybrid car (2000), and the Swiffer mop (1996) as examples. While we may dream of producing a fresco for the front portico at New York’s Metropolitan Museum of Art, or of penning the next best-selling novel, these are not the types of invention we commonly find in school and after-school creativity programs.

The ideas that the JumpStart Theatre Program brings to creative education focus on smaller acts of invention, often known as ‘everyday creativity’ or ‘little’ or ‘mini c’ creativity, which are nonetheless skills and behaviors that fit common, general definitions, of creativity. These definitions focus on two qualities – creative processes that lead to ideas, or things, that (1) are new or novel, and (2) have value. Thus, a creative idea is an original or unusual idea that can be put to some use or purpose that has value to someone. Furthermore, the creative processes, in which learners experiment, explore, imagine, tinker, test, and take risks are often of equal or greater value than the resulting creative product.

CRoC often assesses for everyday creativity, and creative processes, behaviors and orientations using a variety of qualitative methods, like rehearsal and performance observations. To complement these qualitative process-oriented methods, CRoC employs the NGSC, a quantitative tool that captures learners’ creative orientations and problem solving abilities at a given moment in time. Thus, the survey contains questions that ask students to self-report their creative orientations and tasks that can be rated by human judges for their levels and types of creativity. The model below lists the variety of scales on the survey.

### 2.1.1 Next Generation Creativity Survey Model

<table>
<thead>
<tr>
<th>Self-Reported Creativity</th>
<th>Demonstrated Creativity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative Fluency</td>
<td>Creative Fluency</td>
</tr>
<tr>
<td>Originality</td>
<td>Originality</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Creativity in Drawing</td>
</tr>
<tr>
<td>Empathy</td>
<td></td>
</tr>
<tr>
<td>Creative Problem Solving</td>
<td></td>
</tr>
<tr>
<td>Creative Self-Efficacy</td>
<td></td>
</tr>
</tbody>
</table>

The NGCS is intended to measure creative skills and dispositions as well as supportive attitudes (e.g. collaboration and empathy) at the time when program students began their work in the JumpStart Theatre Program and then again after participating in their school’s musical production. Growth in scores between the pre- and post- administrations provides indications of the effects of programs on their participants.

With the NGCS, students have the opportunity to display creative thinking and creative behavior through tasks required by the survey. These tasks include speculating on what life would be like if a novel condition(s) prevailed, inferring what a character in a drawing might be thinking, and bringing evidence from the drawing to bear on that inference. Students are invited to make multiple speculations. The number they create can be thought of as creative fluency. Their tendency to be original contributes to their creativity scores.

Following Amabile's (1996) Consensual Assessment Model, we gather expert educators, including teaching artists, to make judgments about the creativity of student responses to these tasks. We also include a set of questions eliciting student self-reports of their own creative practices and orientations. This is a common feature of available creativity tests such as the Torrance Test of Creative Thinking Skills. We also include self-report scales probing the development of student attitudes and behaviors that are believed to be important ingredients in their success. These are measures of collaboration, empathy, creative self-efficacy beliefs, critical thinking, and creative problem solving. These elements align with what is known as the social psychology of creativity.

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2.1.2 NGCS Items and Scales

<table>
<thead>
<tr>
<th><strong>Self Reported Creativity</strong></th>
<th><strong>Definition</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative Fluency</td>
<td>e.g., agreement with the statement, “I find it easy to think of lots of ideas.”</td>
</tr>
<tr>
<td>Originality</td>
<td>e.g., agreement with the statement, “My ideas for solving problems are often unusual.”</td>
</tr>
<tr>
<td>Creative Problem Solving</td>
<td>Approaching problems by testing alternative solutions, without rushing to judgment and with a willingness to be wrong while speculating</td>
</tr>
<tr>
<td>Creative Self-Efficacy</td>
<td>e.g., agreement with the statement, “I can usually solve a difficult problem if given enough time.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Psychological States or Dispositions Supporting Creative Behavior</strong></th>
<th><strong>Definition</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration</td>
<td>e.g., agreement with the statement, “I like listening to the ideas of other students.” or, “I like to contribute to group projects.”</td>
</tr>
<tr>
<td>Empathy</td>
<td>e.g., agreement with the statement, “I can usually tell how someone else is feeling.” or, “I care about helping others who are having difficulties.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Demonstrated Creativity</strong></th>
<th><strong>Definition</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Drawings</td>
<td>Students compose a self-portrait of themselves designing or inventing something. Portraits are judged for creative details and originality.</td>
</tr>
<tr>
<td>Creative Fluency</td>
<td>Students are asked to list as many ideas as possible. The greater number of ideas a student produces in an allotted period of time, the higher her creative fluency.</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>This is evidenced as students present their ideas and opinions about what the featured, fictional animal is thinking.</td>
</tr>
</tbody>
</table>

**Note:** In this section of the survey, students respond to open-ended questions and prompts by writing their analyses and conclusions and by drawing themselves doing creative activities, such as inventing, designing, and solving problems.

2.1.3 NGCS Implementation

In the first year of the study, the 2015 – 2016 academic year, the CRoC research team administered a first cohort of pre/post-test NGCS to 150 students in the three original schools, Finneytown, Gamble and Holmes. Approximately half of the surveyed students participated in the JumpStart Theater Program and approximately half of the surveyed students served as a control group.

Treatment students were those involved in play productions at the three schools. Control students were surveyed from among non-participants at the three schools. The general
analytical design of the work was to compare post-scores to pre-scores and to report on gains that students made of various elements or dimensions of creativity.

In the 2016 – 2017 academic year, CRoC administered a second cohort of pre/post-test NGCS to students in the original three schools and to Felicity-Franklin Middle, the fourth school that joined in the second year of the study (SY2016-17). In this second year of study, a total of 152 surveys were “usable.” A usable survey is one that has both pre- and post-surveys completed, such that pre- and post-survey data align for each student. Seventy-five surveyed students participated in the JumpStart Theater Program and 77 surveyed students were in the control group.

Because students self-select to participate in the JumpStart Theater Program and some students may choose to participate in one year, but not the next, the NGCS is not tracked with students across years. Instead, each cohort serves as a snapshot of the program over the course of three years. In the final year of the study, general and recurring trends from all three cohorts’ performance on the NGCS will be reported.

2.2 Observations
To complement the quantitative data generated through the NGCS, CRoC used several types of observations as qualitative data collection methods. These methods serve as triangulation to the quantitative data and are detailed in the following sections.

2.2.1 Teacher Bootcamp Observations
Research Assistants (RAs) attended the January 2017 Bootcamp professional development training. iTheatrics and JumpStart Theatre teaching artists led the Bootcamp sessions, which successively prepared and coached teachers to create the world of the play and to present a complete production with music, sets, costumes, and props. RAs were trained to record their observations of the Bootcamp using a customized guide.

2.2.2 Rehearsal Observations
An RA attended between five and seven rehearsals at each of the schools at the beginning, middle, and end of the rehearsal process, using the guide to focus their observations. The work of Sheila Page\(^4\) was shared with each RA to deepen their understanding of the creative behaviors that they might observe.

2.2.3 Performance and Share-Out Observations
An RA attended one performance at each school, using the guide to focus their observations. Additionally, the RAs attended the group performance at the Aronoff Center for the Arts.

\(^4\)Creative Attributes Inventory, courtesy of Ms. Sheila Page, HM Inspector of Education, at Kirkcaldy, Scotland Ministry of Education)
2.3 Teacher & Teaching Artist Surveys

Finally to complement the quantitative data generated through the NGCS and the qualitative observations, CRoC used qualitative teacher and teaching artist surveys. These surveys further triangulate to the quantitative and qualitative data.

Twenty-two JumpStart Theatre teachers completed a paper pre-survey and two teaching artists completed a paper pre-survey. The surveys prompted teachers and teaching artists to reflect upon their expectations, hopes, and plans for the JumpStart experience.

Nine JumpStart Theatre teachers completed a post-survey delivered online via Survey Monkey. The survey prompted teachers to reflect upon their and their students’ learning, growth, and challenges during the JumpStart Theatre Program and musical theatre production.
3. Quantitative Evaluation Results: The NGCS

We now detail the data findings, starting with the quantitative results from the Next Generation Creativity Survey (NGCS), which shed light on student creative problem solving, empathy, collaboration, and more. First, we present the Year Two study sample size and results for all students from all four schools. Next, we present results for each of the four schools. Then, we feature a two-year overview of student performance on the NGCS in Year One and Year Two and synthesize the quantitative results.

The NGCS: Sample Size

CROC attained a sample of 75 treatment student surveys and 77 control surveys in all, for a total of 152 completed, matched (pre-/post-surveys). Treatment students were those involved in play productions at the four schools. Control students were selected from among non-participants at the four schools and given the same pre- and post-surveys as participants. The general analytical design of the work was to compare post-scores to pre-scores among students in the treatment and control group and to report on gains or losses that students made in various elements or dimensions of creativity.

<table>
<thead>
<tr>
<th># of Usable Surveys</th>
<th>Treatment Students</th>
<th>Control Students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Felicity</td>
<td>25</td>
<td>24</td>
<td>48</td>
</tr>
<tr>
<td>Finneytown</td>
<td>14</td>
<td>15</td>
<td>29</td>
</tr>
<tr>
<td>Gamble</td>
<td>19</td>
<td>18</td>
<td>37</td>
</tr>
<tr>
<td>Holmes</td>
<td>17</td>
<td>20</td>
<td>37</td>
</tr>
<tr>
<td>All EdTA</td>
<td>75</td>
<td>77</td>
<td>152</td>
</tr>
</tbody>
</table>

The following tables include averages of pre- and post-scale scores, which were analyzed to determine if there are statistically significant differences between students’ NGCS scores on the pre- and post-creativity scales. Each self-report scale, in which students reflect on their perceived creative problem solving, collaboration, empathy, creative self-efficacy, and creative fluency skills, ranges from 1 – 4. The demonstrated creativity elements of the survey are scored by trained survey scorers, and scores range from 0 – 3. Thus, all averages presented in the following tables fall within the 0 – 4 range, depending upon whether the question assesses elements of creativity through self-report questions or demonstrated creative tasks.

The ‘Gain' column indicates whether there is a statistically significant difference in the pre- and post-scores for each group. The final column highlights the scales in which treatment students outperformed the control students, regardless of gains or losses between pre- and post-surveys.
3.1 All Students: Year Two

Generally, in Year Two of the study, students who participated in the JumpStart Theater Program achieved higher NGCS scores than the control group students before and after participating in the program. However, JumpStart Theater students, en masse, did not show statistically significant gains in the NGCS over time. These findings are presented in Table 1.

![Table 1: Comparison of EDTA Treatment and Control Students’ Performance on NGCS Scales](image)

Table 1 illustrates that JumpStart students out-performed control group students in *creative problem solving, creative efficacy, collaboration, empathy, originality, creative fluency, and demonstrated creativity in inventing*, even without experiencing a significant growth in these areas over time before and after the JumpStart Theater Program. Meanwhile, control students showed significant gains in *creative efficacy* and *collaboration*, yet their post-scores were still notably lower than the treatment students’ post-scores in creative efficacy and collaboration.

3.2 Students by School: Year Two

Tables 2 – 5 show score changes for all four participating schools: Holmes, Finneytown, Felicity, and Gamble. We present each table below with a brief explanation of the trends.

Holmes’ EdTA students demonstrated significant gains in *creative problem solving and critical thinking*, while Holmes control students demonstrated significant gains in demonstrated *creativity in inventing and critical thinking*. Although Holmes students in each group experienced slight significant gains, generally, the treatment EdTA students out-performed
the control students in creative problem solving, creative self-efficacy, collaboration, empathy, originality, and creative fluency.

<table>
<thead>
<tr>
<th>Scale or Measure</th>
<th>EDTA</th>
<th>Gain?</th>
<th>CONTROL</th>
<th>Gain?</th>
<th>EDTA Out-performs Control Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 17</td>
<td></td>
<td>N = 20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creative Problem Solving</td>
<td>Pre 2.99</td>
<td>Post 3.21</td>
<td>x</td>
<td>Pre 2.81</td>
<td>Post 2.8</td>
</tr>
<tr>
<td>Creative Efficacy</td>
<td>3.28</td>
<td>3.35</td>
<td>2.93</td>
<td>2.87</td>
<td>XX</td>
</tr>
<tr>
<td>Collaboration</td>
<td>3.22</td>
<td>3.34</td>
<td>2.8</td>
<td>2.87</td>
<td>XX</td>
</tr>
<tr>
<td>Empathy</td>
<td>3.22</td>
<td>3.39</td>
<td>2.77</td>
<td>2.96</td>
<td>XX</td>
</tr>
<tr>
<td>Originality</td>
<td>3.25</td>
<td>3.19</td>
<td>2.8</td>
<td>2.74</td>
<td>XX</td>
</tr>
<tr>
<td>Creative Fluency</td>
<td>2.88</td>
<td>2.97</td>
<td>2.69</td>
<td>2.69</td>
<td>XX</td>
</tr>
<tr>
<td>Creativity in Inventing*</td>
<td>1.27</td>
<td>1.14</td>
<td>0.97</td>
<td>1.15</td>
<td>x</td>
</tr>
<tr>
<td>Critical Thinking*</td>
<td>1</td>
<td>1.2</td>
<td>0.95</td>
<td>1.15</td>
<td>x</td>
</tr>
</tbody>
</table>

* = demonstrated creativity; x = statistically significant gain; o = statistically significant loss; XX = Program Out-performs Control

Finneytown students in the treatment and control group performed similarly in the pre- and post-surveys. Of note, Finneytown control students experienced a significant gain in collaboration, while the EdTA students out-performed the control students in creative fluency.
Despite a significant decline in empathy, Felicity EdTA treatment students out-performed the control students on all scales: creative problem solving, creative self-efficacy, collaboration, empathy, originality, creative fluency, critical thinking, and creativity in inventing.
Gamble control students showed significant gains in *creative problem solving*, *creative self-efficacy* and *collaboration*. However, their gains only brought them to equivalent levels of the EdTA students. Gamble EdTA treatment students outperformed the control group in *collaboration*, *empathy*, *demonstrated critical thinking*, and *creativity in inventing*.

### 3.3 All Students: Year One & Year Two

Finally, we present a two-year glimpse of the ways in which EdTA students have outperformed control students, regardless of the time in which students took the survey in Table 6.

<table>
<thead>
<tr>
<th>SCALE OR MEASURE</th>
<th>EDTA</th>
<th>Gain?</th>
<th>CONTROL</th>
<th>Gain?</th>
<th>EDTA Out-performs Control Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 19</td>
<td></td>
<td>N = 18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creative Problem Solving</td>
<td>Pre 2.98</td>
<td>Post 2.93</td>
<td>Pre 2.63</td>
<td>Post 2.84</td>
<td>x</td>
</tr>
<tr>
<td>Creative Efficacy</td>
<td>3.2</td>
<td>3.05</td>
<td>2.74</td>
<td>2.98</td>
<td>x</td>
</tr>
<tr>
<td>Collaboration</td>
<td>3.1</td>
<td>3.21</td>
<td>2.64</td>
<td>3.03</td>
<td>x</td>
</tr>
<tr>
<td>Empathy</td>
<td>3</td>
<td>3.04</td>
<td>2.78</td>
<td>2.75</td>
<td>xx</td>
</tr>
<tr>
<td>Originality</td>
<td>3.35</td>
<td>3.11</td>
<td>o</td>
<td>3</td>
<td>3.1</td>
</tr>
<tr>
<td>Creative Fluency</td>
<td>2.92</td>
<td>2.89</td>
<td>2.81</td>
<td>2.97</td>
<td></td>
</tr>
<tr>
<td>Creativity in Inventing*</td>
<td>1.35</td>
<td>1.31</td>
<td>1</td>
<td>1.02</td>
<td>xx</td>
</tr>
<tr>
<td>Critical Thinking*</td>
<td>1.54</td>
<td>1.42</td>
<td>1.31</td>
<td>1.2</td>
<td>xx</td>
</tr>
</tbody>
</table>

* = demonstrated creativity  
  x = statistically significant gain; o = statistically significant loss

XX = Program Out-performs Control
Broadly speaking, EdTA students outperform the control students in all measures of creativity across schools and years even though they did not necessarily experience significant gains over time while participating in the JumpStart Theater Program. This result is fascinating, yet largely unsurprising. Students who opt to participate in the JumpStart Theater Program are likely to be attracted to creative expression and the arts out of personal interest. It could therefore be anticipated that those same students report more confidence in their creative self-perceptions prior to participating in JumpStart than their peers before or after the JumpStart Theatre Program. These same students may show generally higher demonstrated creativity scores, as well, because they have an interest in creative arts and/or have dedicated time to developing their creative skills through other extra-curricular activities in the arts at school, in their community or at home.

In short, students who choose to participate in the JumpStart program probably enjoy the creative arts and feel relatively confident in their own abilities, which is reflected in their NGSC self-report scores. Furthermore, these students may have sought out other creative arts opportunities in the past, which have further developed their creative abilities as demonstrated on the drawing/inventing and critical thinking portions of the NGCS.

Although the second year NGCS results do not show many significant gains for JumpStart students, in the first year of the JumpStart Theatre Schools project, treatment students outperformed control students in five of six self-reported creativity scales (all but collaboration) and in three key areas of demonstrated creativity we reported (critical thinking, and creativity in drawing/inventing). We are inclined to think that the more robust turnout of control student surveys last year brought evidence of reliable differences.

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* = demonstrated creativity
XX = Program Out-performs Control
between the program and control students. However, the consistent high scores for program students this year regardless of time stand in their own merit.

We are also not surprised that in the two years of the student, JumpStart treatment students have outperformed their peers in all areas of the NGCS. The qualitative data, presented in forthcoming sections of this report, support such findings and illustrate through observations from rehearsals and performances that JumpStart students show high levels of creative problem solving, collaboration, and empathy. Although the NGCS may not detect significant gains over time in the second year of study, the consistent high scores on the NGCS are supportive of the observations and suggest that JumpStart students who choose to engage in theatrical and creative performance are also relatively confident in their creative abilities.

Felicity-Franklin students at work on “Honk JR.”
As a final note on the quantitative analyses, it is important to note that results are very likely affected by the small sample sizes, ranging from 14 – 25 students. There is also a likely ‘spillover effect,’ in which control students are exposed to some elements or experiences that the treatment students experienced in JumpStart.

For example, control students may be friends with students in the treatment group and, thus, may watch a rehearsal; or they may hear about the benefits of the program, see the school buzzing with excitement, or be in a class with a teacher who also takes part in the JumpStart program and who has integrated some of the practices into everyday learning—all of which could affect their perceptions of themselves or their demonstrated creativity as captured on the NGCS. Therefore, we cannot explain gains for control students other than to say they may have had some beneficial experiences, which influenced the scores, in addition to the general unreliability of such small samples. Nonetheless, score gains are worth noting and may illustrate a meaningful positive change over time.

4. Qualitative Evaluation Results
In this second findings section, we present our qualitative analyses that provide further insight on the JumpStart Theatre Program’s impact on student, teacher, and school community creativity, attitudes towards theatre, and growth. These qualitative findings are gleaned from observation and teacher and teaching artist survey data. More specifically, in this section we use qualitative data to understand how the JumpStart Theatre professional development Bootcamps are translated into practice in school and the extent to which students, teachers, and school communities experienced growth in creativity, problem solving, resilience, collaboration, and a ‘sense of community’.

We start by presenting the philosophies promoted during the observed Bootcamp sessions and providing evidence of how those philosophies were brought to life in the JumpStart Theatre Program on a day-to-day basis. We then provide insights on teacher and student growth and the factors that appear to have enabled such growth through the JumpStart Theatre program.
4.1 Bootcamp Approaches, Learning, Philosophies, and Tools
The JumpStart Theatre Bootcamp trainings serve as one of the primary and most intensive professional development mechanisms to support teachers in implementing the JumpStart Theatre Program. The three training sessions are scheduled over a three-month period; the first session details musical theatre basics. The second, technical theatre elements; and the third, rehearsal techniques. After attending the Bootcamp all-day workshops, teachers are provided with ongoing support from Teaching Artists and EdTA to sustain the approaches, learning, philosophies and tools that are introduced and cultivated in each Bootcamp session. The Bootcamps provide relatively new theatre directors, choreographers, set designers, and leaders in the JumpStart Theatre Program with an initial critical and concentrated foundational period for professional growth and support. A strong Bootcamp session with practical, actionable, and experiential training is what makes the JumpStart Theatre Program possible in schools.

CRoC field researchers observed the Bootcamp sessions that took place in January 2017, early in the process of each school’s musical theatre production. These observations yielded insights about the prominent themes, philosophies, and approaches emphasized and embodied during the Bootcamp, which we present below. Several of the Bootcamp philosophies identified in this second year of study were consistent with themes identified in the first year of study. Recurring themes across years are indicated with an asterisk

1. Experiential Learning *
2. Practical Problem Solving
3. Practical Tools, Tips, and Tricks for Rehearsal *
4. “Tell the Story” *
5. Empowering Teachers and Building Community through Agency, Ownership, Mutual Respect, and Support
We elaborate upon each of these themes with examples from observational data.

