

**Why the Arts Matter in Education  
or  
Just What Do Children Learn  
When They Create an Opera**

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## INTRODUCTION

At the turn of the last century, the educator Francis M. Parker wrote for a broad public that all deep learning was “expressive”, and combined “the manifestation of thought and emotion.”[1] The philosopher, John Dewey, carried the point a step further by arguing for the central role of the arts in all general education.

In a culture more inclined to value the immediate over the eternal and the applicable over the aesthetic, we have frequently neglected their arguments. In many American schools that claim to teach the arts, children receive instruction no more than an hour a week for the thirty-two weeks they are in school.

However, a century later, contemporary educators are reclaiming Parker’s and Dewey’s arguments by using avenues different from philosophical argument. In the last few years we have seen not only the creation of national arts standards and the collection and reporting of the National Assessment of Educational Progress data on American students’ performance in the arts, but the appearance of a number of research studies suggesting that there are substantial benefits to be gained from arts education. [2]

Having begun to demonstrate that arts education matters, we are in a position to muster the understanding and resources to ask the next questions: Why does involvement in music, theater performance, or the visual arts spark engagement with school, higher levels of academic performance and increased participation in community service? Under what conditions do the arts have these effects? These are difficult questions, but they are the keys to gaining the deeper understandings that will permit us to explain the importance of arts education to a public that is just beginning to listen. Moreover, answering them will give us the capacity to design quality programs likely to yield lasting effects.

## Lifting the Lid: Understanding Why Arts Education Has Effects

The customary approach to demonstrating the effects of arts education is to select two groups of students, preferably similar in their backgrounds. One group receives no formal arts education, while the second group receives arts training in forums such as the addition of music to their curriculum, the integration of visual arts into their social studies curriculum, or a series of artist residencies. Following that intervention, we identify what distinguishes the students who have had arts education from their peers.

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S (Time 1) —> No arts education —> S (Time 2)  
 S (Time 1) —> **ARTS EDUCATION** —> S (Time 2)

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While helpful as far as it goes, this approach tells us nothing about the specific effects that arts education has and why those particular effects occur.

For instance, imagine we find that, as a group, students involved in an intensive visual arts program perform better in school than their peers. What can we claim about the specific effects of visual arts learning on academic performance? If these students also perform better on academic tests, and succeed in the next level of education, we might claim that their visual arts experience has conveyed general learning strategies and understandings. But suppose we find that these students are better at reading diagrams and graphs, and doing geometry and that doing well in geometry places them in higher level math classes with peers who are more invested in school? What if all that distinguishes these students, beyond their higher grades, is regular attendance rates? Do we want to argue that visual arts training lent them persistence? Do we consider whether schools give higher grades to good citizens? Depending how we answer these questions, our understanding of the effects of visual arts learning would be dramatically different.

The rest of this paper discusses the particular role that qualitative research can play in providing a deeper, if not yet conclusive, understanding of what effects arts

education programs have and why these effects may occur. The focus of this work is a multi-year study of “Creating Original Opera (COO),” a program in which elementary students form a company to write and produce an original opera.

### Beginning with “Gregarious” Moments

In a preliminary evaluation of the Creating Original Opera program, teachers made the claim that “the opera makes students work harder and smarter.” To understand what they meant, we worked closely with teachers, in observing classes and examining tapes and transcripts of student work. We asked teachers to identify instances of learning that they believed were specific to the opera. They pointed out situations such as the following in which a teacher and two students (Wendell and Anna), along with two other students (S1 and S2) developed a set of feasible solutions for a changing set:

T(eacher): So let me re-state the problem for you. All right, the fact is that we are going to have two drops.

S1: The library.

T: The library, and the other one is...? The what?

S2: The playground.

T: The playground.

T: Now, they are going to be happening in the same space on stage. Now we don't have a high place to hang these things from... I need some of your thoughts....

A: Well, you know how you have those maps up on the wall there? (she points) If we could just find something to sort of hang it from, and then pull it down each time and then when you're finished you can just pull it down and...

T: You mean like a shade?

A: Yeah.

T: OK, let's think about that. That wall is a folding wall they open and close frequently...

A: So it might have to be a little forward...

T: ...The whole idea of something that pulls down and goes back up is a neat idea, but the idea of putting something...across the wall might not work. Does anyone else have another idea of what we could do? Wendell?

W: We could take like a long strip of wire or something like that and get a piece of paper, and get a big roll and like a garbage can kind of thing, but bigger, and we could staple the design on it, and keep rolling it when we want a different design on it. Like if you want a different set design...and then if you don't want the people to see what you're doing you just close the curtain and...

