



Cultivating Youth Scientists with Youth Participatory Action Research

Our Experiences from the ANR Grant Project: Developing a Culturally-Relevant Civic Science Approach to Improving Scientific Literacy for Latino Youth

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■ 4-H Youth Development Program

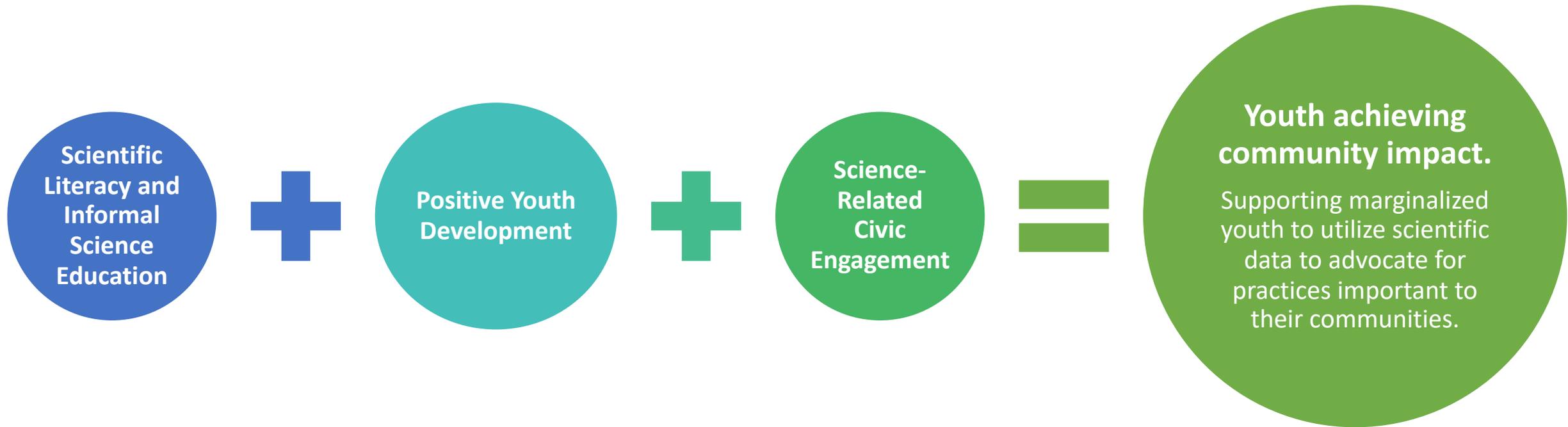


2017 ANR Grant Funded Project

Goal: Develop, pilot, and evaluate a culturally-responsive form of civic science – *youth participatory action research (YPAR)* – to help marginalized youth improve their scientific literacy, their positive youth development, and their civic engagement.



