

Harmony Project – Research Basis Summary Prepared by Margaret Martin, MPH, DrPH Harmony Project Founder

Harmony Project programs are research-based. I developed Harmony Project as a youth development and mentoring program targeting students with the greatest needs and the fewest resources. Utilizing a public health perspective, we focused on the after school environment, when children are at greatest risk of accident, injury, assault, abuse, criminal activity, and substance use. I didn't know about Dr. Abreu or El Sistema at the time I founded Harmony Project, but I began this work for essentially the same reasons, and we continue to learn as much as possible from the work being done in Venezuela and elsewhere. The following is a narrative describing key pieces of research upon which Harmony Project programs are based.

1. A robust body of literature shows the following. Tiny kids want to learn everything, and they want to learn it now! Intrinsic academic motivation (natural curiosity) of 3rd graders tends to be stably and predictably high. For every year a child remains in school, however, intrinsic academic motivation plummets. I.e., kids show up interested and seeking mastery experiences, and the things we do with kids in schools tends to extinguish their curiosity and desire to learn. (See 2, below, for the exception.)

References:

Harter, S. (1981). A new self-report scale of intrinsic versus extrinsic orientation in the classroom: motivational and informational components. *Developmental Psychology*, Vol 17(3), 300-312.

Lepper, M.R., Corpus, J.H., Iyengar, S.S. (2005). Intrinsic and extrinsic motivational orientations in the classroom: Age differences and academic correlates. *Journal of Educational Psychology*, Vol 97(2), 184-196.

Makri-Botsari, E. (1999). Academic intrinsic motivation: Developmental differences and relations to perceived scholastic competence, locus of control and achievement. *Evaluation and Research in Education*, Vol 13(3),

157-171.

2. Shirley Brice Heath, a linguistic anthropologist at Stanford (now at Brown), wanted to learn what kids, ages 8 - 18, do in their discretionary non-school hours. To answer the question, she conducted a 10-year qualitative research study, embedding ethnographers in 124 different after-school programs throughout the country. She transcribed some two million words of recorded conversation. All the students involved in after school programs had benefited relative to peers who had not engaged in after school programs. But, relative to students who had participated in sports programs or community service programs (like scouting, religious clubs, 4H, etc.), arts-engaged kids sounded like they came from a different universe. Heath determined that, hands down, arts-based programs produced the most powerful and enduring pro-social impact on young people. The effect was particularly striking for disadvantaged students, who tended to self-select into arts-based programs at greater rates than did their more advantaged peers.

Heath's study demonstrates that arts-engaged students tend to remain curious, engaged, and interested in the process of their own learning and development -- a striking "exception" to the downward motivation trend described in #1, above.

Reference: <http://www.aep-arts.org/files/publications/ChampsReport.pdf>

Imaginative Actuality: Learning in the Arts during the Nonschool Hours Shirley Brice Heath with Adelman Roach, page 19 The article on page 1 of the compendium is also of note. It describes an analysis of data from the National Educational Longitudinal Survey done by James Catterall and colleagues. Music-engaged high school students performed significantly better in math and language. Students with high levels of music engagement scored even higher. The effect persisted for disadvantaged students.

<http://www.aep-arts.org/files/publications/ChampsReport.pdf>

Involvement in the Arts and Human Development: General Involvement and Intensive Involvement in Music and Theater Arts James S. Catterall, Richard Chapleau and John Iwanaga, page 1

3. The RAND Corporation followed up on Heath's work to essentially answer the following question. "Do all arts programs produce powerful and enduring pro-social benefits, or are there specific factors within high-performing arts programs that account for the powerful pro-social benefit observed?"

RAND's landmark "Arts and Prosocial Impact" studies answered the question. Quality instruction was necessary, but insufficient to produce the prosocial benefits observed. There were, indeed, a handful of specific factors besides quality instruction that were common to the highest-performing arts-based youth programs.

RAND, Arts & Prosocial Impact:

<http://www.rand.org/pubs/drafts/DRU1887.html>

4. The question remains: How are quality arts programs (containing the elements identified by the RAND study) able to impact students' social and emotional well-being and improve academic motivation? The answer can be found in the work of University of Rochester researchers Richard M. Ryan and Edward L. Deci. Their "Self Determination Theory" posits three essential psychological needs: the need for autonomy, for competence, and for relatedness. Using an experimental design, Ryan and Deci showed that boosting students' autonomy, competence, and relatedness resulted in statistically significant increases in students' intrinsic motivation.