T: Do we have curtains?

W: No, but I mean, you could just turn the lights out or something.

T: Oh, blackout...go to black.

W: Yeah. [3]

When we asked what the teacher saw in this episode, she said unhesitatingly, “They just keep working toward a solution. The opera's so...gregarious.” In short, she had a theory about what students were learning from the opera: something about persistent joint work. She also had a sense of why that persistence mattered: somehow it created an ecology in which quality was a central issue.

Our challenge as researchers was, in part, to follow up on that intuition by examining what exactly happened in those “gregarious” moments and asking why gregariousness should improve, not merely animate, what students were able to do.

### What is learned in an opera company

To pursue these questions, we selected four classrooms in which the COO program was fully implemented (e.g., classroom and specialist teachers were involved, teachers were trained in the program, there was adequate classroom time, and so forth). Since we were developing an understanding of “gregariousness” and why it mattered, we wanted maximum insight into the

fine workings of opera classrooms. In a sense, we wanted to take the back off the watch and see how the fine cogs and wheels produced movement and change.

To help us gain such insight, we developed a set of qualitative approaches to collecting data. These included classroom observations, transcripts of teacher and student interviews, and student ethnographies, logs of important activities and collections of student work. From these sources we selected moments of shared problem-solving that we compared to similar episodes from non-opera settings, such as working in small groups to answer an open-ended math problem or to develop an oral presentation on Native American leaders in social studies. By studying and coding a sub-sample of this data, we developed a set of features that distinguished many of the opera episodes of whole class discussion from problem-solving in other contexts. Using the larger pool of episodes, we could see whether or not these contrasts in collaborative work held up. These initial findings are summarized in Table 1.

These data suggested that students in the opera setting participate in more substantive ways in group interactions than students in the alternative settings. In addition, these data demonstrate that during opera

sessions, students operate in a more cohesive way, connecting what they say to others' turns, their own earlier comments, and to issues that have a long-running history for the group.

Interestingly, this overall pattern holds in three of the four classrooms studied. It breaks down in the fourth, where students were more often a work force doing teachers' bidding than a company of individuals in charge of making choices and decisions. In that classroom, the data from opera contexts is no different from that of non-opera settings.

Finally when we look across three time periods (T1 = outset of the opera process, T2 = midpoint, T3 = the week of the final production) another equally interesting pattern becomes apparent. The cross-time comparisons show that within opera contexts these substantive and cohesive collaborative behaviors actually increase in the large majority of the categories. This pattern suggests that the opera work is not simply one which is more conducive to joint work, but one in which collaborative interaction grows over time.

Thus, we go beyond the observation that the opera experience produces students who collaborate effectively to solve artistic problems. We can begin to specify what it is that students learn about collaboration in the search for quality. In the context of continuing and well-implemented opera work, groups of students become increasingly expert at active participation in the form of taking turns and asking questions. Moreover, students become increasingly expert at coherent work towards quality. That is, they build off what others propose. Student remarks link back to earlier turns, they can make constructive comments, and they can edit their own earlier suggestions in the light of an evolving discussion. Finally, they can see their current conversation as linking back to, or shedding light on, an idea or issue that they have taken up earlier and are continuing to address.

This phenomenon of sustained and coherent collaboration is apparent not only to observing researchers, but to students themselves. Students are keenly aware of the way in which joint creation defines their opera work. When asked to describe important choices, decisions, and insights ("ah-ha's"), they quite

**Table 1: Collaborative Interactions across Opera and Non-opera Contexts**

Dimension:	Non-opera Context	Opera Context
% students participating	33	50
% students taking substantive turns	20	26
% of student turns with questions	11	12
% student turns with links back to previous comments	18	38
% student turns with constructive critique of others	9	32
% student turns with revisions of a student's own earlier ideas or proposals	9	26
% student turns with links back to a long term theme or issue for the group	7	20

**Table 2: Longitudinal Changes in Collaborative Interactions across Three Classrooms**

Dimension:	Classroom 1			Classroom 2			Classroom 3		
	T1	T2	T3	T1	T2	T3	T1	T2	T3
% students participating	10	15	53	50	44	60	10	13	50
% students taking substantive turns	20	23	33	25	44	67	17	33	53
% of student turns with questions	13	17	17	17	27	27	8	8	6
% student turns with links back to previous comments	27	27	40	38	27	60	21	25	29
% student turns with constructive critique of others	13	15	40	32	40	40	6	21	29
% student turns with revisions of a student's own earlier ideas or proposals	9	17	40	17	15	27	6	8	29
% student turns with links back to a long term theme or issue for the group	7	7	10	20	15	27	8	8	21

typically, focus their responses on gradually evolving solutions to an artistic challenge. Here, for example, is an elementary school student explaining how composers and writers developed the concept and structure of a song that had long eluded them. It is a song to be sung to children trapped in a natural history museum by dinosaurs who come to life and warn them to save the earth or meet extinction.