4.1.1 Experiential Learning
As in the first year’s Bootcamp, teachers engaged in an experiential and participatory learning journey. As one teaching artist reflected in a Bootcamp survey, they sought to “empower students to be a part of the creative process guided by the directing team.”

Thus, teachers undertook warm-ups, activities, and rehearsal techniques that could and should be used with their students. Creating an experiential learning environment showed teachers “how to teach their students about musical theatre” by first having them “perform all of the activities” themselves (CROC Observer 3). The extent to which experiential learning appears to have been intentionally designed in the Bootcamp suggests that the EdTA Bootcamp Leaders know that when teachers experience the value of a teaching or learning approach, they tend to incorporate it into their own teaching practice. All three CROC field researchers noted the value and prominence of this participatory method in their observation notes:

Observer 1: “The leaders of this Bootcamp were PHENOMENAL about showing how to translate the exercises taught to the students. Instead of just teaching them these methods, they had them participate. They gave the teachers a real opportunity to feel the benefits of what they would teach their students, allowing them to feel that how effective these practices are is vital to ensuring they translate back to the students and are equally as effective.”

Observer 2: “The way that the teachers were guided to transfer these activities to their students was great. They all realized how beneficial the exercises would be. For example, they learned how allowing the students to take part in the costuming process would be beneficial to them owning their character, and really feeling like they had a hand in the process.”

4.1.2 Practical Problem Solving
One facet of teachers’ experiential learning included participating in activities that would prepare them to be resourceful, clear-headed, decision-makers when the inevitable myriad of challenges emerged during rehearsals and performances. CROC field researchers noted examples of these practical problem-solving activities:

“Another way [the Bootcamp Leader] taught them to manage or adapt their expectations was to introduce extra obstacles into their activities, making the teachers have to quickly adjust. When the teachers worked in groups to choose fabrics to represent the different characters in Seussical the Musical, [the Bootcamp Leader] told them they could use more than one fabric per character. A while into their planning process, he added that they could not use more than two fabrics per character, and all of the fabrics they pick for the different characters need to look like they all belong to the same show. Later when he asked the teachers to design their budgets for Aladdin, he told the teachers they had a budget of $3000, and as they got
further into the plans, he told them there were budget cuts so each group only got $2000."

These activities that prompted experiential and applied practical problem solving also provided a chance for teachers to consider how they could cultivate similar practical problem solving and resourcefulness amongst their students:

"Teachers considered set designs, to see how they could be overly extravagant, but in the end, they are even able to convey the set using only people, or one overall theme representation to create a set. They discussed how this would help the kids really understand that a story is being told through their actions and that not everything has to be an overly expensive set."

4.1.3 Practical Tools, Tips, and Tricks for Rehearsal
In addition, in an effort to “demystify tackling blocking, learning music or staging a production number" teachers were provided with practical, clear and codified planning and rehearsal tools, tips, and tricks to use as creative leaders and as teachers. For example, each teacher was given a hand-out that laid out a basic rehearsal schedule, a basic structure that had been tested repeatedly and was proven to be the most effective way to keep students' attention while supporting them to make the greatest possible growth in one rehearsal. Several CRoC field researchers also noted that this Bootcamp was particularly practical in comparison to previous JumpStart Theatre Bootcamp professional development trainings:

"While previous Bootcamps covered the importance of warm-ups, there was an increased focus on the overall structure recommended for rehearsals. [The Bootcamp Leader] went over the hand-out he gave them about structure, encouraged note-taking, and asked them to write down all of their resources as something to take back with them to their respective schools."

It seems that the Bootcamp Leader tried to make the Bootcamp as practically useful as possible for teachers, not only by providing hands-on materials for teachers to take with them after the Bootcamp, but also by prompting "teachers to say how and if each activity was something they could do with their students, so that any disconnect between the Bootcamp and their specific student programs could be addressed then, and so that the teachers could think about how each activity would benefit their individual students."

More specifically, many of the Bootcamp warm-ups used with teachers often connected to a prominent theme, skill, or expertise necessary when engaging in theatrical performance. For example, teachers were led through calming, meditative exercises in which they were encouraged to “slowly peel off their negative connotations and thoughts toward themselves” and instead embrace their assets, skills, and resources individually and as a community, as a means to reduce the stress that comes with producing and/or participating in a performance. Teachers were instructed that this same activity could be used with
students to cultivate a similar sense of calmness, agency and accomplishment, during particularly stressful moments of the production process.

4.1.4 “Tell the Story”
Consistent with the most prominent theme observed in the first year’s Bootcamp sessions, one of the most resonant themes in the second year Bootcamp was the idea of when in doubt, just “tell the story.” This concept was reiterated to first- and second-year Bootcamp teachers throughout the sessions as a means to simplify and de-stress the musical theatre process:

“[The Bootcamp Leader] told the teachers: “It always comes back to tell a story”, referencing an idea that he has brought up in every Bootcamp. At the end of the day, if the story has been told, then the teachers have done their jobs. In the first Bootcamp, this idea was used to explain that they don’t need to get complicated with their choreography or vocals, when the story can be told with levels, proximity, etc. to make the relationships and dynamics clear. The same idea was applied to showing how simple costumes and sets can convey a lot of meaning, and to show that the story can be told with just the words on the page if the sets and props they want are unavailable.”

“[The Bootcamp Leader] was sure to stress that regardless of budget, regardless of resources, regardless of space, the most simplistic set design can convey a story. [...] The main take away was, regardless of your budget, even the most basic of sets can help convey your story, but in the end, if the kids are telling their story and loving the experience, you are doing the right thing.”

Interestingly, in this second year Bootcamp, teachers were pushed to think beyond the initial mantra of “tell the story” to critically consider how certain theatrical elements can convey the story. One CRoC observer noted:

“[The Bootcamp Leader] asked the teachers what function of costumes in musicals was, they answered “to tell a story”, but he made them delve further and explain how it helps tell a story, until they answered that it puts you in a time period, or expresses mood and helps create a culture.”

It seems in this year the Bootcamp Leader wanted to make sure teachers truly internalized how they could simply and compellingly “tell the story” with limited resources and a healthy doses of thoughtfulness. The Bootcamp Leader brought the mantra to life and made it clear and useful by prompting teachers to consider how to apply and embody the mantra with their students, when making production and design decisions. This new approach to the age-old “tell the story” concept was a fresh way to explicitly transform an amorphous and over-simplified ‘theory’ and into actionable practice.
4.1.5 Empowering Teachers and Building Community through Agency, Ownership, Mutual Respect, and Support

Finally, this year’s Bootcamp training sessions had a strong emphasis on empowering teachers and building a sense of community. These two important outcomes were achieved by giving teachers a chance to develop their perceived sense of agency and ownership while cultivating mutual respect and support among Bootcamp Leaders and teachers. More practically, this was achieved through thoughtful, reflective dialogue and activities led by the Bootcamp Leader. For example:

“[The Bootcamp Leader] also made sure to seldom give the teachers the answers to why they did an activity or why it was important, and instead asked teachers what they noticed or learned from it, as a way of encouraging the teachers to think critically and have ownership over what they learned.”

“The teachers were asked to list a resource for each letter of the alphabet. The teachers were forced to think through all the people or organizations they had at their disposal to aide them in their process of producing a show. Most importantly though, [the Bootcamp Leader] stressed that they themselves, the teachers, were the greatest asset they had. They work tirelessly to produce this show and ensure that the students are getting what they need out of this, and most of the time, they overlook themselves as resources, when they in fact, are the main resource the show has. It was a great morale booster, as well as an innovative way to ensure the teachers knew they were not alone.”

In practice, teachers also discovered during the Bootcamp that they are each other’s best resources. When sharing what they planned to use from the Bootcamp in their own rehearsals and production process, teachers often listed ideas that came from other schools, not from the EdTA prescribed list of suggestions or activities. The Bootcamp Leader noticed this and praised teachers for adopting each other’s practices, like making a public, community checklist tracking progress on production elements, “because that idea came from the teachers at Gamble rather than from anything [The Bootcamp leader] taught them, and showed teachers that were learning from each other.”
4.2 Carry Over from the Bootcamp

The aforementioned themes, philosophies, and approaches that emerge in the Bootcamp are important stand-alone concepts that characterize a well-executed musical professional development. However, it is important to examine the extent to which teachers were able to translate the Bootcamp philosophies into actual JumpStart Theatre Program practice. If teachers are able to implement what they learned in the Bootcamp in their everyday theatre rehearsals and practice, we can be more confident that the growth in student and teacher performance, creativity, confidence, collaboration, resilience, and sense of community experienced during the period of study can be attributed to the JumpStart Theatre program. Thus, we now briefly review evidence from the data that indicate the extent to which teachers successfully enacted the Bootcamp learnings in their musical theatre rehearsals and production processes.

In summary and in contrast to Year One of the research study, teachers used the Bootcamp philosophies, approaches, and tools in the day-to-day JumpStart Theatre program regularly and consistently. This is a notable improvement from the first year, during which schools showed signs of Bootcamp philosophies ("tell the story" and "embrace improvisation" and "there are no right or wrong answers") but were inconsistent with daily warm-ups and debriefs, scheduling, keeping track of progress, and creating time for students to thoughtfully and creatively contribute to the show’s design and production.

In the second year of the study, teachers who participated in the program previously demonstrated improvements in their confidence, practice and preparedness, and ability to put the Bootcamp philosophies into action with their students. In short, teachers are improving their practice of orchestrating musical theatre productions. We now provide examples of data that indicates that teachers successfully brought the Bootcamp teachings to life in their JumpStart Theatre productions.

4.2.1 Agency and Ownership

In the Bootcamp, teachers engaged in tasks that fostered their agency and ownership as creative directors, producers and choreographers and in brainstorming activities that would cultivate similar agency and ownership in their students. This was explicitly addressed throughout the Bootcamp training:

“When asked how to then make the exercise realistic, one of the teachers from Gamble suggested that they do with their students what [the Bootcamp Leader] did with them - put limits on the students by giving them fewer choices. Another teacher suggests that they give the primary control over choosing a costume to the other students, and then give the individual student a choice of what to wear between three costumes the group selected for them.”

After experiencing their own agency and devising strategies to cultivate students’ agency, teachers were able to use those practices into the JumpStart Theatre rehearsals. Several
CRoC observers repeatedly noted the ways in which students had opportunities to have input in choreography, costumes, and set design:

“Students on the production team are also responsible for deciding the costumes for the show and for communicating this to the actors” [Gamble]

“When there wasn’t something specific she needed, she allowed the students to come up with their own creative interpretations” [Felicity]

CRoC observers were also clear to indicate that students’ opportunities for input were sincere and were not tokenistic. Student voices were seen as important resources to utilize during the production process. For example, tech students at one school had an entire rehearsal dedicated to brainstorming and planning design ideas with their teachers. After this session, students were supported to bring their brainstormed ideas to life in staging and set design. Because students could see their ideas being sought and valued by their teachers, and incorporated into the production, they had the chance to develop a true sense of agency and ownership. One CRoC observer noted this during a rehearsal observation at Finneytown:

“Things were not fitting into the song the way the teacher wanted them to, so they reworked the steps of the song to better fit the music. The kids were invited to give input on how to make the flow of the piece better suited to the selection. The invitation for the kids to be involved seemed to attune their focus, they felt involved therefore they were interested and invested in the outcome.”

Thus, teachers successfully integrated learning about the importance of agency and ownership into the JumpStart Theatre rehearsals and production.

4.2.2 Practical Tools, Tips, and Tricks for Rehearsal

Teachers also used many of the practical tools, tips, and tricks from the Bootcamp in day-to-day rehearsal. Unlike the first year of program, CRoC observers noted in this second year that warm-ups and breakdowns at the start and end of each rehearsal were used consistently across schools. Furthermore, these opening and closing activities often directly tied to the skills they needed in a rehearsal –such as paying close attention to one another for coordinated movements, which would be necessary in choreography rehearsals later in the day. Several schools used the “checklist” idea that Gamble shared at the Bootcamp as a means to track timelines and progress. Also, CRoC field observers noticed several technical performance techniques used throughout rehearsals like at Felicity in which students were tasked to improve their volume and diction through a targeted activity:

“Students had to repeat their lines at different volumes, speed, and articulations, trying to exemplify how the different aspects of using their voices makes a difference in the way the audience hears the story.”
This activity and technique, in addition to many warm-ups and breakdowns and other organizational tools and tips were mentioned explicitly at the Bootcamp and then clearly and consistently integrated into daily student rehearsals.

Additionally, at Finneytown, a teacher gave a couple of students the Bootcamp creative problem solving strategy, so that they could solve how to flatten Stanley in one scene and then how to transform him into a flattened character. The students built a contraption using what they could find, like wood for a frame and black cloth for a curtain. The contraption had a lever that lowered a lightweight board to flatten Stanley. Then Stanley slipped through a slit in the curtain of the contraption and miraculously reappeared as a flattened Stanley.

4.2.3 “Tell the Story”
EdTA’s “tell the story” mantra also was integrated regularly into daily JumpStart Theatre rehearsals. This philosophy is embedded into almost every decision a JumpStart Theatre teacher makes, from resourceful, low-cost set and costume design to setting a manageable rehearsal schedule leading up to the performance. However, a CRoC field observer noted an explicit example of how teachers brought the “tell the story” to life for the students in a normal rehearsal at Felicity:

“If a student was in la la land, the teachers stopped, got their attention, and ensured the student knew what was expected of them. They often tied it back to the warm-up where they asked the student to think about their situation where their character was in the scene and asked them to really portray how they would feel if they were in that specific situation.”

4.2.4 Building Community & Utilizing Community Resources
The sense of community and the notion that “we are our own best resources”, which were actively cultivated during the Bootcamp, were present and noticeable in the actual implementation of the JumpStart Theatre Program. Both CRoC observers and JumpStart Theatre teachers noted the growing sense of connection and the importance of utilizing all facets of a community to help the production succeed. As summarized by one teacher in a post-program survey:

Teacher 1: “It takes a village! Or at least a large support network.”

Through specific activities, teachers actively created opportunities for students to develop a sense of community. For example at Gamble a CRoC field observer noted:

“The rehearsals the teachers have been conducting this semester have been a great use of time. They have allowed the cast to explore […], build trust and communion as a group.”

Teachers also actively reached out to their communal resources, like parents who volunteered to create programs, costumes, and set or sell tickets, and to EdTA who provided ongoing technical and pedagogical support:
Teacher 5: “I kept in constant communication with my resources at EdTA, almost to an annoying point, I am certain! I am ever so grateful for the support and information available to use through this wonderful team of people. I will really consider this program one of the best experiences of my career.”

Some teachers expressed surprise and delight in their community’s willingness to support this endeavor, from parents, to principals, to students, to school custodians:

Teacher 4: “I was surprised by a parent who came and watched rehearsals several times which provided the students an audience.”

Teacher 5: “I was delighted by the kid’s excitement for this program. Not only the students in the cast and crew, but the student body were so enthusiastic to watch their friends perform. I was also very happy with the support from everyone in our district regarding the show. Our custodians were fantastic and worked hard to help our show be successful! I am always and forever grateful for all the hard work they put in. The students in our cast and crew were so fantastic and encouraging to each other.”

The palpable sense of community and support was also echoed in teacher surveys when they were asked about the degree to which they felt supported by the school community—including their co-JumpStart Theatre teachers, administration, parents, etc. Two-thirds of surveyed teachers expressed that they felt “somewhat to very” supported by their school communities. Several teachers elaborated upon this sentiment:

Teacher 5: “I was so happy with our community and their support. I knew they would love it, but didn’t imagine we’d have the turn out and help we received. I am so excited to continue working with this community!”

Teacher 8: “I did not have as much support from my team as I expected. They missed rehearsals and did not always follow through on things, leaving me to pick up the pieces.”

Teacher 7: “I felt like our communication about our resources (available funds, stage, rehearsal space) could have been improved. Our access to appropriate space was a major issue. I think we needed to have worked out a primary and auxiliary space prior to rehearsal beginning.”

Teacher 9: “I absolutely felt and appreciated the support from our school community and our parents. They were AMAZING!”

When asked about whether they felt supported by EdTA all of surveyed teachers expressed that they felt “somewhat to very” supported by EdTA. As summarized by one teacher:
Teacher 8: “I could not have produced the show without the training from EdTA. Our mentor was very supportive and had some really great suggestions. She also did a great job of realizing what pieces I was missing or not giving enough attention and alerting me before it was too late. For example, she suggested a costume parade sooner than I had planned which turned out to be a huge life saver.”

Finally, one teacher’s account of the JumpStart Theatre community demonstrates the impact and importance of this community on all who participate in the program, especially students.

Teacher 3: “One of our lead actor’s parents was battling cancer all year... and the parent was able to witness our opening night. Then a week later, that parent passed away. This 8th grade student never showed any signs of turmoil, was committed to the students and the production, and was a shining star throughout the performances. I know that this creative process and community was comforting to the student and an obvious outlet for dealing with all the stress of his family tragedy.”

In summary, as evidenced by the aforementioned data excerpts, JumpStart Theatre teachers consistently implemented a musical theatre production program that embodied the signature JumpStart Theatre Program philosophies and approaches. We therefore feel confident linking the observed teacher and student growth in creativity, collaboration, resilience, and community to the JumpStart Theatre program because the program was implemented according to the same philosophies and at the same quality as the Bootcamp.

4.3 Teacher Growth

We now document the teacher growth noted by JumpStart Theatre teachers in their pre- and post-program survey, followed by student growth in the subsequent section. After reviewing the qualitative data on teacher and student growth, we explore the factors that may have enabled teachers and students to experience growth in a variety of domains.

To summarize, teachers experienced a sense of growth and learning in the following ways:

1. Comfort with Creativity and Problem Solving
2. Sense of Community
3. Resilience
4. Theatre Expertise

We detail each area of growth in the following sections.
4.3.1 Comfort with Creative Limitations and Problem Solving
Teachers consistently expressed increasing comfort with the creative challenges and problem solving inherent in leading a musical theatre production with a tight budget and in a relatively inexperienced theatre community. This growth is especially of note especially because several teachers expressed anticipation and anxiety about “not knowing what to do” as a director and creative leader in an unfamiliar artistic domain.

Teacher 2 acknowledged struggling with the creative limitations (“It is a tough job. Having to completely come up with your own stuff fully can be challenging”), but also said that they felt their creative instincts were most activated when they decided to “just wing it and have the kids put in their ideas.” Other teachers also felt that their creative instincts were most ignited when they had to problem-solve or act creatively within tight limitations. For example, Teacher 1 said “designing the set with what we had” ignited their creative instincts while Teacher 4 said, “being given a scene and 15 minutes to stage it was fun and good practice.”

All of these responses suggest that although teachers were regularly challenged, they were not defeated by these challenges and instead became comfortable using such challenging moments and limitations to spark their creativity. This level of comfort and openness to creative limitations and challenges appears to have increased from the first year of the study.

4.3.2 Sense of Community
Teachers also demonstrated growth when reflecting upon their sense of community and support from their community. More specifically, teachers indicated that they realized that they could and should delegate to, and depend upon, their team members because their community members were valuable and reliable sources of support:

Teacher 5: “I learned I can depend on teachers in my community to help with many things surrounding the production of a musical. [...] I know for certain I will be delegating more jobs out next year. I see that I could step-in more in other areas such as learning elements of my script in more detail and sooner than I did this year.”

4.3.3 Resilience
Several teachers demonstrated a sense of rejuvenated resilience in their teacher survey reflections as a result of participating in the JumpStart Theatre Program, as evidenced in the following excerpts:

Teacher 1: “Anything is possible through persistence, determination and a positive attitude when you and your students and colleague all want to put in the work.”

Teacher 2: “I learned that whatever is thrown at you, you still have to push through. Also my students are capable of anything!”
4.3.4 Theatre Expertise

Finally, most teachers indicated that they experienced growth in their theatre expertise, from understanding how to schedule and plan a thorough production process, to improving their story telling, musical, set-design, and creative blocking abilities. Twelve out of twenty-two teachers indicated at the Bootcamp that they hoped to improve their technical production, choreography, set design, and general theatrical performance skills. Many of them reported that they successfully grew those skills in follow-up post-surveys:

Teacher 8: “There is a LOT more to it than you realize as a performer or patron. This year I learned about digging through the script and how important that is to the final product [and] helping the students develop their characters [brought out my most creative instincts].”

Teacher 5: “I learned that I can do more with a musical than I thought I’d be able to. [...] I found joy in directing the students. I have more ability in teaching students about stage interaction than I thought I would.”

