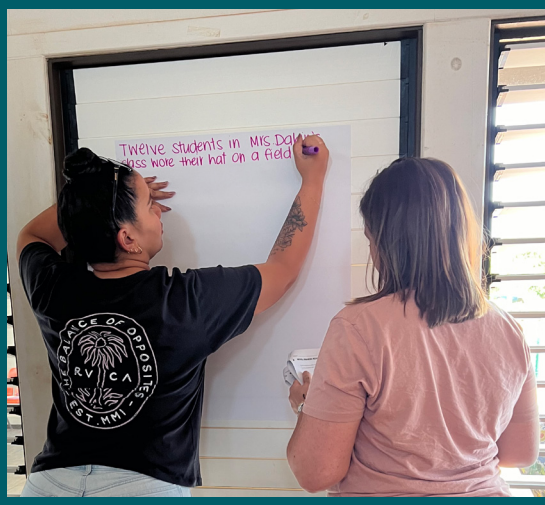
E Kūkulu Ke Kahua a Pa'a

Build the Foundation Until Firm

University of Hawai'i, Kaua'i Community College

Tribal Colleges & Universities Program | NFS Secondary & Elementary Teachers in STEM

Year 1 Annual Evaluation Report



SUMMER H. HELMS, INC.
Strategic Planning, Grant Writing & Evaluation

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INTRODUCTION

In April 2023, the *E Kūkulu Ke Kahua a Pa'a: Build the Foundation Until Firm* project was funded by a five-year grant from the National Science Foundation (NSF). This project aims to build K-12 mathematics instructional capacity on Kaua'i by providing on-going, sustained teacher professional development at three target schools. The target schools were identified in 2021-2022 through a series of meetings which assessed school interest in participating in a project with KauCC, as well as gathered information from schools related to their needs in strengthening mathematics education. The traditional approach to mathematics PD is through discrete, one-off workshops that typically target all K-12 teachers in an entire district. This approach has not been sufficient in generating a transformation of practice in STEM teaching practices. The three schools identified to partner with KauCC include two K-12 charter schools (Kanuikapono Public Charter School and Kawaikini New Century Public Charter School) and one middle school (Kapa'a), each with math


Kanuikapono

proficiency levels of 20%, 23% and 17% respectively (all below state and complex averages). Further, math proficiency at all three of the public Kaua'i high schools has been in decline over the past 6 years, two of the three high schools (Kapa'a and Waimea) are well below the state proficiency level, and all three are below the national proficiency rate. The mathematics proficiency gap in Hawai'i appears to begin after 4th grade, and is significantly lower than national averages by 8th grade. Native Hawaiian students were among the three groups of students with the highest percentage of failing grades in 2021. Native Hawaiian (NH) students account for 43%, 72%, and 25% of target school populations. The *E Kūkulu Ke Kahua a Pa'a* project addresses low math proficiency at the target schools through three objectives and their supporting activities:

1. Increase the effectiveness (knowledge and quality) of K-12 mathematics instruction through a sustained, three-year professional development (PD) and mentorship program for at least 15 Kaua'i K-8 teachers that focuses on improving conceptual understanding of mathematics and pedagogy.

2. Develop and improve place-based, culturally appropriate curriculum, assessments, and rubrics for five elementary grade levels.
3. Build high quality mathematics pathways for grades K-8 to achieve alignment and continuity with high school and dual credit mathematics, which will reduce the need for remedial instruction and create adequate preparation and equitable access for NH students.

OVERVIEW OF YEAR 1 ACCOMPLISHMENTS

Year 1 of *E Kūkulu Ke Kahua a Pa'a* activities resulted in meaningful progress towards achieving the objectives and outcomes set forth in the grant. Key staff, including Project Manager (renamed Project Coordinator), Interim Mentorship Coach (renamed Math Teacher Mentorship Coach), and the External Evaluator were identified and hired. The Math Teacher Mentorship Coach (MTMC) hiring process did not yield any qualified applicants; thus, Gigi Drent, Co-PI, agreed to act as Interim MTMC until a qualified applicant becomes available. The delay in hiring the MTMC set the project timeline back, thus Cohort 1 did not commence until January 2024.