*See, see, we knew that we wanted to have a song, you know, where the dinosaurs come to life and warn the kids that they better not fight or they will become extinct just like they did. And so we made up this tune, and we were fooling around with it on the keyboard. And Marcus keeps switching like the background beat—you know, like disco or Latin, or Caribbean—and we were getting angry with him. Then he won't quit and he makes it into this, like this rap, and going "Hs- shahs - shh shh." And it was good. So we like started to snap and slide around. And then we took it to the writers who said, "No, no rap, no way." And then we got back at them and said that it made the dinosaurs seem cool, like they knew what was up, so the kids should listen to them. [4]*

**Why Does Coherent Collaboration Matter?**

Having identified what it is that students may be learning as part of opera sessions, we must still deal

with the question of why it matters. What do these findings teach us about how or what arts education contributes to learning?

Students' narratives, like the dinosaur story above, were telling. They hinted at a possible link between coherent collaboration and the achievement of more than "ho-hum" solutions to artistic challenges. To pursue this possibility we returned to all the instances of sustained, joint discussions that were about solving an artistic problem in the opera, such as composing a song or not firing a set designer. Early on in the opera process, as the script and songs are first written, increasing numbers of self-contained (i.e., occurring all in one session) collaborative discussions occur, for example:

*The classroom teacher (JB) and the writers are going over a moment in the script where one of the kids in the opera is about to stomp out of the clubhouse. JB asks a student to read aloud from the script as it stands in draft:*

S:( reading from the script as "Casey")  
 "Well I'm not chicken and I'm not going! Yay."

Other students correct in unison: "Yeah."

Student continues to read from the script:  
 "She has been acting like a brat!"

Other student: "Isn't that in the wrong place?"

Teacher: “No. After uh... after uoohh!  
Well, I wanna...Then...Okay.

Casey leaves here. Good. I’m glad you caught that... I missed that. Okay.”

Teacher reads the corrected version of the script, checking it with the students:

“Let’s go. C’mon.C’mon, chickens. Well, I’m not a chicken and I’m not going. Yeah.”

Teacher asks “And then (referring to the need for better stage directions) Casey kind of storms out... instead of leaves...?”

Student:“In a temper tantrum...”

Other student: “Casey storms...”

Teacher: You like storms out...or...

Other student: Or blazes out...

Teacher: Blazes out. Okay. What’s “blazing” telling the director?

Student: That he’s furious...Like she’s thinking “Why do I have to be in a club with a bunch of chickens?”

Teacher: Okay. So when the writers do their subtext, I think that’s probably what the characters will say... Okay...Casey... We can put a little stage direction here. So do you think it should read “storms...”

Student: Storms out.

Teacher: Storms or blazes?

Other student: Blazes.

Teacher: Blazes isn’t a word that we usually use for moving, but it works here. Okay.

Students call out simultaneously “zooms,” “storms,” “blazers,” “zooms”.

Teacher: Zooms just means to be fast but we don’t want that...

(Student voices get louder, yelling “storms out”, “blazes”, “We want blazes”, “Storms out! Storms out!”)

Teacher: Storms out.

Student: She shuts slams the door and...

Student: Thunders out.

Teacher: Thunders out! [5]

## An Evolving Meaning

A second type of collaborative discussion, one that evolves over time, occurs with increasing frequency as the opera work enters its final stages. It was evident in one classroom where students were creating an opera about how a test divides a group of friends into gifted and ordinary students. The students attend a school that uses such a test to select participants in a gifted and talented program, and the test is very much on every third graders mind. For dramatic effect the students create a character, Charlie, who comes from “away” and who is caught unawares by the test. Initially, they simply pick Kansas for his home, but over repeated conversations Kansas acquires an increasingly complex meaning within their opera.

### Time 1: Informational view of Kansas

Students decide that the new kid, Charlie, who will be trying to get into a special school (like their own), should come from “Kansas,” where they have opera pen pals.

### Time 2: Kansas as signaling “outsider”

Writing the dialogue for the scene in which Charlie first appears, students build in all kinds of jokes about Kansas, such as the taunt: “ We can kids from Kansas.”