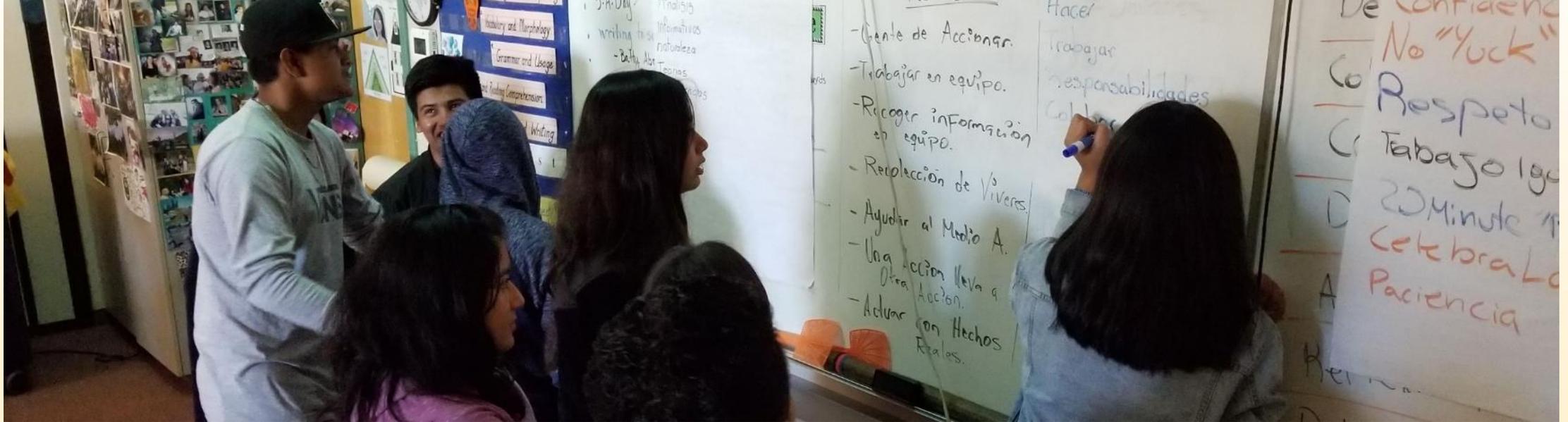
Our Approach and Informing Literature



Research Questions

- What do educators and youth report as key project elements that engaged and motivated young people in a YPAR project?
- What do youth report about their understanding and awareness of relevant science-related issues in their communities? What do youth report about their capabilities and confidence to affect science-related community change?
- What do adult educators describe as their own growth and development through facilitating a YPAR project?