Teacher 6: “Helping to create the set seemed to be my happy place. Now I know for future years. [and] I learned a lot about difference aspects of the creative process with making a play. I think I learned the most about blocking and helping students connect with their characters.”

Some teachers went so far as to use their theatre expertise in their normal classrooms:

Teacher 9: “I thought I had not dramatic talent at all, I was surprised to find during bootcamp that I wasn’t as bad as I thought. [...] I learned that many of the things done to prepare actors and actresses were things that could easily be implemented into my daily classroom routine. I even used many of the warm-ups to get my kids focused and ready for instruction.”

The evidence of perceived teacher growth through the JumpStart Program can be best supplemented with information on teachers’ reported likelihood of participating in the program in the future. Sixty-six percent of surveyed teachers indicated that they are “highly likely” and twenty-two percent of surveyed teachers indicated that they are “likely: to participate next year; meanwhile only, eleven percent (one teacher) indicated that they are unsure if they will participate in the program next year.

In summary, the teacher survey data indicates that, although the JumpStart Theatre Program is designed to support student growth, creativity, and collaboration, JumpStart teachers also benefit from participating in this program. Specifically, they experienced growth in their comfort with creative challenges and problem solving, sense of community, resilience, and theatre expertise. Perhaps best summarized by a JumpStart Theatre teacher:
Teacher 9: “This was probably by far one of the best professional development experiences I have had as a teacher and I have been around for a while. My first day was filled with why am I here and my last day left me feeling like why is this over.”

4.4 Student Growth
The qualitative data collected in observations and teacher surveys complement the quantitative findings on students’ growth in creativity, collaboration and more. Every teacher reflected delight, surprise, and pride in their students’ ability to exercise their creativity, persist, adapt, and thrive in times of tight schedules, limited materials, and general stress. CRoC observers also note particular moments of student creativity, resiliency, collaboration and more. We present our analyses with excerpts from the data according to the following domains in which students demonstrated growth:

1. Confidence
2. Creativity
3. Adaptation, Improvisation, and Resiliency
4. Ownership and Agency
5. Collaboration and Sense of Community

4.4.1 Confidence
Prior to participating in the program, over half of the 22 teachers indicated on their pre-surveys that they anticipated and hoped to build students’ confidence through the JumpStart program. Throughout the program and in post-surveys teachers and CRoC field researchers noted that students actually demonstrated increasing confidence throughout their participation in the JumpStart Theatre Program. One teacher in particular reported seeing tremendous growth in students’ throughout the program and also in the classroom:

Teacher 6: “Most students started out not wanting to truly perform, just wanting to say their lines. Eventually they took everything we taught them and became the characters.”

Teacher 6: “The best thing about doing this was to get to see students grow. It was amazing to see confidence grow on the stage and even in the classroom. Even my grade level team commented about one student and how much their confidence had grown in the classroom throughout this process.”

CRoC field observers also noted many instances in which they saw students’ confidence visibly grow during a JumpStart Theatre rehearsal. For example, an observer at Felicity noted:

“There was a student who was supposed to be a goose who seemed to be very nervous to take on his role. As he entered the stage to speak his lines, you could almost see his anxiety. However, he looked at one of his friends who smiled at him and gave him the
encouragement I suppose he needed and he changed his stance, made himself look like his arms were his wings, stuck out his neck and delivered his lines flawlessly. His efforts were applauded by the teachers and you could see the pride he gained from his success. Every time after that, whenever he entered the stage to say his line, he was at ease.”

It is worth noting that students’ confidence in performing—either in the production, rehearsals or normal school classes—increased during and after participating in a musical theatre program. This is an indication that, despite the challenges and resource constraints at each JumpStart Theatre school, students were in a warm, inclusive, and creative environment conducive for building confidence. In other words, the stress of the production did not impede students’ ability to feel greater value and self-worth throughout the program.

4.4.2 Creativity

Students also demonstrated growth in creativity while participating in the JumpStart Theatre program. Several teachers anticipated this growth in their pre-surveys and most teachers made note of their students’ creativity when reflecting in the post-program surveys. For example:

Teacher 3: “Just when you think you’ve seen it all the students impress and surprise you with their creativity and talent.”

Teacher 1: “[I was surprised by] how many great ideas my students had to problem solve and the fact that they had such creative vision on their own.”

CRoC field researchers also noted that students—especially the tech and set design students—were ‘given time to be creative’ and cultivate their creative abilities. At Finneytown, the tech team was very creative in the design of a dream sequence. They riffed with each other with ideas on how to add humor; draw connections to other themes in the show, etc.:

“In one scene, Stanley makes a wish. It notes in the script that the wish zooms by represented by a star to indicate the wish had gone by and was traveling to whoever it needs to in order for it to come true. There was so much variability in the students’ responses, everything from using the light and merely a cut out to using sparkly paper that would shimmer and move on a fly to more direct ideas like using a student dressed in a star costume with “Stanley’s Wish” written across their costume and running across the stage.”

Students at Gamble were also given the opportunity to flex and grow their creativity:

“In designing the nest, the kids were given cardboard, glue, and some shredded paper. They were having a lot of fun with it, filling in holes and creating the most realistic nest they could imagine. They didn’t have much direction, other than to make something worthy of the stage, and they did a good job.”
4.4.3 Ability to Adapt, Improvise, and Exercise Resilience

Teachers and CRoC observers noted that students demonstrated increased adaptation, improvisation and resiliency, too. Several teachers remarked that they were delighted by their students’ resilience and one teacher noted that students seem “far more resilient in the theatre setting than they are in the classroom.”

CRoC observers noted remarkable resilience in students, especially at Holmes where “overlapping schedules and a lack of planning space for activities is the norm.” Students and teachers at Holmes had to be adaptive, improvisational and resilient as they dealt with inconsistent rehearsal spaces (their auditorium went under emergency construction at the beginning of the theatre program). As they moved from rehearsal space to rehearsal space, “students had to get accustomed to their space, and be mindful of themselves on the stage. Some of the transitions they had rehearsed no longer worked because one side of the stage has more backstage space than the other, and they had to make adjustments.”

Once their normal rehearsal space was available, conflicting schedules often sent the students and teachers on the move again, but “without discussion or resistance, the teachers dutifully led the students outdoors while the tech crew moved the sound equipment. Once the cast reconvened on an outdoor walkway the teachers and students made the very best of their situation and managed a complete run through of the play.”

Apart from moving rehearsal spaces, students adapted to student and teacher absences, which required students to take on extra and unfamiliar roles during performances, to start and lead their own rehearsals without their director, or sing through full songs without accompaniment while sound systems malfunctioned. Regardless of the situation, students showed that they could persist, adapt, and even thrive and make progress on their production in almost any situation.

4.4.4 Ownership and Agency

Students also showed increasing ownership and agency of the musical theater production throughout the JumpStart Theatre process. Often, students demonstrated a greater sense of ownership as a result of a teacher inviting students into the creative process. For example, one teacher reflected:

Teacher 4: “I allowed the students to [freely] dance to music. I then their used moves in the dance. They were surprised and proud that it was their moves that were in the dance.”

Although teachers provided opportunities to cultivate students’ agency early in the process, soon students were exercising their agency and ownership independently. For example, at two schools:
Holmes: “The students asked to run scenes over when they didn’t get something the first time. Before the rehearsal officially started, several of the students on stage were practicing their entrances or choreography.”

Finneytown: “The kids got the opportunity to really work on their own choreography. One of the students took charge well and demonstrated how things were supposed to look and the rest of the kids followed. It was a nice interaction between the kids, they all wanted to work together because their peer was leading them.”

As highlighted in previous sections, moments that required students to be adaptive and resilient also provided opportunities for agency and ownership. At Finneytown, when teachers were unable to show up on time, students were left to own devices to start rehearsal during tech week. The students started, sang acapella until the light crew got caught up and ran through several of their scenes. As the CRoC observer noted, students “really took it upon themselves to get rehearsal going and it was great to watch them taking responsibility for their show.”

4.4.5 Collaboration and Sense of Community
Finally, students demonstrated strong collaboration skills and fostered a true sense of community within their JumpStart Theatre programs. Half of teachers expressed hope that their students would grow in this way in their pre-surveys and CRoC field observers noted examples of this collaboration and community in several schools:

Holmes: “There were a few students who came in late who didn’t understand how the warm-up worked. A few of the students immediately tried to help them, saying “we did this before, remember?” The students also helped each other follow along with the music and their scripts for those who were filling in or just didn’t know the song they were singing well. One student asked if she could be allowed to sing with another student who wasn’t as good at projecting as she was.”

Gamble: “At another point, when the teacher introduced new choreography, which she needed the students to do in unison without looking at each other. The students all turned to each other and started talking to coordinate.”

One CRoC observer spoke to two students during a rehearsal and they reflected on the JumpStart Theatre process, working with their peers, collaboration, and community:

“It’s really taught us about group work, and I think we learned a lot about helping. You have to be a team and make sure no one is left behind, sorta. This makes us see why if one of us is down, we all kind of are.”

The students’ sentiments were echoed in other moments throughout the musical theatre production, as when the students would regularly congratulate one another with a “that was great!” or clapping after finishing a scene, or when motivating their peers to persist and
improve. Two teachers’ reflections capture the students’ truly collaborative and supportive community:

Teacher 5: “One of our greatest challenges was getting our lead character to actually do the work and learn his lines [...] I was proud of the cast for encouraging and supporting him and saw on our Schoology app they wrote things to motivate him to make the effort. He pulled his act together at the last minute and actually did a great job.”

Teacher 8: “My favorite part of this whole experience this year was seeing how proud the kids were—especially when they performed for their peers. They really gave their best performance for their peers, which was a surprise and a delight. I’m always amazed at how theatre brings kids from different “groups” together and how it provides a “fit” for kids that don’t have one.”

To briefly summarize, the qualitative data reveals that students demonstrated growth in several key areas including confidence, creativity, collaboration, adaptation, improvisation, and resilience while participating in the JumpStart Theatre Program. We now aim to review the student and teacher growth and examine the factors that enabled such growth to occur.

### 4.5 Results Discussion: Factors that Enabled Student and Teacher Growth

To briefly review, students and teachers who participated in the second year of the JumpStart Theatre program experienced growth in:

1. Comfort with creative problem solving
2. Creativity
3. Collaboration
4. Sense of community
5. Adaptation and Improvisation
6. Resiliency
7. Theatre Expertise

While it is important to make note of these areas of growth as a measure of success, it is also worthwhile to ask why and how students and teachers experienced such growth while participating in the JumpStart Theatre Program. When analyzing the data, the CRoC research team made note of potentially influential factors that enabled student and teacher growth. We briefly present these factors below.

#### 4.5.1 Strong and Clearly Defined Teaching Teams

When the JumpStart Theatre teaching team had a predictable and reliable working dynamic, with clear roles and responsibilities, the theater process and production appeared to run particularly well. This smooth working environment may have been a powerful mechanism for teacher growth and general success. For example, at Gamble teachers realized after the
first year that they “needed to differentiate roles.” One teacher reported that, “this has made a big difference for us. I took on the responsibilities of the producer while the other two teachers became the choreographer and director.” These clear roles allowed teachers to specialize and focus in their area of interest without duplicating efforts and running into direct conflict over competing visions.

These clear roles and strong teaching teams also may have served as a mechanism for accountability. At some schools, teachers did not carry the same type of responsibility and usually one teacher had to carry the bulk of the work. This teacher often became stressed and disorganized, which may have prevented teacher growth, stunted the production’s progress, and limited student growth.

Therefore, it may be worthwhile to investigate how to support strong teaching teams with clearly defined roles. Investing in teachers’ productive collaboration and share responsibility could yield benefits for teachers and students.

4.5.2 Integrated Rehearsals
At Gamble, the JumpStart Theatre program was integrated into the daily curriculum in addition to the normal after-school rehearsals. Although school day rehearsals were relatively short in comparison to after-school classes, this integration provided more exposure to the musical material and time for students to practice, which may have enabled students to grow in their confidence, creativity, and sense of community and teachers in their theatre expertise.

Additionally, integrating the rehearsals into the school day at Gamble may have been a sign that the school community and administration greatly valued and supported the program, and are thus more likely to sustain the program in the future, allocate more funding towards the program or pose less resistance when it comes to scheduling, reserving rehearsal spaces, etc. In other words, integrating the program into the curriculum could provide immediate benefits and increases to student and teacher growth in confidence, theatre expertise, creativity, and collaboration—as well as long-term benefits such as greater community-buy-in and support sustainability for the program’s longevity and success.

4.5.3 Constant Feedback
Many of the rehearsal observers were members of the EdTA team and were able to provide feedback to teachers and students during and after the sessions. Additional suggestions documented in observations were also circulated back to teachers. This constant feedback loop between EdTA JumpStart Theatre experts and the on-the-ground teaching team and students may have enabled greater growth for both teachers and students. Regular feedback allows teachers to improve in their theatre expertise and implementation of the program as designed throughout the process instead of waiting to grow as practitioners until the next Bootcamp training. Regular feedback to students may also improve their performance, confidence, and understanding of musical theatre and how to tell a story through performance.
4.5.4 Warm-Ups: A Tool for Cultivating Creativity and Community
The daily rehearsal warm-ups appear to have been a tool for cultivating creativity, cohesion and community. Each school used the warm-ups (and often, breakdowns at the end of rehearsals, as well) as a way to welcome students together into the same mental and physical space and to build a sense of connection and team bonding. Thus, the warm-ups may have been a critical tool to fostering sense of community and collaboration amongst students.

These warm-ups also were usually connected to a particular skill or focus required in each rehearsal, which may have enabled students and teachers to strengthen their musical theatre expertise. Also, many warm-ups had creative and fun elements, which may have provided students with the chance to develop their creativity. Finally, students were regularly encouraged to choose or lead warm-ups, which may have enabled growth in confidence and in agency and ownership.

4.5.5 Support from the Community
The support of the internal school and immediate surrounding community (parents, administration, non-JumpStart Theatre teachers and students) was likely a strong factor that enabled student and teacher growth. In schools where the community was less supportive, students and teachers appear to have struggled with regular attendance, commitment, scheduling and spaces, which probably affected the degree to which students and teachers benefited from the program. As one teacher stated in a post-program survey:

Teacher 4: “I learned that a student’s ability to meet the commitment required to be a part of a cast is dependent upon his or her parent’s priorities. What I could not fix was the disappointment of a student when the parent requires the child to watch siblings instead of participating in the play.”

That said, schools that may have had more constraints or less support might have benefited from developing greater comfort with creative problem solving and general creativity, resilience, adaptation, and improvisation.

Schools with very supportive communities, in which parents were regularly involved—attending rehearsals on a regular basis so that students would have an audience member to watch, designing practical sets, costumes, and programs, and running ticket sales—and principals allowed the program to be integrated into the curriculum, and non-JumpStart Theatre teachers and students were enthusiastic likely saw greater growth in sense of community, collaboration, and confidence among students and teachers.

It is important to note that regardless of the type or extent of community support, teachers and students benefited and grew. However, they may have grown in different ways and in different dimensions as a result of the type of community support.
4.5.6 Guided Structure with Room for Creativity

The qualitative data suggests that when teachers provided a sense of guided structure that still had plenty of room for creativity, students and teachers were able to grow alongside each other.

In the Bootcamp, teachers were often given a base level of support and structure from calm, confident Bootcamp Leaders, which let teachers feel confident in the production ideas and tools and empowered to use such tools. However, there was still enough flexibility and space for creative adaptation and interpretation through discussions of how teachers may use such tools and approaches in their own schools. **This balance of guidance and structure with openness towards creative interpretation likely fostered teachers’ agency and ownership over the tools and practices and more generally.**

Similarly, observation data reveal that **students often needed the guidance or confidence from their teachers in order to feel confident taking risks.** The only time that rehearsals became chaotic in schools was when teachers were frazzled, uncertain, and lacked direction or a calm confidence. Whereas rehearsals led by more calmly confident teachers often struck the ideal balance of structure and space for creativity. In such rehearsals, students were not limited by rigid direction from teachers; rather, students had enough guidance from teachers so that they could feel assured by their teachers’ support and general direction, while also feeling empowered, invited to contribute their creative ideas, and participate as equal and valued members of the creative learning community. The impact of teachers guiding and supporting students to feel empowered and embrace their creativity is evidenced in a few excerpts from rehearsal observations:

“In the scene they were working on one of the students portrays a know-it-all type reporter and the teachers helped him understand that he had the freedom to be loud and obnoxious, that it would really help him convey the story. Once he had some direction, the student really took off and seemed to really grasp his character.”

“The teachers let the students bring their own flair to their characters, and it was wonderful to see them guide but not demand.”

“The teacher does a good job of giving the students ownership over the show. The rehearsal could run more smoothly if she (and all of the teachers) had a clearer idea of what she wanted to give them, in regards to blocking and choreography. The energy seemed to leave the room and the students lost focus a little bit near the end of the rehearsal when the teacher hit a mental block.”

Guided structure with room for creativity seems to depend upon an assured and thoughtful teacher or leader. Such confidence and ease is also typically a result of years of experience and expertise. It therefore may be unreasonable to expect JumpStart Theatre teachers to exude this calm confidence after only participating in the program for two years or less and having minimal musical theatre experience. However, such calm confident leadership may
also come from comfort with “not knowing” and with improvisational exploration and the creative learning process. As previously discussed, the JumpStart Theatre Program may have cultivated this comfort in many teachers, thus making it easier to provide students with the ideal environment in which to cultivate their agency, ownership, confidence and creativity.

4.5.7 Co-creation Among Students and Teachers

Finally, cultivating an environment conducive to co-creation—equal participation in a creative and iterative process—among students and teachers may also have been an influential factor in student and teacher growth. Throughout the rehearsals, CRoC observers regularly noted moments in which students and teachers appeared to engage in a creative dialogue, in which they designed choreography, blocking, or sets together through respectful, curious, and equal conversation and experimentation. For example at Gamble:

“The teacher came across a moment in the song that didn’t have any assigned choreography and told the students to act like they were talking to or playing with friends, but that she didn’t have any direction beyond that. She further asked them to play with possibilities and use their imaginations later in the song.”

The teacher then integrated the students dance movements into the choreography. Several teachers reported taking delight in this co-creative process during and after the program:

Teacher 9: “[My most creative instinct was sparked by] just watching the kids and allowing them to ‘fill the gaps’ as needed, watching their creative juice flow enhance my thinking and made me go home thinking of things to implement in my classroom or in the play.”

“One of our students is a dance enthusiast and wants to help choreograph some so we will hopefully work with some of her ideas.” – Reflection from a teacher mid-way through the program

In these moments, the teacher sets off initially guiding or prompting the students. But then once students start participating, the creative process becomes a conversation. Teachers start to respond to students’ ideas and inputs and the outcome is truly co-creative and a result of a reciprocal dynamic between teacher and student. This respectful and reciprocal co-creation is evidenced in another example in which a teacher was choreographing with a student and half-way through the student said, “I don’t know what you want here.” The teacher responded “and that’s okay” then they talked about it and came to a compromise in which the issue was resolved collaboratively and co-creatively.

This co-creative process is one that inherently cultivates a sense of community among students and teachers, through collaboration, confidence, agency, and improvisation. Thus, this particular dynamic is likely to be a strong factor in enabling student and teacher growth in the JumpStart Theatre Program.
5. Second Year Conclusions and Recommendations

To summarize, the second-year evaluation of EdTA’s JumpStart Theatre Program reveals positive gains and growth for teachers and students who participated in the program. Specifically, veteran teachers demonstrated increased comfort with creativity and problem solving, sense of community, resilience, and theatre expertise. Students demonstrated growth in their self-beliefs about creativity and collaboration, in their ability to generate multiple creative ideas, and in their confidence, ability to adapt, improvise and exercise resiliency, in their ownership and agency in the production, and in their peer collaboration and sense of community.

The research team feels particularly heartened by the noted growth because evidence from the implementation data indicate that the JumpStart Theatre intervention was implemented at a high quality level among all participating schools; teachers used tools, techniques, and activities from the JumpStart Theatre Bootcamp training and embodied the Bootcamp philosophies of “telling the story,” experiential learning, creative problem solving, and building a cohesive, resilient, and resourceful community through a collective creative endeavor. Thus, the noted improvements are likely a true result of the JumpStart Theatre program.

Additionally, the data illuminated several potential reasons why teachers and students experienced tangible, positive gains while participating in the program. It appears that the balance of guidance and structure with openness towards creative experimentation and problem solving cultivated a learning environment in which students and teachers could co-create with and alongside of each other. Furthermore, the Bootcamp philosophies and techniques were useful tools that helped schools to adapt, persist, and improvise, especially in times of time and resource constraints, and succeed despite the odds. Perhaps the spirit of the JumpStart Theatre Program and the noted growth in the second year of the evaluation can be best captured in an observation note from Finneytown’s dress rehearsal:

“Without having the final four songs blocked, the students had tons of time to work their own thoughts into the show. It was wonderful to see them working so hard to get their pieces together and to see their own creative ideas come to life. The kids seemed to appreciate that they had such a big part in the scene. They took a rather stressful situation, stayed focused, and they made it a decently calm situation.”
We now present a brief list of ten recommendations for the future based upon the second year of evaluation:

1. **Continue to Build Upon Trained Teacher Experience.** Teachers who have participated in Bootcamp training can return as alumnae to the Bootcamp for refresher courses, advanced training also to share experiences and be a resource for new teachers.