Quality arts education programs (that include the elements identified in the RAND study) improve students' competence, autonomy, and relatedness with laser-like precision. A student learns to play an instrument herself (autonomy). Over time she develops the ability to play it better, and to play increasingly difficult pieces (competence). And she

performs these pieces before family and peers -- either on her own or as part of an ensemble (relatedness).

Reference: Ryan, R.M., Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, Vol 55, 68-78.

Self Determination Theory: [http://www.psych.rochester.edu/SDT/;](http://www.psych.rochester.edu/SDT/)

5. How Music Learning Shapes Students' Brains

Dr. Nina Kraus, Director of the Auditory Neuroscience Lab at Northwestern University has studied how music learning shapes the brain and the abilities of music students for two decades. She has found that, over time, music learning shapes the development of the brain and nervous system in a way that improves students' language learning and acquisition and also improves a student's ability to listen in a noisy environment and hear the important messages, despite the accompanying noise. The following link contains short videos that provide the opportunity to listen to Dr. Kraus describe her research.

<http://www.soc.northwestern.edu/brainvolts/#>

6. Grades, Behavior and Mood

In our most recent impact evaluation survey, a high proportion of students' parents indicated that - since joining the Harmony Project - their child has shown improvement in his/her Grades (82%), Behavior (82%), Mood (80%), and Health (70%). These responses were recently validated in a research study conducted by Michael Uy, a UC Berkeley graduate who was awarded the Judith Lee Stronach Baccalaureate Prize to spend a year comparing The Harmony Project with Venezuela's world-renowned El Sistema youth orchestra program (i.e., the program that produced Gustavo Dudamel, incoming Los Angeles Philharmonic Music Director). The study – based on in-depth interviews with students and parents of both programs – found that 90% of Harmony Project students showed

improved focus and discipline, 73% improved academic achievement, 71% improved family communication, 44% improved self-esteem.

7. Preventing School Drop-Out; High School Graduation; College Attendance

Below is a link to a recent study conducted by the University of California Santa Barbara which reports drop-out rates for cities throughout California. Drop-out rates for Los Angeles were reported to be 50% for the entire city. Drop-out rates for low-income communities can be as high as 70%, or even higher. Harmony Project operates programs in four of LA's 12 high crime "gang reduction zones". Our students come from low-income homes (family income below 200% of the federal poverty level), yet they all remain enrolled in school.

http://cdrp.ucsb.edu/dropouts/pubs_cityprofiles.htm

In 2010, 100% of Harmony Project's high school graduates went on to college. Each was the first in the family to attend college.

8. 21st Century Learning skills:

Harmony Project participation supports the following 21st Century Learning Skills:

Core Subjects: English, Reading / Language Arts, Arts

21st Century Context: Global Awareness

Harmony Project students discover the world and other cultures through the music they learn. They also participate in classes with students from diverse cultures and backgrounds.

Learning & Thinking Skills Critical thinking & problem-solving skills Communication skills Creativity & Innovation skills Collaboration skills Contextual learning skills

The process of learning to play a musical instrument takes place over multiple years, and develops student discipline, persistence, strategic thinking, creativity and accountability. Ensemble participation develops the ability to collaborate well with others.

Life Skills Leadership Ethics Accountability

Harmony Project students develop leadership skills as Teaching Assistants and Peer Mentors within the program. They develop a personal ethical framework and moral values through service-learning opportunities within the program. And they learn accountability by participating in ensembles and youth orchestras where the quality of the performance depends upon each member learning and performing their part well.

21st Century Learning Skills (

http://p21.org/index.php?option=com_content&task=view&id=254&Itemid=119);

40 developmental assets from Search Institute <http://www.search-institute.org/content/what-are-developmental-assets>

Focus group interviews of Harmony Project students and parents show that Harmony Project participation develops 30 or more of the 40 developmental assets identified by the Search Institute. This reflects a level of social support associated with personal resilience and a significant reduction in students' problem alcohol use, violence and school problems.