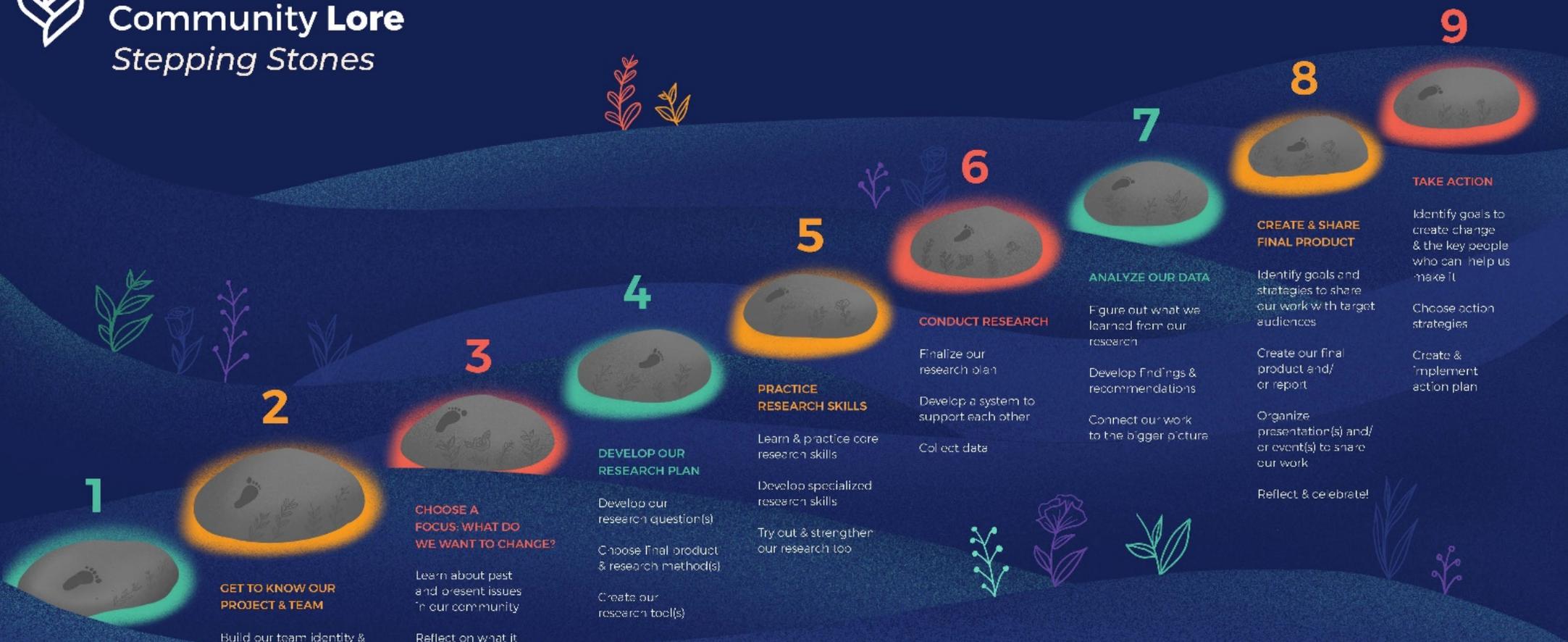
YPAR Model

A form of civic science that start with forming the research foci and collecting, analyzing, and interpreting data in order to bring about collective action for positive community change





Community Futures Community Lore Stepping Stones



GET READY FOR OUR PROJECT

Learn more about Youth Participatory Action Research (YPAR) and the values behind it

Assess our community & organization's readiness to do a YPAR project

Plan & prepare for our project & assemble our team

GET TO KNOW OUR PROJECT & TEAM

Build our team identity & relationships

Team norms: decide how we will work together

Become familiar with our project & YPAR

CHOOSE A FOCUS: WHAT DO WE WANT TO CHANGE?

Learn about past and present issues in our community

Reflect on what it is that we care about

Define the focus for our project

DEVELOP OUR RESEARCH PLAN

Develop our research question(s)

Choose final product & research method(s)

Create our research tool(s)

PRACTICE RESEARCH SKILLS

Learn & practice core research skills

Develop specialized research skills

Try out & strengthen our research tool

CONDUCT RESEARCH

Finalize our research plan

Develop a system to support each other

Collect data

ANALYZE OUR DATA

Figure out what we learned from our research

Develop Findings & recommendations

Connect our work to the bigger picture

CREATE & SHARE FINAL PRODUCT

Identify goals and strategies to share our work with target audiences

Create our final product and/or report

Organize presentation(s) and/or event(s) to share our work

Reflect & celebrate!

TAKE ACTION

Identify goals to create change & the key people who can help us make it

Choose action strategies

Create & implement action plan



Stepping Stone 1: Get Ready for our Project

- Learn more about YPAR
 - Assess community & organizational readiness
 - Plan & prepare for project
 - Assemble our team
- Training with UCD Center for Regional Change (Brandon Louie)
 - 3-County YPAR Team – Getting to know each other
 - Hiring Staff
 - Identifying Sites



Stepping Stone 2: Get to Know Our Project and Team

- Build our team identity & deepen relationships
- Team norms
- Become familiar with YPAR

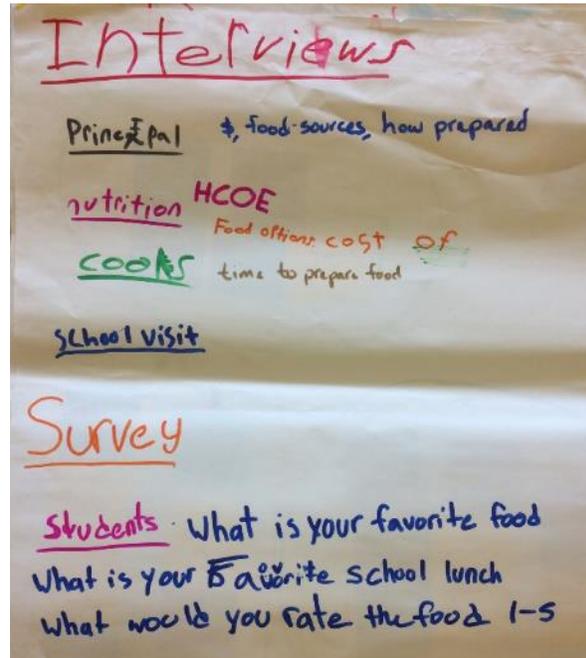


- Humboldt County Middle School
 - Vice-Principal buy-in and actively recruited students
 - DELAC (District-level English Learner Advisory Committee) support and place for parent recruitment and buy-in
 - Play football to build team relationships