2. **Support Strong and Clearly Defined Teaching Teams.** The JumpStart Theatre schools that had a strong teaching team with well-defined roles appear to have had the most productive collaboration and strongest rehearsal sessions. We therefore recommend that EdTA consider ways to encourage teaching teams to clearly define and delegate their roles amongst each other. Investing in teachers’ productive collaboration and share responsibility could yield benefits for teachers and students.

3. **Include Select Students in Bootcamps.** During the technical training day at the Bootcamp one student from each school who is interested in stage management could be invited to participate in the training. The teacher who is in charge of the backstage crew would then have a trained technical assistant.

4. **Require Rehearsal Spaces.** In the application process, JumpStart Theatre may want to require a rehearsal space specifically designated for JumpStart Theatre activities, in which the time slot and space reserved for JumpStart Theatre and is put on the school calendar. It may be worthwhile to require that a back up arrangement is planned for unexpected interruptions.

5. **Coordinate Ideal Scheduling.** EdTA may want to work with JumpStart Theatre schools so that the school administrator in charge of calendar and scheduling coordinates with JumpStart Theatre teachers.

6. **Continue to Provide Constant Feedback.** EdTA observers provided regular feedback to students and teachers during rehearsal observations. This immediate and constant feedback loop is a valuable resource for teachers and students and may enable ongoing growth and improvement in all domains of the performance.

7. **Cultivate an Environment Conducive to Co-Creation.** It appears that some of the greatest moments of growth among students and teachers in collaboration, creativity, and sense of community, were as a result of the co-creative approach to designing and producing a musical performance. This process is one that inherently cultivates a sense of community among students and teachers through creativity, collaboration, confidence, agency, and improvisation. Thus, this particular dynamic is likely to be a strong factor in enabling JumpStart Theatre’s student and teacher growth.
8. **Integrate into the School Curriculum.** As evidenced in Gamble this year, integrating the program’s theme into the school day curriculum is a beneficial practice for students and teachers and for building school community and pride. We therefore recommend that JumpStart Theatre teachers meet with content teachers, music, dance, band, choir, and art to establish curricular connections with subject areas and transfer skills.

9. **Include Parents.** We recommend inviting parents to be involved starting at the beginning of the year and presenting everything they need to know ie: rehearsals, schedules, and a list of benefits of being in a theater program for their child. Community engagement, especially from parents, appears to play an important role in students’ growth, building community, and ensuring the musical’s success.

10. **Formally Interview More Students.** CRoC will develop a strategy so that Research Assistants can interview more students during rehearsals to gather their JumpStart Theatre experience.
End of Report
Capturing Student and Teacher Creative Growth through the
After-School JumpStart Theatre Program
Cincinnati, Ohio • Felicity, Ohio • Covington, Kentucky

Educational Theatre Association

Year Three and Final Report
August 2018

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*The CRoC team extends a note of appreciation to Jim Palmarini, the leadership and staff, administrators, teaching artists, teachers, students, and everyone who welcomed our presence as we documented the JumpStart Theatre Program.*


Front Cover Photo: Joyful students perform at the JumpStart Theatre Performance Showcase.
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1. Introduction
The Educational Theatre Association (EdTA), based in Cincinnati, Ohio is a national nonprofit organization with approximately 100,000 student and professional members. EdTA’s mission is to shape lives through theatre education by honoring student achievement in theatre and enriching their theatre education experience; providing professional development for teachers, including networking opportunities, resources, and recognition; and influencing public opinion that theatre education is essential and builds life skills.

In 2015, in collaboration with New York City-based companies, iTheatrics and Music Theatre International (MTI), EdTA initiated the JumpStart Theatre Program in Ohio and Kentucky. The three-year scalable, pilot program is designed to build sustainable musical theatre programs where, previously, there were none. JumpStart Theatre is modeled after the successful Broadway Junior Musical Theatre Program, founded in 2005, by the Shubert Foundation, iTheatrics, and Music Theatre International, in collaboration with the New York City Department of Education. In Cincinnati, four iTheatrics teaching artists delivered the program – Marty Johnston, Susan Fuller, Cindy Ripley and Steven Kennedy. EdTA teaching artist program mentors Dee Anne Bryll and Becca Kloha Strand contributed to the delivery of the program.

EdTA contracted with the Centers for Research on Creativity (CRoC) based in Los Angeles, California to assess the impact of the JumpStart Theatre Program on the student, teacher, and school community’s growth in creativity while participating in a middle school musical theatre program. This report describes CRoC’s evaluation findings of:

1) the third year of implementation of JumpStart Theatre in four public schools in Ohio and Kentucky, and
2) the holistic three-year project period.

EdTA selected the schools from a competitive application process. These schools agreed to present the program at their school for three academic years (SY 2015-16 through SY 2017-18).

1.1 JumpStart Theatre Schools
Each school stated their goals or hopes in offering the JumpStart Theatre Program to their students and teachers. These goals are offset as italicized, boxed text.
Felicity Franklin students with their musical director in dress rehearsal for The Music Man JR.

Felicity-Franklin Middle School, Felicity, OH

[We hoped that that] this program would help our community recognize what our students are capable of when given a chance. At one time, our school had an active Boys and Girls Club, which provided a place for students to go after school and during the summer. Unfortunately, the club was closed and many of our students walk the streets of town, since there isn’t much else to do. I believe an experience such as this would be something students could get excited about. It could change the way some kids actually see themselves and also let the community see what our kids are capable of accomplishing.

Felicity-Franklin Middle School, herein known as “Felicity,” participated in Year Two and Year Three of the study, beginning with their response to the 2016 “All Call” for applications to JumpStart Theatre.

From the start, school leaders were notably enthusiastic. The principal and three teachers attended the interviews, which was uncommon with other school applicants. JumpStart Theatre recognized the importance of administrative buy-in and added Felicity to the study in the second year of implementation.
Felicity-Franklin Middle School (grades 5-8) is located in the village of Felicity, Ohio in Southeast Clermont County, 35 miles east of Cincinnati. The population of the village is under 1,000 residents. The school serves 281 students housed in a K-12 building. The school is similar to the other schools in the study in relation to school day structure and the fact that this is its first year with middle school theatre. Yet, it is distinctly different from the other JumpStart Theatre Program schools in that it is located in a rural setting with an entirely Caucasian student body.

Unemployment in Franklin Township is among the highest in Ohio with the principle industry being agriculture. Furthermore, Clermont County—where Felicity is located—had nearly 100 fatal drug overdoses in 2015, one of the highest rates in the state. As a result, many students in Felicity are cared for by secondary providers—grandparents, aunts, and friends of parents who have either died from, or who are struggling with, drug addiction. Despite these hardships, there is a strong sense of community and caring for the students, led by a well-known principal who is native to the area.

The mission at Felicity-Franklin Middle School is to ensure:
- Success in acquiring academic skills;
- Teamwork with students, parents, school personnel, and community;
- Ambition toward achievement of academic and personal goals; and
- Respect for ourselves, family, school, and community.

The school offers extracurricular sports activities including volleyball, soccer, tennis, track, softball, and baseball, and choir.

JumpStart Theatre is the school’s first theatre program. In this second year of the school’s participation, the selected play was *The Music Man JR*. Sixty students participated on stage and on the crew this year and three volunteers assisted the production. The students performed to an audience of 350 community members. The performances were a major event for the community, raising close to $2,000, the highest amount in ticket sales of the schools in the study. Many families donated materials, painted sets, and helped make costumes.

In addition to in-school performances, the cast performed the song from the play, “Wells Fargo Wagon” at the JumpStart Theatre Showcase, held at the Anderson Theater in Memorial Hall, a 556-seat theatre built in 1906 in the Beaux Art style.
Finneytown students perform Seussical JR.

Finneytown Middle School, Cincinnati, OH

The goal of [JumpStart Theatre] is to provide training that inspires creative thinking, self-confidence, effective communication skills, fluid movement, and voice control. Having the JumpStart Theatre program will assist in enhancing our academic programs and provide a creative outlet for our students where none currently exists.

Located in the urban–suburban Finneytown Local School District, Finneytown Secondary Campus includes both high and middle schools that serve a total of 700 students. The schools share a well-appointed theatre, the William R. Swartzel Performing Arts Center.

After-school activities for middle school students are: academic support, craft club, student council, athletics, community service, and marching band. Art program offerings are: band, choir, orchestra, general music, and general arts education.

In this third year of the program, Finneytown presented Seussical JR. a 60-minute song filled celebration of the powers of friendship, loyalty, family, and community. Thirty students participated as actors, production crew (sets, sound, props, costumes) and by promoting the show; three teachers participated as director, music director, and choreographer. Forty volunteers assisted the production, and 876 people attended a school performance.
In general, EdTA staff observed or heard teachers mention parents/volunteers helping sell tickets, distribute programs, sell concessions, build sets, build costumes, collect props, providing snacks, helping students memorize their lines, supervise backstage, assisting students with hair/makeup.

In addition to in-school performances, the cast performed the song “Oh, The Thinks You Can Think!” from the play at the JumpStart Theatre Showcase, held at the Anderson Theater in Memorial Hall, a 556-seat theatre built in 1906 in the Beaux Art style.
James N. Gamble Montessori High School, Cincinnati, OH

We welcome more creative arts opportunities for our students to grow socially, emotionally, and academically.

James N. Gamble Montessori High School (Gamble) embraces Montessori educational values that encourage the development of 21st century skills, including:

- Curiosity and Creativity
- Critical Thinking and Problem Solving
- Flexibility and Adaptability
- Leadership, Teaming, and Collaboration
- Independence, Initiative, and Self-Direction
- Prioritization, Productivity, and Accountability
- Personal and Social Responsibility

Located in the urban Cincinnati Public School District, the high school (9-12) and junior high school (7-8) share the campus that serves a total of 410 students.

After-school programs include cheerleading, athletics, science clubs, video game clubs, art club, student government, Key Club (Kiwanis Service), and Korean Club.
In this third year of the program, 31 students participated as actors, production crew (sets, sound, props, costumes) and by promoting the show; three teachers participated as director, music director, and choreographer). Seven volunteers assisted the production and 550 audience members attended a performance.

Gamble presented *Into The Woods JR.*, a 60-minute musical retelling of classic Brothers Grimm fairy tales *Cinderella, Jack and the Beanstalk*, and *Little Red Riding Hood*.

In general, EdTA staff observed or heard teachers mention parents/volunteers helping sell tickets, distribute programs, sell concessions, build sets, build costumes, collect props, providing snacks, helping students memorize their lines, supervise backstage, assisting students with hair/makeup.

In addition to in-school performances, the cast performed the song “Ever After” from the play at the JumpStart Theatre Showcase, held at the Anderson Theater in Memorial Hall, a 556-seat theatre built in 1906 in the Beaux Art style.
Holmes Middle School students on their school stage performing *The Little Mermaid JR.*

**Holmes Middle School**, Covington, KY

We are always looking for ways to engage students in their learning so that they make the positive connections with adults and peers necessary to be successful. The demographics of our school (91% free and reduced priced lunch) often preclude many of our students from having enriching learning experiences outside of our school walls. Our goal is to give our students all the experiences and opportunities that many of their more affluent peers have access to - helping them unlock the promise of their potential. The JumpStart Theatre program would help us give our students a chance to feel that they belong, experience success, and showcase talents that may not always be evident in the traditional classroom setting.

Holmes Middle School is part of the Covington Independent Public Schools, the largest independent school district in the state of Kentucky. Holmes Middle (6-8) shares its campus with Holmes High School (9-12) on the site of the oldest public school in Kentucky, built in 1853. Holmes Middle serves a total of 716 students.

The Community Learning Center at Holmes provides before- and after-school opportunities (academic enrichment, youth development, and family and community engagement), including Art Club, Dance Troupe, and Glee Club. JumpStart Theatre is the middle school’s first after-school drama program.
Approximately 35 students participated as actors, production crew (sets, sound, props, costumes) and by promoting the show; three teachers participated as director, music director, and choreographer).

Holmes presented *The Little Mermaid JR.*, a 60-minute production.

In general, EdTA staff observed or heard teachers mention parents/volunteers helping sell tickets, distribute programs, sell concessions, build sets, build costumes, collect props, providing snacks, helping students memorize their lines, supervise backstage, assisting students with hair/makeup.

In addition to in-school performances, the cast performed the song from the play, “Kiss The Girl” at the JumpStart Theatre Showcase, held at the Anderson Theater in Memorial Hall, a 556-seat theatre built in 1906 in the Beaux Art style.
1.2 School Selection Process

Educational Theatre Association opened applications for JumpStart Theatre in the fall of 2015. Schools were required to commit to the program for three consecutive years. Six schools applied; three were selected based on five indicators (on a scale of 1 – 4):

- Administrative Support
- Indicated Student Interest
- Confirmed Team
- Programmatic Needs
- Intangibles

Felicity-Franklin Middle School applied and was selected in 2016, the second year of the study.

Each school qualifies for Title I funds, which means that the school’s high percentage of low-income families makes it eligible for federal education funds, distributed through the states’ departments of education. For instance, at Gamble, 70% of the student population is eligible for the free or reduced priced lunch program.

Two research assistants (RA1 and RA2) were recruited through University of Cincinnati and Northern Kentucky University to conduct observations and assist with administering the Next Generation Creativity Survey to students. RA1 discontinued working with the study after the first year. RA2 continued for the second and third year. CRoC trained both RAs (in person and via Skype) to carry out observations specific to the EdTA Evaluation Plan, developed collaboratively between CRoC and EdTA.

In the third year, RA3 was recruited from Northern Kentucky University. She began working on the JumpStart Theatre study while a full time student pursuing a degree in psychology with a minor in neuroscience and a focus in music. She then graduated and accepted a position with the Veterans Administration in Cincinnati and continued with the study. CRoC trained RA3 (in person and via Skype) to carry out observations specific to the EdTA Evaluation Plan.

RA3 displayed a deep affinity for the goals of JumpStart Theatre, as evidenced in her observation notes, and in-person and online communications. R3 engaged at a deeper level in the study, by participating in focus groups and filling in gaps in the data collection when R2 left the project midway through Year Three without notice, indication of her whereabouts, or completing her work plan.
2. Setting the Scene: Musical Theatre and Cognitive Neuroscience

Acting is about as complete and multimodal as you can get.
It’s physical, it’s emotional, it’s cognitive, and it’s social.
~ Art Kramer, cognitive research scientist

Tell the Story. Sing the Songs. Teachers learn these two mantras in the JumpStart Theatre Boot Camps. The goal is to focus their student’s attention on the most important elements of acting in a musical. In that sense, these mantras are practical strategies. Yet, they are so much more. These actions of telling and singing give students opportunities to exercise, develop, and feel the power of their humanity, bringing their bodies, minds and souls to the process. Teachers can also use these mantras in their teaching practice, across curriculum, to deepen and sustain student learning.

Telling the Story
Who can claim that they haven’t felt their heart rate increase as the protagonist faces danger? Or shed tears at the suffering of innocent characters? Who among us hasn’t laughed and cheered as the hero outsmarts the villain? As an observer of theatre, students find themselves reacting physically and emotionally to situations that characters encounter. As actors in roles, students imagine and behave as if they are other than themselves, in some other place, at another time. Enduring stories and plays have the power to alter what we believe is possible, the way that we think, and the life decisions we make.

Theatre is a meaning making experience that helps us to interpret life and understand the world. For youth, that world is often hyper-judgmental, where split second impressions can lead to a student being ridiculed, bullied, ostracized, or worse. When these are the potential consequences of certain attitudes or behaviors, where can a young person experiment with the consequence of a decision and express their deeper emotions? For many students,
theatre is the only place where instead of suppressing their feelings, they can examine them in the light of the characters they are involved with. Students who participate in theatre have a safe environment where they can be who they are by being who they aren’t. A place where everyone is different and united under a single purpose — to tell the story.

While we have known for centuries the impact of theater on our emotions and its ability to give us insights into other worlds, we haven’t known why or how it works. Theatre scholars and advocates would do well to explore what neuroscience reveals about brain functions and how such functions relate to theatre and performance. Yet it was quite by accident that a research team discovered that when a monkey watches another monkey or human perform certain actions, the neurons in the brain of the one who watches fires in the same way as the one who performed the action.

These particular neurons are motor neurons that carry messages from the brain to the muscles and activate a precise part of the brain that has a mirroring system. This seems to allow us to experience the actions of others at a very basic motor level. And if the experience produces an authentic feeling on a deeper level, the same neurotransmitters are released as if the experience were real. When we feel for the character, we develop empathy for them. The experience of empathy is an essential character trait for students to develop, because it allows them to better understand how others are likely to react to a situation.

As Robin Lithgow, former Director of the Arts Education Branch of the second largest school district in the country, Los Angeles Unified School District, noted, “When a drama teacher asserts that one of the primary things his students are learning is empathy, that teacher is absolutely right. The students are developing their mirror neurons. They are learning to care.” The capacity for empathy can transfer to others in similar situations as well as enhance our ability to see our own world more clearly.

Dr. James Catterall puts this concept into the context of the stage in his article, “A Neuroscience of Art and Human Empathy: Aligning Behavioral and Brain Imaging Evidence”:1

Theatre and drama offer a quintessential platform for engaging empathic dispositions. The actor must develop a sense of a character to initiate a role – understanding that character in a sociocultural context. More than this, the actor must grow to understand other characters in a production – empathizing in turn to put the action on a footing suited to who the players intend to be.

______________________________

We turn to the plays selected by each school in the study to offer specific examples. In the play, *The Little Mermaid*, Holmes students might empathize with Ariel, a girl who doesn’t fit in or live up to the expectations of adults. Ariel learns to let go of what is expected of her and summon the courage from within to seek her own world and pursue her own dreams.

On the other hand, students may recognize Ariel’s encounter with a smooth talker like Ursula, who manipulates her at her most vulnerable, and better recognize and understand the scene the next time it plays out in real life.

Felicity’s play, *The Music Man*, depicts the powerful impact of music on various characters. Students may feel empathy for a young boy who overcomes shyness, a teen who strives for recognition, a young woman who is afraid to love, even Harold Hill, a con man, who is inspired to live a better life. The once removed experience these feelings and aspirations depict enable and empower real life.

*Into the Woods*, produced by Gamble, offers many lessons that may resonate with students. Every character in the play wishes their life were different. Each character desperately wants something he or she does not have. The play teaches us that wishes, like actions, have consequences and appetites. Once we get our wish, we will most likely wish for more. The musical play ends with Cinderella’s song, "I wish!"

In Finneytown’s choice, *Seussical*, the main character Horton is ridiculed and ostracized for defending his beliefs and Jojo is admonished by his school and parents for his overactive imagination. The choice is ‘get in step’ or ‘get out of line,’ a daily choice for adolescents.

Most teachers consider student's interests, their social context, and the issues they face individually and as part of a community, when they choose their play for the year. Musical theatre offers classroom teachers, across curriculum, a myriad of opportunities to make connections to the characters and world of the play that guide students to reflect on their lives, the world at large, and their place in it.

*Singing the Songs*

Stephen Koelsch describes the neurology of music in his book, “Brain and Music.” He writes, “As soon as music hits our ear it stimulates spinal motor neurons and vestibular, visceral systems.” He identifies the function of the core emotional network that is responsible for the feeling we get when we listen to music. The three main areas of this network are the amygdala, the nucleus accumbens and the hippocampus.

Dr. Catterall addresses music, emotion and the brain in his article, *A Neuroscience of Art and Human Empathy: Aligning Behavioral and Brain Imaging Evidence.*

Music ties to emotion and empathy in the case of making music as well as simply in listening. Playing music in ensembles is as much a human community experience as a music experience. Musicians develop feeling and understanding for the emotions, as well as for the joys, needs, and predicaments we might say, of fellow musicians – and for the feelings and understandings of themselves as performers. Making music is a fluid enterprise, requiring adaptations or modifications along the way, at the behest of a musical director whose “needs” and concerns may be worth understanding, or in a nearly autonomous response to the sound as it goes forward – slipping in and out of grooves, adjusting volume or timbre, or just sitting out. Listening to music unleashes a number of imagined human situations where empathy may be involved. Imagining you are a cellist, or the Who’s drummer, or singer Eartha Kitt, or maestro Gustavo Dudamel puts you in juxtaposition with another as sure as seeing a performer in concert does.