### Time 3:“Home”

As work on the libretto continues, the conversation in class comes around to the parallels between Charlie’s Kansas and the Kansas of Dorothy in *The Wizard of Oz*. Students return a number of times to discuss how both children have been carried away from a familiar life in Kansas to a place where they are strangers and face dangers. In Charlie’s case, it is the danger of not passing the test to get into the gifted and talented program.

**Time 3: Kansas Vs Oz**

Much further on in the development of the opera, students are writing the lyrics to a song in which the kids from New Jersey at last welcome Charlie into their club. As they work on the lines to this song, they continue to think about what Kansas stands for in his life and in their opera. This section of the song is about what he will be able to do now that he is a member. (JB is the teacher, S stands for the several different students in the discussion.)

S: And now you can play baseball, even though you're not in Kansas.

S: You are in Emerald City

S: Yeah, like Dorothy in OZ.

JB: So what might Charlie find if he were in the Emerald City?

S: The scarecrow got a brain, the Tin Man got a heart.

JB: We can be pretty sneaky here. We still have the name of the town to choose. I think calling it Emerald City would be hitting them over the head.

S: Jewel City

S: Green City

S: Club City

S: No, we want to get them to think Kansas—green city, emerald, lessons. (6)

**Time 4: Lost Kansas**

After much discussion, students decide they want to end their opera with Charlie failing the test, but staying on in the community. The other students who once teased him mercilessly suddenly understand what it is to be an outsider. They also understand their community as exclusive. The students have been working on the reprise of a song from earlier in the opera. In a previous discussion, they had planned that Charlie would join the other kids in making fun of his old home. But at this moment the class develops a more nuanced meaning for Kansas as a place that Charlie (and they) have lost forever.

JB: Sings the first verse of the lyrics as they occur earlier in the opera.

S: Why not just keep the rest of the song?

JB: We could.

Ss: No, it's different now./ Uh-huh./ No.

S: Things have happened.

S: (suggesting a new version of a line)

"You've found a place to replace Kansas."

(Conversation about what Charlie is escaping).

S:(emphatic) No, I don't think so.

JB: Why not?

S: Charlie wants to return to Kansas—like Dorothy.

JB: Oh, so, they are consoling him?

It won't be so bad here?

S: He is not about to start saying bad things about his old home.

JB: Works on re-ordering lines.

Ss: Sing out different possibilities:

S: Now you know what Kansas is.

S: Now you know what Kansas really is

S: Kansas will always be in your heart. [7]

These instances suggest one of the reasons why students produce such strong work in the context of the opera and why opera learning might contribute to achievement in other tasks and domains. The company structure creates a setting in which students are expected to collaborate on matters of quality, and in which they learn to select the best from a wide field of possibilities. The sustained nature of the project means that these conversations need not be one-shot discussions of local matters. Since discussions recur over time, both questions of quality and of complex meanings, such as "Kansas" develop a long life.

In their exit interviews, children as young as third grade, when asked to write reviews of a video performance of the comic opera "Gianni Schicchi," spontaneously interpreted the many messages that that a performance can convey. For example:

*The way (the greedy relatives) acted, they really expressed the characters they played. The scenes really fit their show. When all the relatives searched for the will, they tore the apartment to pieces, even the pillows. Feathers were flying everywhere. The way they moved, acted, and especially how they dressed. For example, the greedy fancy aunt, Zita, was dressed like she was so rich she only thought about money. And she acted like she was too good to even breathe the smoke from her cigarette (she had to have a long holder.) So get your tickets before they sell out. Remember, don't be fooled by no other. Go to see the real Gianni Schicchi near you. [8]*

This data suggests that the work students do on their own operas can be applied more broadly. Students can extend their understanding of the many-layers of meaning and the many modalities for conveying it to the work of others. It is robust enough to transfer. A next step in the inquiry would be to ask whether their opera work has given students a broad understanding of how artistic communication works, or enhanced their ability to understand that many messages have multiple meanings [9]. Are opera students better non-literal readers? If so, the kind of qualitative inquiry outlined here will have helped us to uncover a productive partnership between arts education and a fundamental human capacity.

## CONCLUSION

Clearly we can demonstrate that arts education matters. We can show how, in the context of opera work, students collaborate often and effectively. But it is not enough to say "Opera work improves performance." We need to ask "What exactly is being learned?" Similarly, we need to ask *why* such effects occur. What is it about sustained and coherent collaboration that supports the development of a taste for more than convenient solutions or a capacity for understanding complex meanings.

Such questions are significant, for their precision carries us from knowing that the arts matter in education to understanding why and how they matter.

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