Stepping Stone 4: Develop our Research Plan

- Develop our research question(s)
- Choose methods
- Create research tool(s)



- Humboldt County Middle School
 - Youth wanted to ask their classmates about the cafeteria food and talk with key stakeholders
 - Youth developed a 3-S survey
 - Soup, Sandwiches, Salad
 - Youth developed interview questions and practiced the interview process



Stepping Stone 5: Practice Research Skills

- Learn and practice core research skills
- Develop specialized research skills
- Try out and strengthen our tool

- Humboldt County Middle School
 - Youth Surveyed
 - Grades 3-8
 - Youth interviewed
 - County Office of Education Nutritionist
 - School Principal
 - School Cafeteria Manager

Pacific Union Triple "S" Lunch Survey

Sandwiches

1. Did you know you can order individual sandwiches from our school cafeteria?

a. Yes 😊

b. No 😞

2. Would you ever order an individual sandwich from our school cafeteria?

a. Yes 😊

b. No 😞

c. Maybe 🤔



Stepping Stone 6: Conduct Research

- Finalize research plan
- Develop a system to support each other
- Collect data

What grade are you in? ¿En que grado estas?			
9th	10th	11th	12th
What is your native language? ¿Cual es tu lengua principal?			
English	Spanish	Other _____	
Have you studied other languages? ¿Estudiaste otro idioma (s)?		YES	NO
If Yes, How long? ¿Si estudiaste otro idioma, cuanto tiempo?			
Less than one year/Menos de un año		1-2 years/1-2 años	2-3 years/2-3 años
More than 4 years/Mas de 4 años			
Are you learning another language at school? ¿Estudias otro idioma en la escuela?		YES	NO
What's the best way you learn another language outside of school? ¿Como tu aprendes otro idioma afuera de la escuela?			
Books/Libros		Phone or Computer Apps/Aplicaciones de Telefono o Computadora	
Movies or TV/ Peliculas o Television		Music/Musica	Conversations/Conversaciones
How helpful are books to learn a new language? ¿Como te ayudan los libros para aprender otro idioma?			
Not Helpful No Ayudan	Very Little Helpful Ayudan Muy Poco	Sometimes Helpful A veces Ayudan	Helpful Ayuda
			Very Helpful Ayuda Mucho
How much time per week do you use books to learn a new language?			

- Sonoma County High School
- Served 22, 9-11th grade students
- Research question: *How do English Learners prefer to practice English during after school?*
- Data collection involved surveys of 170 peers.



Stepping Stone 7: Analyze our Data

- Figure out what we learned
- Develop findings and recommendations
- Connect our work to larger contexts



- Sonoma site found that English Learners preferred to learn informally, by socializing with peers.
- The cohort recommended a formalized afterschool club be formed to meet every other week to talk in English about movies, music, and other topics.



Stepping Stone 8: Create and Share Final Product

- Identify goals and strategies to share our work
 - Create final product/report
 - Organize presentations
 - Reflect and celebrate
- Sonoma – decided to test their model in year 2.
 - Plan to present both their original findings and data on their tested model to administrators in spring 2020.



Stepping Stone 9: Take Action

- Identify goals to create change
- Choose action strategies
- Create and implement action plan

Youth reflection Sonoma:

What I've learned from this, is kind of – what it's like to have more confidence in my classmates so I learned some things from them that I didn't know.





Youth reflection

One piece of advice I would give myself is to get the best information possible, since we are not the only ones trying to learn English and there are people who have already been through this, and they have achieved it with effort, and because of that is the survey. And it is better to do this survey with people who have learned than with those who have not, than with those who already know how to talk.





Year 2: The Road Ahead

Expanding to five sites – continuing research on YPAR



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Resources

- <http://yparhub.berkeley.edu/>
- <https://regionalchange.ucdavis.edu/publication/moving-serving-youth-engaging-youth>
- <https://education.ucdavis.edu/center-community-and-citizen-science>