A compelling argument for educators to offer programs like JumpStart Theatre, as well as to incorporate theatre and music into the school curriculum, has to do with the way that both art forms directly affect our emotional and memory systems. Current findings on the neurobiology of storytelling show that character-driven stories with emotional content result in better understanding and better recall. Humankind has many long traditions of oral storytelling that preserve stories for innumerable generations. Likewise, there is a powerful relationship between music, emotion, and memory. For thousands of years, songs have been used as a mnemonic device. Song taps into multiple retrieval systems and can bring forth vivid memories of important stories, knowledge, or special times in our lives.

Educators are learning from recent neuroscience that emotion and cognition, feeling and thinking are interconnected and that without emotions, memories are not stored in the long-term memory system. In other words, we remember what we care about and what is relevant to our lives. In order for the brain to store information in our long-term memory it has to matter. In his book, “The Feeling of What Happens,” Antonio Damasio writes, “We are not thinking machines that feel, we are feeling machines that think.”


Mary Helen Immordino-Yang further states in her book “Emotions, Learning, and the Brain”: *Current research on the interrelatedness of emotions and cognition reveals that*
emotion plays a critical role in attention, learning, and memory. If they [students] feel no connection to the knowledge they learn in school, the academic content will seem emotionally meaningless to them; even if they manage to regurgitate the factual information, it will lay barren and without any influence on their decisions and behavior. Without emotion students feel no connection to the knowledge they learn in school. 6

Dr. Immordino-Yang takes it another step further to advise and caution educators:

*If emotions are not taken seriously when they occur and are not given appropriate room to influence decisions and thinking in the classroom, the effective integration of emotion and cognition in learning will be compromised...for good cognition to manifest in the classroom and beyond, emotions need to be an honored part of the learning experience all along.*7

A teacher’s task is to engage the class in explorations that go deeper than their preconceptions and increase their understanding of the stuff of life. There are teachers who intuitively use drama and theatre to light fires in young minds. These teachers can connect the stories and plays back to student’s personal sense of self and help them adapt to making choices that optimize their journey towards adulthood. As a result of the JumpStart Theatre Program, the teachers/directors are discovering ways to implement theatre and music activities as highly effective learning strategies in their content areas. Cognitive neuroscience research strongly endorses these teaching methods that tap into the emotions and prior experiences of students.

Students participating in the plays have confided to each other, their teachers, and to the researchers that the JumpStart Theatre Program has given them a place where they are accepted for who they are and given them the freedom to explore who they can be.

As business and education leaders assess the values and skills students will need to thrive in the 21st century global economy, they agree that problem solving, critical thinking, collaboration, communication, adaptability and creativity are essential. These are also some of the skills that students learn through their involvement in the JumpStart Theatre Program.

3. Evaluation Focus & Methods

We now present the research focus and methods in detail. In the third year evaluation report, the Centers for Research on Creativity (CRoC) examined the JumpStart Theatre Program's impact on student, teacher, and administrator creativity, attitudes towards theatre, and growth. More specifically, the research team aimed to illuminate:

1) student growth, particularly in self-efficacy, empathy, collaboration, critical thinking, creativity, and problem solving in JumpStart Theatre
2) the ways in which teachers implemented and embodied the JumpStart Theatre Program throughout the production period
3) teacher support, growth, and plans for sustainability
4) administrative support, growth, and plans for sustainability

CRoC researchers used several data generation methods, including student creativity assessments, teacher surveys, focus groups, and program observations as tools to capture evidence of the hypothesized increase in creativity and growth. We detail each data generation method in the following sections.

3.1 Capturing Creativity through the Next Generation Creativity Survey (NGCS)

The research team used CRoC’s signature student creativity assessment, the Next Generation Creativity Survey (NGCS), to measure student creativity, problem solving, originality, self-efficacy, empathy, and dispositions to collaboration.

Before expanding upon the details of the NGCS’s design, it is essential to clarify CRoC’s approach to understanding human creativity. Conceptions and definitions of creativity, both stated and implied, range widely. Some scholars and authors, including Gardner (1993) and Csikszentmihalyi (1996) focus on extraordinary creativity – the production of masterworks of art, music, dance, or theatre.

Others focus on inventions that impact the way we live and work on a global scale – the bread-slicing machine (1928), the hybrid car (2000), and the Swiffer mop (1996) as examples. While we may dream of producing a fresco for the front portico at New York’s Metropolitan Museum of Art, or of penning the next best-selling novel, these are not the types of invention we commonly find in school and after-school creativity programs.


The ideas that the JumpStart Theatre Program brings to creative education focus on smaller acts of invention, often known as ‘everyday creativity’ or ‘little’ or ‘mini c’
creativity, which are nonetheless skills and behaviors that fit common, general definitions of creativity.

These definitions focus on two qualities – creative processes that lead to ideas, or things, that (1) are *new or novel*, and (2) *have value*. Thus, a creative idea is an original or unusual idea that can be put to some use or purpose that has value to someone. Furthermore, the creative processes, in which learners experiment, explore, imagine, tinker, test, and take risks are often of equal or greater value than the resulting creative product.

CRoC assesses for everyday creativity, and creative processes, behaviors and orientations using a variety of qualitative methods, such as rehearsal and performance observations. To complement these qualitative process-oriented methods, CRoC employs the NGSC, a quantitative tool that captures learners’ creative orientations and problem solving abilities at a given moment in time. Thus, the survey contains questions that ask students to self-report their creative orientations and tasks that can be rated by human judges for their levels and types of creativity. The model below lists the variety of scales on the survey.

### 3.1.1 Next Generation Creativity Survey Model

<table>
<thead>
<tr>
<th>Self-Reported Creativity</th>
<th>Demonstrated Creativity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative Fluency</td>
<td>Creative Fluency</td>
</tr>
<tr>
<td>Originality</td>
<td>Critical Thinking</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Creativity in Inventing</td>
</tr>
<tr>
<td>Empathy</td>
<td></td>
</tr>
<tr>
<td>Creative Problem Solving</td>
<td></td>
</tr>
<tr>
<td>Creative Self-Efficacy</td>
<td></td>
</tr>
</tbody>
</table>

The NGCS is designed to measure creative skills and dispositions as well as supportive attitudes (e.g. collaboration and empathy) at the time when students began their work in the JumpStart Theatre Program and then again after participating in their school’s musical production. Growth in scores between the pre- and post- administrations provides indications of the effects of programs on their participants.

With the NGCS, students have the opportunity to display creative thinking and creative behavior through tasks required by the survey. These tasks include speculating on what life would be like if a novel condition(s) prevailed, inferring what a character in a drawing might be thinking, and bringing evidence from the drawing to bear on that inference. Students are invited to make multiple speculations. The number they create can be thought of as creative fluency. Their tendency to be original contributes to their creativity scores.

Following Amabile’s (1996) Consensual Assessment Model\(^1\), we gather expert educators, including teaching artists, to make judgments about the creativity of student responses to

these tasks. We also include a set of questions eliciting student self-reports of their own creative practices and orientations. This is a common feature of available creativity tests such as the Torrance Test of Creative Thinking Skills. We also include self-report scales probing the development of student attitudes and behaviors that are believed to be important ingredients in their success. These are measures of collaboration, empathy, creative self-efficacy beliefs, critical thinking, and creative problem solving. These elements align with what is known as the social psychology of creativity.

### 3.1.2 NGCS Items and Scales

<table>
<thead>
<tr>
<th>Self Reported Creativity</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative Fluency</td>
<td>e.g., agreement with the statement, “I find it easy to think of lots of ideas.”</td>
</tr>
<tr>
<td>Originality</td>
<td>e.g., agreement with the statement, “My ideas for solving problems are often unusual.”</td>
</tr>
<tr>
<td>Creative Problem Solving</td>
<td>Approaching problems by testing alternative solutions, without rushing to judgment and with a willingness to be wrong while speculating.</td>
</tr>
<tr>
<td>Creative Self-Efficacy</td>
<td>e.g., agreement with the statement, “I can usually solve a difficult problem if given enough time.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Psychological States or Dispositions Supporting Creative Behavior</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration</td>
<td>e.g., agreement with the statement, “I like listening to the ideas of other students.” or, “I like to contribute to group projects.”</td>
</tr>
<tr>
<td>Empathy</td>
<td>e.g., agreement with the statement, “I can usually tell how someone else is feeling” or, “I care about helping others who are having difficulties.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Demonstrated Creativity</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creativity in Inventing</td>
<td>Students compose a self-portrait of themselves designing or inventing something. Portraits are judged for creative details and originality.</td>
</tr>
<tr>
<td>Creative Fluency</td>
<td>Students are asked to list as many ideas as possible. The greater number of ideas a student produces in an allotted period of time, the higher her creative fluency.</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>This is evidenced as students present their ideas and opinions about what the featured, fictional animal is thinking.</td>
</tr>
</tbody>
</table>

**Note:** In this section of the survey, students respond to open-ended questions and prompts by writing their analyses and conclusions and by drawing.

### 3.1.3 NGCS Implementation

In the first year of the study, the 2015 – 2016 academic year, the CRoC research team administered a first cohort of pre/post-test NGCS to 150 students in the three original schools, Finneytown, Gamble and Holmes. Approximately half of the surveyed students
participated in the JumpStart Theater Program and approximately half of the surveyed students served as a control group.

Treatment students were those involved in play productions at the three schools. Control students were surveyed from among non-participants at the three schools. The general analytical design of the work was to compare post-scores to pre-scores and to report on gains that students made of various elements or dimensions of creativity.

In the 2016 – 2017 academic year, CRoC administered a second cohort of pre/post-test NGCS to students in the original three schools and to Felicity-Franklin Middle, the fourth school that joined in the second year of the study (SY2016-17). In this second year of study, a total of 152 surveys were “usable.” A usable survey is one that has both pre- and post-surveys completed, such that pre- and post-survey data align for each student. Seventy-five surveyed students participated in the JumpStart Theatre Program and 77 surveyed students were in the control group.

In the 2017 – 2018 academic year, CRoC administered a third cohort of pre/post-test NGCS to students in the original three schools and to Felicity-Franklin Middle, the fourth school that joined in the second year of the study (SY2016-17). In this third year of study, a total of 198 surveys were “usable.” Ninety-nine surveyed students participated in the JumpStart Theatre Program and 99 surveyed students were in the control group.

It is important to note that because students self-select to participate in the JumpStart Theatre Program and some students may choose to participate in one year, but not the next, the NGCS is not tracked with students across years. Instead, each cohort serves as a snapshot of the program over the course of three years. In this report, we detail general and recurring trends from all three cohorts’ performance on the NGCS.

3.2 Observations
To complement the quantitative data generated through the NGCS, CRoC used several types of observations as qualitative data collection methods. These methods serve as triangulation to the quantitative data and are detailed in the following sections.

3.2.1 Teacher Boot Camp Observations
RA2 and RA3 attended all Boot Camp professional development trainings held on September 29, 2017, November 4, 2017, and January 19, 2018 at the Aronoff Center in Cincinnati. iTheatrics and JumpStart Theatre teaching artists led the Boot Camp sessions, which successively prepared and coached teachers to create the world of the play and to present a complete production with music, sets, costumes, and props. RAs were trained to record their observations of the Boot Camp using a customized guide.
3.2.2 Rehearsal Observations
The evaluation plan called for each RA to observe three rehearsals, one dress rehearsal at each school. Observations were scheduled so as to capture an arc of change from beginning of the rehearsal process, through the middle, and to the end. The observation guide that the RAs used was refined from previous years to deepen their observations. The work of Sheila Page\textsuperscript{2} was shared with each RA to deepen their understanding of the creative behaviors that they might observe.

RA3 reported observational quantitative data regarding the frequency of observed creative behaviors in 7 rehearsals in two schools (Felicity and Finneytown) including: creative problem solving, critical thinking, collaboration, and empathy. These observational quantitative findings are reported after the NGCS quantitative findings, to further illuminate creative assessment data with observational reports of students’ creative behaviors.

3.2.3 Performance and Share-Out Observations
RA2 and RA3 attended one performance at each school, using the guide to focus their observations. RA3 attended the JumpStart Theatre Showcase at the Anderson Theater, Memorial Hall in Cincinnati.

3.3 Student, Teacher, and Administrator Focus Groups
In the third year of the study, CRoC conducted focus groups to expand and deepen understandings of the JumpStart Theatre Program. Teachers from Finneytown, Gamble, and Holmes participated in a focus group conducted by CRoC researchers with EdTA staff support at The Gruff in Covington, Kentucky on May 2, 2018. The principal from Holmes also participated in the focus group. Teachers and the principal from Felicity-Franklin were unable to attend due to scheduling conflicts, so CRoC researchers conducted a focus group the following day with JumpStart Theatre teachers and the principal at the school. A separate, impromptu focus group was also held with three JumpStart Theatre students at the school. Additionally, CRoC researchers conducted a focus group at the EdTA offices with EdTA staff and teaching artists and who were involved in producing and administering the program.

3.4 Teacher Surveys
To complement the quantitative data generated through the NGCS and the qualitative observations, CRoC used qualitative teacher surveys. These surveys further triangulate the quantitative and qualitative data.

\textsuperscript{2} Creative Attributes Inventory, courtesy of Ms. Sheila Page, HM Inspector of Education, at Kirkcaldy, Scotland Ministry of Education). See Appendix A.
Ten JumpStart Theatre teachers completed a paper pre-survey. The surveys prompted teachers to reflect upon their expectations, hopes, and plans for the JumpStart Theatre experience.

Four JumpStart Theatre teachers completed a post-survey delivered online via Survey Monkey. The survey prompted teachers to reflect upon their and their students’ learning, growth, and challenges during the JumpStart Theatre Program and musical theatre production. Due to a low response rate, teacher surveys are not analyzed in a comparative pre/post fashion. Instead, the data is used to triangulate findings from focus groups.

4. Quantitative Evaluation Results: The NGCS

We now detail the data findings, starting with the quantitative results from the Next Generation Creativity Survey (NGCS), which shed light on student creative problem solving, empathy, collaboration, and more. First, we present the Year Three study sample size and results for all students from all four schools. Next, we present results for each of the four schools. Then, we feature supplementary observational quantitative data on the frequency of students’ creative behaviors in rehearsals, which brings the numbers to life. We conclude with a three-year overview of student performance on the NGCS in all years of the study and synthesize all quantitative results.

The NGCS: Sample Size

CRoC attained an overall sample of 99 treatment student surveys and 99 control surveys, for a total of 198 completed, matched (pre-/post) surveys. Treatment students were those involved in play productions at the four schools. Control students were selected from among non-participants at the four schools and given the same pre- and post-surveys as participants. The general analytical design of the work was to compare post-scores to pre-scores among students in the treatment and control group and to report on gains or losses that students made in various elements or dimensions of creativity.

<table>
<thead>
<tr>
<th># of Usable Surveys</th>
<th>Treatment Students</th>
<th>Control Students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Felicity</td>
<td>51</td>
<td>51</td>
<td>102</td>
</tr>
<tr>
<td>Finneytown</td>
<td>22</td>
<td>19</td>
<td>41</td>
</tr>
<tr>
<td>Gamble</td>
<td>13</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>Holmes</td>
<td>13</td>
<td>18</td>
<td>31</td>
</tr>
<tr>
<td>All EdTA</td>
<td>99</td>
<td>99</td>
<td>198</td>
</tr>
</tbody>
</table>

The following tables include averages of pre- and post- scale scores, which were analyzed to determine if there are statistically significant differences between students’ NGCS scores on the pre- and post- creativity scales. Each self-report scale, in which students reflect on their perceived creative problem solving, collaboration, empathy, creative self-efficacy, and
creative fluency skills, ranges from 1 – 4. The demonstrated creativity elements of the survey are scored by trained survey scorers, and scores range from 0 – 2. Thus, all averages presented in the following tables fall within the 0 – 4 range, depending upon whether the question assesses elements of creativity through self-report questions or demonstrated creative tasks.

The ‘Gain?’ column indicates whether there is a statistically significant difference in the pre- and post-scores for each group. The final column compares the treatment and control group scores and highlights areas in which treatment students outperformed the control students.

### 4.1 NGCS - All Students: Year Three

Generally, in Year Three of the study, **students who participated in the JumpStart Theatre Program achieved higher NGCS scores than the control group students before and after participating in the program.** However, JumpStart Theatre students, en masse, did not show statistically significant gains in the NGCS over time. We anticipate that this is largely due to small sample sizes and a hypothesized slower rate of student growth in their third year of the program. These findings are presented in Table 1.

<table>
<thead>
<tr>
<th>Scale or Measure</th>
<th>EDTA ALL N = 99</th>
<th>Gain?</th>
<th>CONTROL ALL N = 99</th>
<th>Gain?</th>
<th>EDTA OUTPERFORMS CONTROL STUDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative Problem Solving</td>
<td>Pre 3.14 Post 3.09</td>
<td></td>
<td>Pre 3.1 Post 3.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creative Self Efficacy</td>
<td>3.34</td>
<td></td>
<td>3.18</td>
<td></td>
<td>XX</td>
</tr>
<tr>
<td>Collaboration</td>
<td>3.28</td>
<td></td>
<td>3.2</td>
<td></td>
<td>XX</td>
</tr>
<tr>
<td>Empathy</td>
<td>3.26</td>
<td></td>
<td>2.96</td>
<td></td>
<td>XX</td>
</tr>
<tr>
<td>Originality</td>
<td>3.3</td>
<td></td>
<td>3.18</td>
<td></td>
<td>XX</td>
</tr>
<tr>
<td>Creative Fluency</td>
<td>3.11</td>
<td></td>
<td>3</td>
<td></td>
<td>XX</td>
</tr>
<tr>
<td>Creativity in Inventing*</td>
<td>1.1</td>
<td></td>
<td>0.89</td>
<td></td>
<td>XX</td>
</tr>
<tr>
<td>Critical Thinking*</td>
<td>1.05</td>
<td></td>
<td>0.94</td>
<td></td>
<td>XX</td>
</tr>
</tbody>
</table>

*: demonstrated, scored 0 - 2; x: statistically significant gain; o: statistically significant loss; XX: program outperforms control

Table 1 illustrates that JumpStart Theatre students out-performed control group students in **creative self-efficacy, collaboration, empathy, originality, creative fluency, demonstrated creativity in inventing, and demonstrated critical thinking**, before and after the JumpStart Theatre Program, even without experiencing a significant growth in these areas over time. Meanwhile, control students showed a significant loss in **collaboration** and their scores overall are notably lower than the treatment students’ post-scores. It is worth noting that
JumpStart Theatre students did not experience the same loss in collaboration, which may indicate a degree of resiliency among JumpStart Theatre students that enabled them to maintain similar levels of perceived collaboration skills after the program. Finally, all treatment students demonstrate the highest scores in creative self-efficacy, collaboration, and originality regardless of treatment group.

4.2 NGCS - Students by School: Year Three
Tables 2 – 5 show score changes for all four participating schools: Felicity, Finneytown, Gamble, and Holmes. We present each table below with a brief explanation of the trends.

As illustrated in Table 2, Felicity JumpStart Theatre students demonstrate a significant growth in originality between pre- and post-survey periods. Felicity control students did not demonstrate any gains or losses. Felicity JumpStart Theatre treatment students did demonstrate a significant loss in critical thinking, yet out-performed the control students on the following scales: creative self-efficacy, originality, creative fluency, and creativity in inventing. These findings are promising because Felicity sample sizes are the largest in the study, with both treatment and control samples at 51 students. Larger samples sizes may indicate that the detected trends are meaningful differences between students in JumpStart Theatre and control students, and not a result of confounding factors.

Furthermore, we hypothesize that Felicity's gains may be related to the length of their participation in the program; currently, they are in year two. We hypothesize that the first two years may be the most transformative for students and teachers, in which they experience the most significant growth and that by year three, students and teachers demonstrate high levels of creativity, but slower rates of growth. This hypothesis applies to all schools in the third year of the program: Finneytown, Gamble, and Holmes.
As illustrated below in Table 3, Finneytown JumpStart Theatre students demonstrated a significant gain in critical thinking and a significant loss in creative problem solving over time in the program; these students also outperformed control students on creativity in inventing. Meanwhile, control students did not demonstrate a significant gain or loss on any of the scales on the NGCS. It is important to note that Finneytown sample sizes for each treatment group are small, making it difficult to determine the extent of program’s effects on students’ NGCS performance.

<table>
<thead>
<tr>
<th>SCALE OR MEASURE</th>
<th>EDTA N = 22</th>
<th>Gain?</th>
<th>CONTROL N = 19</th>
<th>Gain?</th>
<th>EDTA OUTPERFORMS CONTROL STUDENTS</th>
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<td>Pre</td>
<td>Post</td>
<td></td>
<td>Pre</td>
<td>Post</td>
<td></td>
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<tr>
<td>Creative Problem Solving</td>
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<td>0</td>
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<td>3.04</td>
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<td>Creative Self Efficacy</td>
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<td></td>
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<tr>
<td>Collaboration</td>
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<td>3.19</td>
<td>3.06</td>
<td></td>
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<tr>
<td>Empathy</td>
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<td>3.23</td>
<td>3.05</td>
<td>3.12</td>
<td></td>
</tr>
<tr>
<td>Originality</td>
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<td>3.48</td>
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<td>3.29</td>
<td></td>
</tr>
<tr>
<td>Creative Fluency</td>
<td>3.29</td>
<td>3.19</td>
<td>3.17</td>
<td>3.16</td>
<td></td>
</tr>
<tr>
<td>Creativity in Inventing*</td>
<td>1.05</td>
<td>1.18</td>
<td>0.89</td>
<td>0.86</td>
<td>XX</td>
</tr>
<tr>
<td>Critical Thinking*</td>
<td>1.07</td>
<td>1.23</td>
<td>x</td>
<td>1.05</td>
<td>1.08</td>
</tr>
</tbody>
</table>

* = demonstrated, scored 0 - 2  
** = statistically significant gain; o = statistically significant loss  
XX = program outperforms control
As illustrated in Table 4, Gamble’s sample sizes are notably small with only a total of 24 students completing both pre- and post-surveys in total; this makes it very difficult to detect meaningful change in student performance. Gamble students in either the treatment or control group did not show significant gains on the scales measured by the NGCS and JumpStart Theatre students did not outperform control students significantly in any area. Also, unlike the three other schools, Gamble JumpStart Theatre students tend to demonstrate lower scores that are more equivalent to typical control student performance on the NGCS. This may indicate less of a difference between students self-selecting to be a part of the program and students opting out of the program.

<table>
<thead>
<tr>
<th>Scale or Measure</th>
<th>EDTA N = 13 (Gain?)</th>
<th>CONTROL N = 11 (Gain?)</th>
<th>EDTA Outperforms Control Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
</tr>
<tr>
<td>Creative Problem Solving</td>
<td>2.83</td>
<td>2.71</td>
<td>3.2</td>
</tr>
<tr>
<td>Creative Self Efficacy</td>
<td>3.21</td>
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<td>3.19</td>
</tr>
<tr>
<td>Collaboration</td>
<td>3</td>
<td>3.08</td>
<td>3.15</td>
</tr>
<tr>
<td>Empathy</td>
<td>3.03</td>
<td>2.96</td>
<td>2.76</td>
</tr>
<tr>
<td>Originality</td>
<td>3.27</td>
<td>3</td>
<td>3.27</td>
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<tr>
<td>Creative Fluency</td>
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<td>2.84</td>
<td>3.04</td>
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<td>Creativity in Inventing</td>
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<td>0.81</td>
<td>0.73</td>
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<tr>
<td>Critical Thinking*</td>
<td>0.85</td>
<td>0.96</td>
<td>0.94</td>
</tr>
</tbody>
</table>

* = demonstrated, scored 0-2
x = statistically significant gain, o = statistically significant loss
XX = program outperforms control
Finally, as illustrated in Table 5, Holmes’ EdTA students demonstrated significant gains in collaboration and creative fluency, while Holmes control students did not experience any significant gains or losses. JumpStart Theatre students also significantly outperformed the control students in creative self-efficacy, collaboration, empathy, creative fluency, creativity in inventing, and critical thinking. Generally, Holmes JumpStart Theatre students demonstrate the greatest gains in NGCS scores across time and outperformed control students in the greatest number of areas on the NGCS, compared with the other participating schools. However, it should be noted that sample sizes in Holmes are very small and students in the program are self-selecting, making it difficult to ascertain whether detected effects among JumpStart Theatre students are significant because of the program or because of other confounding factors. That said, the strong performance is worth noting and worth considering when examining Holmes’ JumpStart Theatre production process and performances.

| Table 5: Comparison of Holmes Treatment and Control Students’ Performance on NGCS Scales |
|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| SCALE OR MEASURE                             | EDTA N = 13                                   | CONTROL N = 18                                | EDTA OUTPERFORMS CONTROL STUDENTS |
| Creative Problem Solving                     | Pre 2.9                                      | Post 3                                       |                                  |
| Creative Self Efficacy                       | Pre 3.18                                     | Post 3.2                                     |                                  |
| Collaboration                                | Pre 3.17                                     | Post 3.45                                    | x                                |
| Empathy                                      | Pre 3.26                                     | Post 3.28                                    |                                  |
| Originality                                  | Pre 3.31                                     | Post 3.19                                    |                                  |
| Creative Fluency                             | Pre 2.86                                     | Post 3.18                                    | x                                |
| Creativity in Inventing*                     | Pre 1.04                                     | Post 1                                       |                                  |
| Critical Thinking*                           | Pre 1.04                                     | Post 0.7                                     |                                  |

* = demonstrated, scored 0 - 2
x = statistically significant gain; o = statistically significant loss
XX = program outperforms control

As a whole, the NGCS scores show a variation in growth across schools, which is likely strongly related to the sample size at that school and the year of participation in the program. It is important to emphasize that the schools and the JumpStart Theatre program should not be discouraged by the quantitative data presented in this section; the qualitative data presented throughout the report suggests that students and teachers demonstrated high levels of creative behavior throughout the program. The NGCS may not have been able to detect such creative behavior because it measures self-perceptions (which may not reflect demonstrated behaviors or skills) and was implemented with small sample sizes.
4.3 Frequency of Observed Creative Behavior

We now present observational data about students’ demonstrated creative behavior during JumpStart Theatre rehearsals at Felicity and Finneytown\(^3\). These data were collected from a total of seven rehearsal observations, three at Felicity and four in Finneytown. These observations were documented in narrative form at the rehearsal site and in follow up while typing notes. Likert Scale questions were answered using prompted recall from the detailed observation write-ups.

We first detail the combined averages for observed empathy, collaboration, critical thinking, and creative problem solving in the seven rehearsal observations in Figure 1. Then, we present specific rankings for the rehearsal observations at each school in Figures 2 and 3.

The data in Figure 1 reveals that on average, students at Finneytown and Felicity demonstrated collaborative behaviors most regularly (often to always), and critical thinking and creative problem solving behaviors closely behind also at a high frequency (often to always). On average, students demonstrated empathic behaviors regularly (sometimes to often).

![Frequency of Observed Student Rehearsal Behaviors]

**Figure 1. Total Frequency of Observed Student Rehearsal Behaviors**

To bring these quantitative data to life, researchers provided examples of these observed behaviors, and we list several examples below.

---

\(^3\) The data collection of observations was limited to two schools this year, because one RA assigned to Gamble and Holmes dropped out unexpectedly without turning in any notes or data. CRoC and EdTA staff have made multiple attempts to find the RA to no avail.
**Empathic Behavior:**

1. “There were moments when the chattier students were overpowering [the director] and her ability to direct, and the students that were working with her individually were able to speak up and quiet the room, so the empathy they displayed for their teacher was inspiring.”

2. “The students of this cast show [empathy] towards the two leads and their more adult, romantic scenes. They have grown so much and had really managed to remove the giggling all together and reserved themselves to eye rolls or small blushes when the “kiss” scene came up, and during this rehearsal they saw it twice. Each time the ensemble members and the crew were polite and not distracting, despite the nervousness shown on stage by their peers.”

3. “Specifically, a boy with a lisp had a heartfelt moment when he wanted to avoid his lisp because he felt like he would be made fun of, but after a brief discussion with the teachers, and encouragement from his cast mates who explained their understanding, he truly had the opportunity to explore himself in his character without fear.”

**Collaborative Behavior:**

1. “Some students reached out to help others conquer their fears while others helped distract them and gave them something else to focus on during their lines so they weren’t as nervous.”

2. “The first rehearsal was filled with interactions meant to help the students learn their groups and where they needed to be on stage. This rehearsal was no exception, and students were quick to jump in and help their peers remember where they needed to be and when.”

**Critical Thinking:**

1. “This rehearsal was the second rehearsal with tech crew present and the work this team did to mark up the stage, organize props, and address technical issues was incredible. They were constantly working to make the sound run smoothly while also working on making sure the stage was marked for the cast and for crew members.”

2. “This rehearsal still focused quite a bit on the idea that the students need to project to and interact with their audience. Some of the students volunteered thoughts on how to overcome nervousness, while others remembered being taught to “speak to the back wall,” so that everyone in attendance could hear them.”

**Creative Problem Solving:**

1. “This rehearsal presented quite a few lighting issues and the students worked around it using flashlights to illuminate the important moments during the dress rehearsal.”

2. “This was the first rehearsal with furniture, and only the third with tech crew, so learning the cues, working with the props, and figuring out where everything
needed to be presented the students with tons of time to figure out the best flow for them as a cast and crew.”

We now present school-specific figures demonstrating frequency of observed student rehearsal behaviors at Finneytown and Felicity. In Figure 2, Finneytown generally shows improved empathy over time and high levels of collaboration consistently in rehearsals. There is greater variation in critical thinking and creative problem solving across rehearsals, with the final observed rehearsal ranked very highly with collaboration, critical thinking, and creative problem solving “always” present.

![Finneytown Frequency of Observed Student Rehearsal Behaviors](image)

**Figure 2. Frequency of Observed Student Rehearsal Behaviors in Finneytown**

Felicity students demonstrate consistently high levels of critical thinking and creative problem solving across rehearsals, and a growth in collaboration over time to very high levels. Felicity student’s empathic behavior is slightly lower and more inconsistent than the other three observed behaviors, but on average still present sometimes or often.
In summary, the observed rehearsal behaviors complement and support the NGCS quantitative findings, suggesting that students self-reported beliefs on their collaboration, critical thinking, problem solving, and empathy align with the observable skills demonstrated in rehearsals. More specifically, Felicity’s strong performance in critical thinking and creative problem solving in rehearsals is reflected in high scores on the NGCS. Similarly, Finneytown’s high scores in observed creative problem solving suggests that the significant decrease in creative problem solving on the NGCS may be more influenced by small samples sizes than by actual creative problem solving abilities. Thus, the complementarity of these two types of data help to provide a more holistic image of student growth as documented in quantitative forms.

4.4 Summary and Synthesis of Quantitative Findings: Years One, Two & Three

Finally, we present a three-year glimpse of the ways in which EdTA students have outperformed control students in the NGCS in Table 6.
In summary, Table 6 illustrates that EdTA students outperform the control students in all but one measure (creative problem solving) of creativity across schools in Year Three, even though they did not necessarily experience significant gains over time while participating in the JumpStart Theatre Program. The three-year scope also indicates that Holmes and Felicity appear to show more consistent student performance on the NGCS while Finneytown and Gamble have more variation in scores. This variation may be related to year of participation, sample size, as well as when and how the survey was implemented. For example, in year one at Gamble, both treatment and control students took the survey in the same auditorium resulting in general chaos. The second and third year treatment and control students completed the survey separately.

It is important to reemphasize that school specific analysis is very limited due to small sample sizes, and greater emphasis should be placed on the summative EdTA data with all schools, which is a result from much a larger combined dataset. **The larger data set affirms that students in JumpStart Theatre outperform their peers in the control group before and after the program regularly and significantly.**

This result is fascinating, yet largely unsurprising. Students who opt to participate in the JumpStart Theatre Program are likely to be attracted to creative expression and the arts out of personal interest. It could therefore be anticipated that those same students report more confidence in their creative self-perceptions prior to participating in JumpStart Theatre than their peers before or after participating in the program. These same students may show higher demonstrated creativity scores, as well, because they have an interest in creative arts and/or have dedicated time to developing their creative skills through other extra-curricular activities in the arts at school, in their community or at home.

<table>
<thead>
<tr>
<th>Table 6: Years 1 - 3 EDTA Students Outperforms Control Students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCALE OR MEASURE</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Creative Problem Solving</td>
</tr>
<tr>
<td>Creative Self Efficacy</td>
</tr>
<tr>
<td>Collaboration</td>
</tr>
<tr>
<td>Empathy</td>
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<tr>
<td>Originality</td>
</tr>
<tr>
<td>Creative Fluency</td>
</tr>
<tr>
<td>Creativity in Inventing*</td>
</tr>
<tr>
<td>Critical Thinking*</td>
</tr>
</tbody>
</table>

* = demonstrated creativity  
XX = Program Outperforms Control
Consistent with findings across all three years of the study, students who choose to participate in the JumpStart Theatre Program probably enjoy the creative arts and feel relatively confident in their own abilities, which is reflected in their NGCS self-report scores. Furthermore, these students may have sought out other creative arts opportunities in the past, which have further developed their creative abilities as demonstrated on the inventing and critical thinking portions of the NGCS.

The qualitative data, presented in forthcoming sections of this report, support the findings in Table 6 and in Figures 1 – 3, and illustrate through observations from rehearsals and performances that JumpStart Theatre students show high levels of creative problem solving, collaboration, and empathy. Although the NGCS may not detect significant gains over time in the third year of study, the consistent high scores on the NGCS are supportive of the observations and suggest that JumpStart Theatre students who choose to engage in theatrical and creative performance are also relatively confident in their creative abilities.

As stated earlier, it is important to emphasize that results are very likely affected by the small sample sizes, ranging from 11 – 35 students. There is also a likely ‘spillover effect,’ in which control students are exposed to some elements or experiences that the treatment students experienced in JumpStart Theatre. For example, control students may be friends with students in the treatment group and, thus, may watch a rehearsal; or they may hear about the benefits of the program, see the school buzzing with excitement, or be in a class with a teacher who also takes part in the JumpStart Theatre program and who has integrated some of the practices into everyday learning—all of which could affect their perceptions of themselves or their demonstrated creativity as captured on the NGCS. Although control students did not experience a statistically significant gain in any scale of the NGCS in any school, spillover effects may account for slight variation in student scores.

5. Qualitative Evaluation Findings

In this second findings section, we present qualitative data and analyses that provide greater insight on the JumpStart Theatre Program’s impact on student, teacher, and administrator creativity, attitudes towards theatre, and growth. In particular, we use the qualitative data to illuminate:

1) Boot Camp learning, philosophies, and tools
2) Observed student growth
3) Teacher support, growth, and plans for sustainability
4) Administrative support, growth, and plans for sustainability

These qualitative findings are gleaned from rehearsal and performance observations, teacher, student, and administrator focus group, and teacher survey data. More specifically, in this section we use qualitative data to understand how the JumpStart Theatre professional development Boot Camps are translated into practice in school and the extent
to which students, teachers, and administrators experienced growth in creativity, problem solving, confidence collaboration, and a 'sense of community.'

To contextually orient the qualitative data and reported growth, we start by briefly presenting the philosophies promoted during the observed Boot Camp sessions. We then provide insights on student, teacher, and administrative growth and the factors that appear to have enabled such growth through the JumpStart Theatre program.
5.1 Boot Camp Learning, Philosophies, and Tools

The JumpStart Theatre Boot Camp trainings serve as one of the primary and most intensive professional development mechanisms to support teachers implementing the JumpStart Theatre Program. After attending Boot Camp all-day workshops, teachers are provided with ongoing support from EdTA Teaching Artists and staff to sustain the approaches, philosophies, and tools that are introduced and cultivated in each Camp session. The Boot Camps provide relatively new theatre directors, choreographers, set designers, and leaders in the JumpStart Theatre Program with an initial critical and concentrated foundational period for professional growth and support. A strong Boot Camp session with practical, actionable, and experiential training makes the JumpStart Theatre Program possible in the schools. It is therefore important to note the emergent themes from the third year Boot Camp to understand the growth experienced by students, teachers, and schools during the JumpStart program.

CRoC field researchers, RAs 2 and 3, observed the three scheduled Boot Camps at the Aronoff Center for the Arts in downtown Cincinnati on September 29, 2017, November 3, 2017, and January 19, 2018. Upon analysis, the collected qualitative data demonstrates that the following prominent themes defined the third year Boot Camp:

1. Building a Sense of Community & Community of Practice
2. Creating Comfort with Discomfort & Growth
3. Advancing Technical Skills
4. Cultivating Resourcefulness & Creative Leadership
5. “Tell the Story”

All of the identified themes are consistent with and build upon the identified themes from the first and second year Boot Camps in the study. We elaborate upon each of these themes with examples from observational data. Note that all schools participating in the JumpStart
Theatre Program, not just the four schools included in the full study, participate in the Boot Camps. These schools might be referenced in quotes from observers to illuminate a point.

5.1.1 Building a Sense of Community & Community of Practice
As in years past, the Boot Camp training sessions had a strong emphasis on creating space for teachers to express and share their experiences, and, in turn, build a sense of community. CRoC observers noted that teachers were given the time and space to develop comfort, trust, and easy communication with each other throughout the Boot Camp:

“The first half of the Boot Camp seemed to focus a lot on creating a common bond between the teachers. The warm ups presented opportunity for the teachers to mingle with new groups of people every time a new set of characteristics were presented. [...] There was plenty of bonding and a mere 10 minutes into camp, the room had gone from a room full of small circles to a massive blended group. A representative of the Community Arts Initiative [noted this and] said, “This is amazing. You would never know they didn’t know each other.”

“Throughout the Boot Camp, the teaching artists allowed for interjection and questions from the teachers there to learn. After each exercise, questions were welcomed, discussion was encouraged, and ideas from teachers were learned by teachers.”

As the Boot Camps continued, teachers had ample opportunities to “bounce ideas off of each other and get experience from a multitude of experienced eyes.” The Boot Camp leaders intentionally created the space for teacher-to-teacher discussion and sharing, so that teachers could see that they were each other’s greatest resources:

“The third year teachers were referred to for help and questions. This final year of Boot Camps has been different in the sense that there is ample communication between teachers from each year in the program.”

Thus, teachers not only had a chance to forge personal connections. They had an opportunity to share techniques, support one another, and problem solve together. In this sense, teachers had the opportunity to develop a JumpStart Theatre community of practice. In other words, teachers were able to leverage their experiences in JumpStart Theatre to deepen their relationships and support one another to advance their craft as musical theatre practitioners and teachers. Several teachers noted the importance of the emerging community of practice for themselves and for their students:

“I enjoy being able to discuss the specifics in our show with the other teachers.”

“Nothing gets accomplished without building relationships. These Boot Camps give us these relationships so that we can take it home to our kids and build similar ones with them, so that we can succeed in our programs.”
The sense of community and community of practice cultivated in the Boot Camps set the stage for teacher and student growth in the JumpStart Theatre Program. Teachers built mutual confidence through supportive relationships and learned that such relationships could be modeled to aid student development, too.

5.1.2 Creating Comfort with Discomfort & Growth
Boot Camp also provided teachers with opportunities to become comfortable with discomfort and growth. Starting with silly warm up exercises, like repeating “Billy button bought a bunch of beautiful bananas” at rapid speed not only helped teachers with a practical enunciation and rhythm exercise; it also provided an opportunity to make mistakes in front of each other, to “giggle through” the awkwardness, and to support one another with affirmations. This and similar opportunities were woven throughout the Boot Camp and noted by CRoC researchers and teachers themselves:

“[Teacher A] is a third-year teacher and he hates dancing, but every year he comes in knowing he’s going to be uncomfortable but being okay with it because of the trust built within these camps. He knows he’s there to learn and he’s okay that that may include pushing his own comfort zones so that he can create a good space for his students when he returns to his school.”

“Teachers were asked to group themselves according to which of the five super tools they considered themselves the worst at. This gave each of the teachers the opportunity to see that they were not alone in their struggles, and it gave the Boot Camp leader the perfect channel to bring each group out of their comfort zones and prove that as scary as theater can be, each section can be easily broken down into very simple forms and done by nearly everyone.”

“Teachers pointed out that they all came into the camp feeling uncomfortable and awkward, and they could now empathize with their students when they returned.”

In other words, throughout the Boot Camp teachers had the opportunity to experience the same level of discomfort as their students may feel when trying something new, like musical theatre. This is an opportunity to develop empathy for students, to experience personal growth as educators, and to model fearlessness to their students when faced with a new, uncomfortable challenge.

5.1.3 Advancing Technical Skills
As in previous Boot Camps, in an effort to “demystify tackling blocking, learning music, or staging a production number” teachers were provided with practical, clear, and codified planning and rehearsal tools, tips, and tricks to use as creative leaders and as teachers. For example, warm ups were introduced as a way to create a comfortable culture amongst students and to intentionally further character development:

“Teachers were introduced to a few new warm up selections like “Whatcha Doin” and “Run, Run, Run, My Pony.” The main idea of these two warm ups is to keep everyone
involved during the warm up, while also loosening up and getting comfortable with themselves and their cast mates. [...] A teacher noted that during warm ups like these, to focus the activity for the students, they should try to imagine their character in the circle, and bring something that their character would do to show the group. It was a great insight to ensure the students are finding ways to become their characters while still enjoying themselves and melding their characters personality with their own so that it comes out more natural on stage.”

Teachers were also taught that “music is just for the mood, to help with understanding” and how to use “body language and raw materials to tell a story” with staging and blocking concepts like levels, proximity, and planes. All of the technical skills were not only reviewed in theory, but practiced by all and connected to a broader purpose in musical theatre. Thus, the Boot Camp served as valuable, concentrated periods of time for teachers to advance their technical theatre skills.

5.1.4 Cultivating Resourcefulness & Creative Leadership
The Boot Camp was designed to empower teachers with creative problem solving skills and with the knowledge “that even with zero costumes, materials, or stage effects, [they could tell] a story in the purest fashions, through body language and placement.”

Teachers’ experiential learning in the Boot Camp also included participating in activities that would prepare them to be resourceful, clear-headed, decision-makers. CRoC field researchers noted examples of practical problem-solving activities that would prepare them to embody these qualities. For example, Boot Camp leaders guided teachers through an activity that would help all students in successful dance numbers, regardless of ability:

“She allowed the teachers to see that a basic set of ideas can be morphed into full dance numbers that don’t require too much memory. Then, [the other leader] jumped in and brought the levels and planes idea back into play, showing how some students who may not be great at the dancing portion of the show can sit on the edge of the stage and show different aspects of the story, for instance eating a banana, while the better dancers are standing and dancing.”

Another particularly memorable opportunity for problem solving occurred when teachers were prompted to create props with limited resources:

“Some teachers offered ideas of blue streamers attached to black gloves to create rain, others suggested oven mitts to imitate crab claws, and all the discussion during the game led to discussion of storage for the props before tech week when they constantly had to be moved around due to rehearsal space issues. One school, Aiken, was smart to use butcher paper and cover a table, and then have the kids trace props onto a table to designate areas for the props to lie in. This again started a great rapport between schools who are not always in one space, or those who don’t have a ton of wing space for utilizations on their stages. For example, Finneytown, who isn’t on their stage until late February, has found replacement “rehearsal” props that are from the dollar store
and are miniature versions of what they will actually be using on the stage. They are all transportable in a single bag that reduces stress for the teachers, but stills allows the students to get used to holding and interacting with their props for the time being.”

In this example, experienced JumpStart Theatre teachers demonstrated how creative problem solving made them better and more organized musical theatre leaders; they developed practical strategies to overcome everyday challenges faced during rehearsals and through sharing, prompted each other to engage in deeper discussion and collective problem solving.

5.1.5 “Tell the Story”
As in all previous Boot Camps, perhaps the strongest theme that emerged was that teachers should “emphasize the true idea that theatre is designed to tell a story.” Several CROc researchers noted this in their observations and confirmed, “that simple motto seem[ed] to be ingrained into teachers’ brains, and when they are able to convey that to the students, the teachers feel that a lot of pressure is taken off, and that kids are able to enjoy the experience being offered.”

Several teachers also noted the importance of this theme in empowering and enabling their leadership and their students’ participation:

“The minimalist approach was what really helped us. Breaking things down and knowing you don’t need the biggest, most expensive things to have a good show.”

“For my ELL students, if they can tell a story without words, they can feel involved without the added stress of lines in a language unfamiliar to them.”

This simple and focused approach to musical theatre has remained a constant and stabilizing principle that soothes teachers’ worries in overwhelming moments, refocuses energy on the purpose of musical theatre, and empowers all students to engage freely in musical theatre.

The aforementioned themes and approaches that emerge in the Boot Camp are important stand-alone concepts that characterize a well-executed musical professional development. However, these themes also provide important context when examining teacher and student growth in the JumpStart program.

5.2 Teacher Growth and Change
We will now examine JumpStart Theatre teacher growth in light of the philosophies and practices employed in the Boot Camp. Teacher growth was documented by teachers in their pre- and post-program surveys, focus group discussions, interviews, and observations. To summarize, teachers experienced a sense of growth and learning in the following ways:
1. Co-creation: Letting go while providing support
2. Confidence
3. Improved Teaching

5.2.1 Co-creation: Letting Go While Providing Support
Teachers consistently expressed and demonstrated growth in their ability to provide their students with a unique balance of guidance, support and agency. CRoC observers documented this regularly across observations and schools:

“The teachers were great guiders today. They were very good with directions for the tech crew, and they were sure to feed lines when necessary, but for the most part they allowed the students to find their own mistakes and fix them when they could, which seemed to allow the students to really take their own responsibility for their success.”

“The students all had an open opportunity to make their character whoever they wanted them to be. The teacher directed when things got a little too out of hand and would bring them back with questions of feelings and emotions in a certain moment, and she would hint at options, but overall, the children had control of themselves and their characters.”

“One teacher was phenomenal with the students and encouraging them to discover their character on their own. She asked the girl playing JoJo, “Is JoJo supposed to be innocent or serious? What do YOU think?” The question was not addressed to only the girl playing JoJo either, rather, the cast that was present was also asked the question and collaboration was encouraged.”

“As they ran scenes, energy seemed to be a problem, but the more the teacher stayed with them and brought energy to his direction, the more they started to add some choices and expression.”

As illustrated in all of the examples above, teachers were capable of directing students and providing support; this demonstrates teachers’ confidence in directing and understanding how to lead a musical theatre production. But even though teachers were knowledgeable about how to solve a problem or bring out a character’s personality, they would strategically hold back and provide students with space to explore their characters, make independent creative decisions, and problem solve with their peers. This suggests notable growth among teachers in their ability to lead when appropriate in order to build trust with their students, and to also step back in order to give students agency and grow their skills through the creative theatre process.

Several teachers reflected that they enjoyed this process and the experience of co-creation with students when providing them with the ability to creatively collaborate and design elements in the show:
“I learned that it is more exciting to students when you play the music and let them
dance while you watch and then take their moves and use them in the choreography.”
– Post Survey

“The most fun times are when we are able to brainstorm blocking on the spot with the
kids suggesting ideas.” – Post Survey

“I have learned that I am good at giving my performers a scaffold of direction and then
trusting them to fill the performance.” – Post Survey

“Especially after the first year, I don’t know about you, but we felt like we had to have
our hands on everything, and we were doing everything, and we were stressed. We
realized, “What are we doing?” The kids can do this!” Like they need to do this for
themselves, especially when you have older ones that have been through it before. That
takes a lot of the work and stress off of your plate, to allow them to teach each other.”
– Teacher Focus Group

This area of growth is particularly important to note because achieving co-creation with
students is not easy or always intuitive. **Teachers that become genuine co-participants
with students must have confidence, level-headedness, and technical skills, as well as
openness and flexibility to the creative process. The JumpStart teachers
demonstrated such traits throughout the third year of the program, indicating
substantial and holistic growth.**

![iTheatrics teaching artist leads JumpStart Theatre teachers in a Boot Camp exercise.](image)

**5.2.2 Confidence**
JumpStart Theatre teachers also noted in their post-surveys and focus groups that they felt more confident after participating in the third year of the JumpStart Theatre program:

“I can do anything I put my mind to. You have to set goals and crush them.”
– Post-Survey

“I am feeling a lot more confident. Last year I felt more panicked, like OH MY GOD, is this going to come together? Is this actually going to happen? Now, I feel more like, yeah, this is definitely going to happen.” – Focus Group

Teachers increased confidence is not surprising, yet reassuring. After participating in several years of intensive musical theatre training and productions with limited resources and capacity—and seeing success despite the many challenges—we would expect to see teachers’ confidence improving. The evidence of their confidence bodes well for the program and suggests that the three-year program yields well-equipped teachers capable of leading the program into a sustainable future beyond the intensive three-year period. This can be summarized in a teacher focus group reflection:

“...I think we feel pretty comfortable through the process now, having been through a third year. We were very rattled the first year, about a lot of things, because we didn’t know what to expect. **And the more you experience a production, the more you know that nothing will be perfect; roll with the punches, it will all come together, the show will go on – all those clichés, those are real.** And the kids never disappoint. So **I feel very confident that whatever happens from here on out, with the knowledge we learned here, we can achieve whatever we set out to do.** I feel very confident that as we bring new people on board, we can pass on that knowledge and expertise. So my sense is just a sense of confidence and accomplishment at this point – knowing that we still have plenty of room to grow.”

5.2.3 Improved Teaching

Finally, teachers reported feeling that the JumpStart Theatre Program improved their teaching in and beyond the program:

“My biggest takeaway from the three years, and the thing that I’m most appreciative of, is the knowledge that I’ve gained about myself. I have become a better teacher by using what I’ve learned through Jumpstart Theatre. I’m a Special Ed teacher, and I use tableaux with the kids so that they understand the stories that they’re reading in class. We’ve even gotten up and acted some of them out. That’s the hook that I need with some of my kids.”

“It allowed me to teach students how to make do with what you have. So many of the students I work with are concrete in their thought process that they see what is in front of them, but they cannot see what those things can be.”
In other words, teachers feel as if they are more able to engage their students, push their students’ thinking, and cultivate imaginative and ‘possibility thinking’ orientations by using techniques from the JumpStart Theatre program.

5.2.4 Summary of Teacher Growth
To summarize, JumpStart Theatre teachers appear to have grown in their confidence and teaching abilities in and beyond the JumpStart Theatre program. Most notably, teachers have developed an ability to be leader and follower, teacher and learner. They’ve learned to guide and support students when necessary, and, at the same time, to know when and how to let go so that students can maximize their agency and genuinely contribute to the creative production. Teachers may have been able to guide students and also let go because of their increased confidence in problem solving and teaching musical theatre, and their comfort with discomfort—key areas addressed in the Boot Camp. Thus, the Boot Camp may have prompted initial growth that was further developed through the practical experience of leading a musical theatre production and collaborating with their students in sometimes challenging rehearsal spaces with limited resources, and other complicating factors.

Students shine on stage at the Performance Showcase

5.3 Student Growth and Change
The qualitative data collected in observations and teacher surveys complement the quantitative findings on students’ growth in creativity, collaboration, and more. Every teacher reflected delight, surprise, and pride in their students’ ability to exercise their creativity, and to persist, adapt, and thrive in times of tight schedules, limited materials, and general stress. CRoC observers also note particular moments of student creativity and
collaboration. We present our analyses with excerpts from the data according to the following domains in which students demonstrated growth:

1. Ownership and Agency  
2. Creative Problem Solving  
3. Empathy  
4. Confidence  
5. Collaboration  
6. Sense of Community

5.3.1 Ownership & Agency  
Like previous years, students showed increasing ownership and agency of the musical theatre production throughout the JumpStart Theatre process. Often, students demonstrated a greater sense of ownership as a result of a teacher inviting students into the creative process. CRoC observers noted that, “outside of technical suggestions, the students had the freedom to make their character bloom, and the script and music stayed true to how they were written.” This was exemplified in a few practical examples:

“The teacher explained that she didn’t give any direction to the student for her dance, that she let her find her own way through the song, and it looks wonderful. The student seems confident in the dance she created for this piece, and the Bird Girls all fed off of her to create their own portion of background dancing.”

“Students were asked to think about and consider the space they would need to cover, how they would get to their exits without blocking their faces or their fellow actors, and each student worked to know their entrances and how to come on stage as their character, not as a student who fears missing their cues.”

Teachers remarked that this was always an intentional decision in order to build students’ confidence, agency, and ownership—and to learn what it takes to put on a collective, creative work.

“The constant push to use the kids’ ideas is vital. I like to micromanage, but that doesn’t help them learn, so I am way too stressed if I try it that way. The kids get so much more out of it being involved. There has always been some guidance in Boot Camp, and having the idea that they give us these small tools, and we use them on our own and grow them and then seeing that reflected in my students has been super helpful.” – Teacher Focus Group

“I think having that time for the students to be involved in the smaller pieces of things, collectively, as a cast and crew makes them appreciate all of the little things that go into making a show a success.” – Teacher Post-Survey

Although teachers intentionally provided opportunities to cultivate students’ agency, students also exercised their agency and ownership independently. As a CRoC observer
noted, “the students were taking the steps they need to take ownership of their own success.” For example:

“None of the props were in their designated area, and that seemed to really mess with the students’ flow. By the end of rehearsal everyone was looking for their props and placing them where they needed to be, because the flow was not there otherwise, and the students recognized that.”

“Some of the senior students were doing well with keeping their newer castmates in line and focused. It takes a lot for a student to stay in character, while also watching their peers and trying to ensure that everyone is where they are supposed to be. Key players all worked hard to ensure they and their classmates were where they were meant to be.”

In summary, students demonstrated high levels of agency, independence, and ownership in all aspects of the creative process; teachers were intentional and designed co-creative learning opportunities, and students demonstrated agency and ownership even when unprompted. This area of growth is particularly noteworthy given the frequency of this observation, the extent to which it is connected to other areas of growth like creative problem solving and confidence, and the scope for students to transfer this skill into other areas of their learning and life.

5.3.2 Creative Problem Solving
Students also exhibited strong levels of creative problem solving while participating in the JumpStart Theatre Program—and through their creative problem solving, continued to exercise their ownership and agency. CRoC observers noted creative behaviors throughout the rehearsal observations (see section 3.3 for additional examples):

“With as many bodies as there are on the stage, the students are [working to ensure] that their faces are turned to the audience while also ensuring their faces are not blocked by a ton of other students or props.”

“Getting the students to focus on and pay attention to the cues in the music and in the dialogue while also staying focused on keeping in character and interacting with their families or groups is proving difficult. However, one student creatively offered to add levels into their standing so that the students could still watch what was happening while also interacting with their groups.”

“The students adapted to no music. Their teacher had an after-school commitment that kept her away from rehearsal until nearly 4:15. […] However, the students did well singing through what they could, and sang along to the best of their abilities with the quiet music from a phone and laptop.”

These examples and the frequency of these types of observations indicate that students demonstrated creative problem-solving behaviors regularly and independently. Such
results further suggest that the general lack of change in NGCS creativity scores may be more due to small sample sizes or selection bias, as opposed to a genuine lack of student creativity. The qualitative data indicates that JumpStart Theatre students are creative problem solvers.

5.3.3 Empathy
JumpStart Theatre students also demonstrated empathy for their characters and, at times, for their peers. CRoC observers noted several instances in which students were “digging into their characters and having the space to learn who they were.” For example:

“The young boy who plays the character with a lisp is doing great grasping the reasons he needs to play up his lisp. I honestly had no idea he didn’t naturally have it until I heard him speaking in the wings later in rehearsal. I knew he had struggled with being made fun of, but he seemed to grasp why and how the lisp played into his character. It was great to see him really coming into his character. “

“With one student, the ability to detect the emotion that should be present, down to feeling angry at outside sources but also finding anger within himself was profound. For Mayzie and the Bird Girls, one student had asked if the Bird Girls were jealous of Mayzie and another replied, “I think that the thought process of the Bird Girls is that they adore Mayzie. They are very happy to be as close to her as they are, but there isn’t any jealousy there.”

The empathy that students demonstrated for the characters also sometimes showed itself in their interactions with each other. One teacher noted this when speaking about her special needs students’ interactions with other students:

“A lot of our students won’t take the time to make relationships with students like that. But when I’m there at practice and in the classroom with him, and we’re joking around, and we’re joking at this level, when some of the kids see how smart he is and they start to want to become friends with him. And they did that during the show, because they had those opportunities that they would never have had before.” – Teacher Focus Group

In other words, the JumpStart Theatre Program seems to have provided genuine opportunities for students to cultivate their empathy, starting with their characters, but extending to their peers and real relationships in their lives.

5.3.4 Confidence
Prior to participating in the program, most teachers indicated on their pre-surveys that they anticipated and hoped to build students’ confidence through the JumpStart Theatre Program. In teacher post-surveys and CRoC field researcher notes, throughout the study, it is documented that students actually demonstrated increasing confidence throughout their participation in the JumpStart Theatre Program. Many observers and teachers reported seeing tremendous growth in students’ throughout the three-year program:
“One thing my husband commented on – because he’s seen all three of them – he said the confidence in the kids, and just how clean things were! He said, that closing number, you could put it on any stage.” – Teacher Focus Group

(Of a previously challenging student who has participated in JumpStart Theatre for three years): “He knows he’s playing a pivotal part, not only in the show, but in the program as well, and it is amazing to see this student, who the teachers will tell you struggled before, grow into such an incredible student.” – Teacher Focus Group

Even students with special needs demonstrated, in their own way, a growth in confidence throughout the program.

“We have a student with autism, and I worked with his caseload manager to encourage him, tell him to come out. Well, he came out, he attended performances, but with autism it’s just like a special monster – you don’t know the boundaries of it. And that’s happened a lot during the practices. He would reach that boundary, and he would retreat. It’s like, how close can you get to the turtle, before he snaps back in? And we can’t get him to come out before the practice is over. So, by the end, when we were at performance time, he would never go out on stage, but he was always backstage singing along, he was right there in the wings. And when we went to go take the bows at the end, the first night he was like – at the very end, snuck back in. But last night he walked out on stage with everyone and took a bow. And that was the reward for me, all year – if I worked that hard, to see him do that.”

There were also instances in which they saw students’ confidence visibly grow during a JumpStart Theatre rehearsal or performance. For example, teachers reflected on one particularly anxious student and the effects of the program on her confidence and ability to cope with uncertain situations:

Teacher 1: “...She panics in the classroom when teachers call on her to answer out loud. And then she is on stage, and she’s just belting it, and she’s hitting every mark. The second night her microphone fell out – the pack fell out of where it was wrapped up around her...”

Teacher 2: “And we’re going, “Oh no, what’s she gonna do?!”

Teacher 1: “And everybody is freaking out over the radio. And she just comes over, and – well, first of all, she’s on stage, and everybody’s like “Go off stage!” And she just picks it up and holds it in her hand and carries on. And then she comes off, and we fix it. Those are the kinds of things that to me are so powerful.”

Finally, when asked in small focus groups, students also reflected that they felt more confident because of the program:
“I like all the skills in life you can get from it. ’Cause, I have to do public speaking all the time and presentations. And just learning how things get put together is very helpful. And, like, confidence is really key to what you do.” – Student Focus Group

This program appears to provide ample opportunities for students to be pushed beyond their comfort zone, to learn how to handle unanticipated challenges and problem solve, and co-create with their teachers. All of these opportunities have likely made it possible for students to realize their capabilities and grow their confidence.

Finneytown students help each other prepare their costumes and hair.

5.3.5 Collaboration
Students had opportunities to co-create with their teachers and their peers throughout the program and, thus, a chance to exercise collaboration skills. CRoC observers often noted that rehearsals “allowed for students to interact and ask questions not only to their teachers, but to their peers as well.” For example:

“Each student struggled with their spacing, but I noticed discussion between the students in each group. They were marking who they were with and finding their own solution to remembering who they were with and who they stood between.”

It is also important to note that when students collaborated, they collaborated well. They exhibited cohesion, communication, and respect to each other when problem solving or supporting one another. For example:
“The students were great with marking the stage, and I was impressed with the team work coming out to the tech crew [from the stage]. They were incredibly cohesive.”

“A student led the other two students who played alongside her, and when they struggled, she was great with combating the delays and got them back to where they needed to be.”

The JumpStart Theatre Program appears to have created space for students to work together productively and to collaborate meaningfully.

JumpStart Theatre has helped students build community at Finneytown.

5.3.6 Sense of Community
Finally, students fostered an authentic sense of community within their JumpStart Theatre Programs. Many teachers expressed hope that their students would grow in this way in their pre-surveys, and teachers and CRoC field observers noted examples of this collaboration and community in several schools:

“What’s obvious is just the enjoyment and fun and community that the kids appreciate being a part of this whole work, this group, this play. It’s more about that than anything, for a lot of them. “I’m a part of something. I’m a part of a bigger community, I’ve collaborated.” I thought our student who spoke yesterday hit on that. It helped her make friends, it helped her reach out and feel more comfortable with her peers. And the bus ride was a big party – they were happy to be together. I think that’s something we’re always celebrating, whenever we see it. It’s a sense of community.” – Teacher Focus Group
A CRoC observer informally interviewed a student during a rehearsal and the student reflected on the JumpStart Theatre process, working with their peers, collaboration, and community:

“The people that join it, you know they’re determined. They want to do something. And usually most of ’em are nice. And if not, they’ll evolve. And they’ll become friends, and you’ll have memories, and make laughs.”

The student’s sentiments were echoed in other moments throughout the musical theatre production, as when the students would regularly congratulate one another and clap after finishing a scene, or when motivating their peers to persist and improve. A CRoC observer noted this several times in rehearsal observations. For example:

“A student was being praised for fixing issues, and her cast and crew mates were cheering for her success, I can only assume she was enjoying that she had come so far from last year with her knowledge of the technology at hand.”

One particularly useful mechanism to encourage students’ sense of community was bringing former JumpStart students back to assist in set design and mentoring current students. A teacher reflected on this in a focus group:

“Because there were many times that we brought [the former students] down – they would be rehearsing on the same day they were having club, so we would take two or three kids from the high school club that had been a part of the production in the past to come down and tutor kids one-on-one in memorization of lines, characterization techniques, you know, just helping them build confidence.”

The depth of student growth in the JumpStart Theatre Program was likely enhanced because of the strong sense of trust, togetherness, and community.
5.3.7 Summary of Student Growth and Change
To briefly summarize, the qualitative data reveals that students demonstrated growth in several key areas including ownership and agency, creative problem solving, empathy, confidence, collaboration, and a sense of community while participating in the JumpStart Theatre Program. These areas of growth were demonstrated consistently throughout the qualitative data in observations, student reflections, teacher focus groups and surveys, and more, which suggests strong triangulation and depth of impact.

It's also important to note that the areas of growth appear interrelated, and greatly affected by the experiences that teachers had during the Boot Camp and the skills and relationships developed over the course of three years. Thus, the JumpStart Theatre Program appears to be a program of genuine and deep growth for all participants who engage fully and freely—and when teachers model deep engagement and provide the same opportunities to students, the most desirable result occurs: students flourish.

5.4 Results Discussion: Factors that Enabled Student and Teacher Growth
To briefly review, students and teachers who participated in the JumpStart Theatre Program experienced growth in:

1. Comfort with Discomfort
2. Confidence
3. Creative Problem Solving
4. Empathy
5. Ownership and Agency
6. Sense of Community, Community of Practice, and Collaboration

While it is important to make note of these areas of growth as a measure of success, it is also worthwhile to ask why and how students and teachers experienced such growth while participating in the JumpStart Theatre Program. When analyzing the data, the CRoC research team made note of potentially influential factors that enabled student and teacher growth. We briefly present these factors below.

5.5.1 Guided Structure with Room for Creativity
As in previous years, the qualitative data suggests that when teachers provided a sense of guided structure that still had plenty of room for creativity, students and teachers were able to grow alongside each other.

In the Boot Camp, teachers were often given a base level of support and structure from calm, confident Boot Camp leaders, which let teachers feel confident in the production ideas and tools and empowered to use such tools. However, there was still enough flexibility and space for creative adaptation and interpretation through discussions of how teachers may use such tools and approaches in their own schools. This balance of guidance and structure with openness towards creative interpretation likely fostered teachers’ agency and ownership over the tools and practices, and more.

Similarly, observation data reveal that students often needed the guidance or confidence from their teachers in order to feel confident taking risks. The only time that rehearsals became chaotic in schools was when teachers were frazzled, uncertain, and lacked direction or a calm confidence. Whereas rehearsals led by calmly confident teachers often struck the ideal balance of structure and space for creativity. In such rehearsals, students were not limited by rigid direction from teachers; rather, students had enough guidance from teachers so that they could feel assured by their teachers’ support and general direction, while also feeling empowered, invited to contribute creative ideas, and participate as equal and valued members of the creative learning community.

5.5.2 Co-creation Among Students and Teachers
Cultivating an environment conducive to co-creation—equal participation in a creative and iterative process—among students and teachers may also have been an influential factor in student and teacher growth. Throughout the rehearsals, CRoC observers regularly noted moments in which students and teachers appeared to engage in a creative dialogue, in which they designed choreography, blocking, or sets together through respectful, curious, and equal conversation and experimentation.

In these moments, the teacher initially guides or prompts the students. Then, once students start participating, the creative process becomes a conversation. Teachers start to respond to students’ ideas and inputs and the outcome is truly co-creative and a result of a reciprocal dynamic between teacher and student. This co-creative process is one that
inherently cultivates a sense of community among students and teachers, through collaboration, confidence, agency, and improvisation. Thus, this particular dynamic is likely to be a strong factor in enabling student and teacher growth in the JumpStart Theatre Program.

5.4.3 Strong Teaching Teams
When the JumpStart Theatre teaching team had a predictable and reliable working dynamic, with clear roles and responsibilities, the theater process and production appeared to run particularly well. This smooth working environment may have been a powerful mechanism for teacher growth and general success. Several teachers reflected on this in focus groups and post-surveys:

“The second year I was the lead person. It went really well, and the kids had a blast, but I was a nervous wreck the whole time. So, this year, with my colleague being in that lead role and me being able to just jump in and out, is a much better fit for me.”
– Teacher Focus Group

“I learned to see my colleague’s strengths and recognize their weaknesses so that I can best fill the gaps to get everything done that needed to be done by the deadlines. I learned to allow someone else to take the lead which allowed me to address missing areas. In the past, I [took] the lead and [took] on everything myself while delegating tasks. I learned how to compromise so that other teachers can learn and grow.”
– Post-Survey

These clear roles allowed teachers to specialize and focus in their area of interest without duplicating efforts and running into direct conflict over competing visions. At another school, in which there was a significant lack of communication amongst teachers, there was slightly more chaos in rehearsals, which may have affected student participation and growth. CRoC researchers repeatedly noted that the connection between a strong teaching team and student performance matters:

“Seeing the involvement of these teachers gives me incredible hope for this school, and a true understanding of why a strong team is a vital part of this program. The students are learning very well, and the freedom to explore their characters is doing them all good.”

“I am repeatedly impressed with the time management of the teachers. As a team, they seem to work together very well. The students are progressing very well with their songs, and a few of the students are already off book with their lines. Regardless of where a student may be with memorization, the teachers keep a great flow with watching pages and keeping the students on track. Nothing felt too rushed, and I never felt as if they were running out of time.”

Therefore, it may be worthwhile to continually investigate how to support strong teaching teams with clearly defined roles. Investing in teachers’ productive collaboration and shared responsibility could yield benefits for teachers and students.
5.4.4 Feeling Like Part of a Community

As mentioned when discussing student growth, feeling a strong sense of community likely played an important role in students’ growth. However, the sense of community appears to have extended beyond school-specific programs. Teachers and administrators feel connected to the JumpStart Theatre community. In teacher and administrator focus groups, they expressed this sense of connectedness:

“After these [Boot Camps] I always feel like I am part of the other schools and their shows because of all the talking and ideas we get from each other. I really enjoy learning from them.”

Not only do they feel connected to a community, they see the value in the community and opportunity to share, learn, and collaborate—and are willing to create ways to grow this sense of community beyond the three years and beyond the provided JumpStart Theatre Program structures. This was illustrated in a focus group conversation amongst teachers:

Teacher 1: “I value this [conversation/focus group]. I think this is a great way to problem solve and support each other. So something like this – monthly? I don’t know. That would be pretty interesting.” – Teacher Focus Group

Teacher 2: “I think, too, that Saturdays are great. So having a once-a-semester Saturday […] and it’s professional development, maybe some lunches. And if you had these topics – again, not that we have the funding for this, but if you do a brown-bag lunch – […] and then offered those independently from the Boot Camps, is that something that you believe people want to come participate in?”

– Teacher Focus Group

In this scenario, teachers expressed a desire to continue their connection and collaboration, or sense of community, even without funding or formal support. This connectedness has and will likely to continue to be a factor that enhances success of the program; the more connected teachers and schools are to one another, the more support they can provide, ideas they can share, and growth they can experience.

5.4.5 Community Buy-in

Community buy-in beyond the school appears also to be a factor that increased student growth. The JumpStart Theatre program is implemented in urban and rural school communities that have not offered this generative learning experience to their middle school students. CRoC observers and teachers noted that these communities have rallied and expressed their support through participation and attendance at the shows:

“Seeing the community itself support these kids, who are doing something that typically in rural communities would get you labeled negatively...if this had started up where I was in school, people in the program would’ve been exiled for being nerds. I assumed the same thing would happen here because they’re so much like us. It’s a farming town. You farm and you play basketball – those are your options. I was like,
“Oh, I hope that they’re not getting bullied.” But this community rallied behind this program.” – Teacher Focus Group

“For the community, this show was the happening thing in town. I remember last year, a lot of the members of the community were excited to see how the students had done, and this year was no different. The people of the community all joked about being at school on a Saturday and how excited the kids were to be there.” – Performance Observation

“There were so many smiling faces in the audience, and I always love hearing the community members discuss the students and how they have all collectively watched them grow up.”- Performance Observation

When the whole community believes in a program, the participants likely believe in their program, too, participate fully and deeply, and thus experience sincere and tangible growth.

5.4.6 Integration with the Curriculum

Finally, formal integration of JumpStart Theatre practices into the school beyond the performance is likely to increase student and teacher growth. In some schools, teachers have integrated elements independently into their teaching, while in other schools, they have developed a formal JumpStart Theatre class operating Monday through Friday as an elective.

“I teach a literacy enrichment course. So I get struggling readers and writers. When I have students in my class that are also in the musical theatre program, it enriches their academic pursuits in our class more than I can quantify. When we talk about plot, when we talk about tableaux, telling stories – beginning, middle and end – I can use their theatre experiences, what they’re doing in rehearsal, in the curriculum in the classroom.” – Teacher Focus Group

“Their class is set up as a Monday through Friday course, it was an elective this year, and since auditions haven’t happened yet, to hold the kids over, they are learning all about the history of musical theater. I loved hearing that these teachers arranged for an entire class period a day to be set aside for these students.” – Teacher Focus Group

When students and teachers have greater access to JumpStart Theatre philosophies and techniques throughout the school day, it is more likely that their growth translates across time and context and becomes a transferable skillset.

5.4.7 Summary of Factors that Enable Teacher and Student Growth

In summary, we identified the following factors that may enhance the depth of student and teacher growth in JumpStart Theatre:

1. Guided Structure with Room for Creativity
2. Co-creation among Teachers and Students
3. Strong Teaching Teams
4. Feeling like a part of a Community
5. Community Buy-in
6. Integration with the Curriculum

To ensure lasting and transformative change among students and teachers, we suggest targeting these six areas and supporting schools to embody these principles, practices, and approaches.

5.5 Administrator Growth and Change

We now present a brief section on school administration growth and change, to examine the perceived change in schools after participating in three years of the JumpStart Theatre Program. Generally, we identified two areas of growth experience by administrators: (1) seeing value in the program and (2) building sustainable structures for JumpStart Theatre after the three-year period.

5.5.1 Seeing Value in the Program

Although JumpStart Theatre teachers and some administrators anticipated or saw value in the program from day one, some administrators remained unconvinced of the impact and value of the program. However, several teachers and JumpStart Theatre staff members noted substantial changes in administrators’ attitudes during the program in this third year. This shift was captured in the teacher focus group discussion:

Teacher 1: “Their first performance, and [the Principal said], “We’re not going to have the second show. These kids are terrible, they can’t sing, they’re not hitting notes. And I said, “I thought they were amazing.” And she said, “Well, clearly you don’t see much theatre.”

Teacher 2: Because they couldn’t find pitch.

Teacher 1: Because that’s their biggest problem in life, right?

Teacher 2: So I said to her, “It’s not the destination, it’s the journey.”

CRoC Researcher Quoting Principal: “I didn’t get it. Well, guess what? I got it. I had an ‘aha’ when I saw that Special Education kid up there. Our kids need this.” That’s what she said as she walked off.”

This example illustrates how a principal experienced transformative growth in her ability to see value in the JumpStart Theatre Program. This growth is important to note because school leadership can determine if and how the program is sustained beyond the three years. If administrators see value in the program, there is a greater likelihood that they will build sustainable systems to continue the program. For example:
“The principal has never talked to the teachers. And did not attend rehearsals. She came only for the second production. And she just announced to them that she’s found a way for them to get funding. So you never know where something triggered her. The good thing is she came here, and she believes she’s found a way to build this into a sustainable program.”

5.5.2 Building Structures for post-JumpStart Theatre
Over time, as school administrators have seen greater value in the program, they have committed to building sustainable structures to support the program’s continued success. One principle expressed this:

“My next “aha” is, “Oh gosh, third year – how do I keep this going?” Which I think we’ve got to plan for. You all don’t know that yet. I think we’ve got to plan if we want to continue, to create some partnerships and keep going.”

Several schools have moved beyond contemplating a plan, to executing a plan for sustainability, which demonstrates growth in administrators. They are willing to take action before the program’s conclusion to ensure that there is no delay in the program’s continuity. For example, one school created a high school drama club that meets once a week after school to ensure that students who participated in middle school could continue to develop their skills and interests in musical theatre. The school administrator described the program and their intentions to design a high school program in the near future:

“All those alumni, and then some new kids from the high school, are now in an after school club that meets once a week. We have a little bit of district money. They actually did their own generated lip-sync production of Michael Jackson’s “Thriller.” We recently did it at a talent show at the school. It was all student-generated, student-driven. We just facilitated whatever they want to do. Telling them the whole time that our plan is to try to open up a high school program before they graduate.”
– Teacher Focus Group

Other schools have created funded positions to ensure the program continues while another school administrator has decided to build a school identity around the arts in order to attract more students:

“They’ve started marketing that “Maybe you’ll want to come here to school, if you appreciate the arts,” and he listed all the subjects, including junior high theatre and high school theatre. So, how exciting that will be! I think that when we look back on what’s worked and what hasn’t worked, those have been some of the highlights.”

Thus, we have seen evidence of administrator growth because they have already sourced funding and created sustainable structures to ensure the program continues.

6. Third Year Conclusions and Recommendations
To summarize, the third-year evaluation of EdTA’s JumpStart Theatre Program reveals positive gains and growth for teachers, students, and administrators who participated in the program. Teachers and students have become co-creative collaborators, working together and with confidence to achieve collective success in their musical theatre performances. Students with troubled pasts are transforming into student leaders. The benefits of the program are spilling over into regular classroom teaching and the local community; and school communities are actively pursuing—or planning to pursue—ways to make the JumpStart Theatre program sustainable. These remarkable successes are documented throughout the three-year reporting process.

We conclude the three-year study by returning to recommendations proposed in previous reports. We rank each recommendation on a scale of 1 (not implemented) – 5 (implemented very well) to indicate the extent to which previous recommendations have been successfully implemented. We then highlight ways to continue success in years to come.

**Recommendations:**

1. **Continue to Build Upon Trained Teacher Experience.**
   
   **Ranking:** 4
   
   **Noted improvement:** In year three’s Boot Camp, more experienced teachers were prompted to provide advice, support, and mentorship to new JumpStart Theatre teachers. This provided an opportunity for trained teachers to share their experience and help others to grow in the process.

   **Recommendation for Future:**
   
   (1) Teachers who have participated in Boot Camp training can return as alumnae to the Boot Camp for refresher courses, or advanced training to continue to share experiences and be a resource for new teachers.
   
   (2) Create a professional development network whereby JumpStart Theatre teachers meet once a month to discuss their experiences, challenges, and musical theatre techniques. This could take a similar format to the teacher focus groups used in this study. Teachers found a live platform—potentially with a Teaching Artist available to guide the discussion—to be productive and inspiring. This network would continue and deepen the emerging ‘JumpStart Theatre community of practice.’

2. **Support Strong and Clearly Defined Teaching Teams.**
   
   **Ranking:** 4
   
   **Noted improvement:** We found several strong teaching teams in the JumpStart Theatre schools and noticed that when strong teaching teams are present, the musical theatre
production runs very smoothly and creates ample opportunity for student and teacher growth.

Recommendation for Future:
(1) Building upon the co-creative culture between students and teachers, we suggest integrating students more formally into strong teaching teams. Students have demonstrated their capacity for leadership through their creative problem solving when teachers are unavailable, or resources are limited. It may be very beneficial to introduce the role of Student Assistant Director(s), whereby emerging student leaders can take a more prominent teaching and leading position, while also strengthening the fiber in teaching teams.

3. Include Emerging Student Leaders in Boot Camps.
   Ranking: 1
   Noted improvement: We did not note any student participation in the Boot Camps.
   Recommendation for Future:
   (1) As mentioned in the aforementioned recommendation, we suggest creating formal student leader positions, such as Assistant Directors. These emerging student leaders could be nominated and selected prior to the Boot Camps and therefore included in Boot Camp training.

4. Require Rehearsal Spaces.
   Ranking: 3
   Noted improvement: Some schools started to adhere to this requirement, which vastly improved rehearsal consistency and quality.
   Recommendation for Future:
   (1) Continue pushing for this requirement and support schools to identify appropriate rehearsal space in classrooms or other school facilities.

5. Coordinate Ideal Scheduling.
   Ranking: 3
   Noted improvement: Some schools developed clear and visible calendars for students, parents, and administrators to create clear expectations and ensure all facilities were available when needed.
   Recommendation for Future:
   (1) Continue to encourage JumpStart Theatre teachers to coordinate with their school administration to work towards an ideal rehearsal and performance schedule.

6. Continue to Provide Constant Feedback.
   Ranking: 5
   Noted improvement: JumpStart Theatre teachers and students are provided with ongoing feedback from Teaching Artists and EdTA staff throughout the rehearsal and performance process. This feedback has been tremendously helpful in improving the
program and in helping teachers and students feel supported and connected to a wider
JumpStart Theatre community.

**Recommendation for Future:**
(1) Continue to encourage a strong and regular feedback loop between students,
teachers, and JumpStart Theatre or EdTA staff. It may also be useful to link specific
teachers with EdTA teaching artists for regular feedback during the JumpStart
Theatre program, in a mentor-mentee type relationship.

7. **Cultivate an Environment Conducive to Co-Creation.**

   **Ranking:** 5
   **Noted improvement:** Based on three years of observations, it is very likely that the
greatest moments of growth among students and teachers in collaboration, creativity,
and sense of community, were as a result of the co-creative approach to designing and
producing a musical performance. This process is one that inherently cultivates a sense
of community among students and teachers through creativity, collaboration,
confidence, agency, and improvisation. Thus, this particular dynamic is likely to be a
strong factor in enabling JumpStart Theatre’s student and teacher growth.

   **Recommendation for Future:**
   (1) Continue to encourage this co-creative relationship by supporting JumpStart
   Theatre teachers to make formal or semi-formal roles for student leaders and by
   modeling co-creation in the Boot Camp professional development.

8. **Integrate into the School Curriculum.**

   **Ranking:** 3
   **Noted improvement:** As evidenced in Gamble over the past two years—and in some
individual teachers’ classes at other schools—integrating the program’s theme into the
school day curriculum is a beneficial practice for students’ and teachers’ creative
growth and for building school community and pride.

   **Recommendation for Future:**
   (1) We recommend that JumpStart Theatre teachers meet with content teachers, music,
dance, band, choir, and art to establish curricular connections with subject areas
   and transferable skills.
   (2) We also recommend that a JumpStart Theatre professional development network is
   used to encourage administrators and teachers to transition the program from
   being a solely after-school program to an integrated school-day curriculum.

9. **Include Parents.**

   **Ranking:** 4
   **Noted improvement:** Parents involvement has improved.

   **Recommendation for Future:**
   (1) We recommend asking parents how they would like to be involved in the JumpStart
   Theatre program and how they may want to connect with each other on their own
time.

10. **New Recommendation: Consider leaning on the JumpStart Theatre Program as a
safe space for students and teacher to manage change and conflict.** We recommend
drawing upon the emerging JumpStart Theatre community and community of
practice—one that embodies resilience, collective success, empathy, and growth—to overcome challenges faced by students, staff, parents, and the community. The JumpStart Theatre community is a valuable resource built upon sturdy relationships. Utilize those relationships to persist and grow in challenging times.

In conclusion, the JumpStart Theatre team has responded to our recommendations well, with significant progress demonstrated in nearly every area. We anticipate continued growth, especially as administrators and teachers create paths for sustainable implementation beyond the three year program period. We are heartened by the program's success and all students', teachers', administrators', and communities' growth over the past three years.

End of Report

7. Appendix A: Sheila Page Creativity Inventory

Behaviors that support development of creativity
CROCs approach to data collection is informed by the work of Ms. Sheila Page, HMIE, Education Scotland. What follows is her framework for defining creative attributes, which can be applied to student learning, teacher learning, and teaching for creativity. The following attributes are not exclusive to the development of creativity skills, nor do they represent a linear process. However, taken together, they point the way towards learning behaviors that support the development of creativity skills.

People who are creative tend to be:
- Inquisitive
- Open-minded
- Imaginative
- Able to identify and solve problems
- Confident in their right and ability to
- Influence change

CREATIVE LEARNING BEHAVIORS

Inquisitiveness:
- Being curious

- Noticing deeply
- Registering patterns
- Making connections between elements
- Referring to previous knowledge
- Researching productively

Open-mindedness:
- Formulating good questions:
  What if….?
  Why does.....?
  Suppose that…?
  Who says…?
- Challenging assumptions or the status quo
- Identifying problems
- Exploring multiple viewpoints
- Functioning in uncertain situations

Use of Imagination:
- Lateral thinking
- Using analogy
- Hypothesizing
- Playing with several possibilities
- Synthesizing and refining multiple options and viewpoints

Delivery of constructive solutions:
- Planning
- Inventing
- Crafting, delivering and presenting

- Applying discipline and resilience
- Evaluating solutions against initial problem
- Evaluating impact of solutions
- Identifying next steps in refinement or development process

Confidence:
- Motivated and ambitious for change
- Confident in validity of own viewpoint
- Able to identify impact of creative process on:
  - personal development
  - project outcomes
- Able to apply creative process to other situations
- Able to lead and work well with others