The first cohort of teachers started with six teachers, five of whom were retained to the end of project Year 1. Between January and April 2024, the cohort completed four hui (group) training sessions and 14 individual mentoring sessions with the Interim MTMC. These training sessions led to the development of seven culturally relevant lessons specific to the needs of each teacher and their students , and were designed to foster active learning and to promote student equity. The project team found that the need for individual sessions was greater than the group PD sessions, which explains why the project team exceeded the original goal of eight individual sessions. Thus, the project team was only able to complete four of the eight originally proposed hui sessions. Coaching also included development of pedagogical strategies in response to identified needs and challenges in each teacher's classroom. The individual mentoring sessions consisted of a three-part cycle: creation of a lesson plan, teaching the lesson with observation, and feedback on the lesson. The MTMC also provided input and guidance to the Kanuikapono hui, specifically, in choosing a new math curriculum which will be piloted with grades 1, 4 and 6-8, starting in Year 2 of the project. Feedback from participating teachers spoke to how valuable the mentoring had been, and how thankful they were to have access to an expert, math-specific coach:

"This time together has already been so valuable."

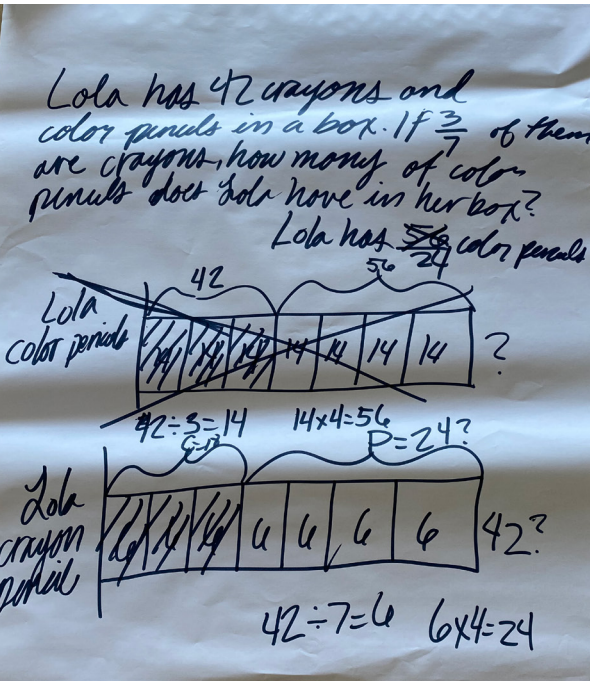
"The Mentorship Math Coach provided valuable insights and guidance on how to effectively deliver math concepts to students, as well as practical tips for classroom management and differentiation."

"The support and guidance from the Mentorship Math Coach and my colleagues through these meetings helped me feel more confident in my content knowledge and ultimately, better equipped to provide quality math instruction"

In tandem with delivering Cohort 1 mentoring and coaching, significant progress was made on project outreach and recruitment outcomes (targets). The KauCC project team presented at the Hawai'i Department of Education (HIDOE) Kaua'i complex Principal Meetings, reaching all elementary and middle school principals on Kaua'i. It is noteworthy that the project team has endeavored to align project goals with HIDOE goals for teacher PD. While all school administrators expressed interest in participating in the project, the outreach effort resulted in the principal of Kapa'a Elementary specifically expressing interest in joining the project in Year 2, as part of Cohort 2, thus expanding the original 3 participating schools to 4. The project team presented to Kapa'a Elementary teachers in April 2024 to outreach and recruit teachers for mentoring Cohort 2.

The project team also hosted a math PD workshop in April 2024 which was attended by 16 teachers and math coaches from local elementary and middle schools. The workshop was taught by Gigi Drent and Loni Kalk, KauCC staff and Co-PIs of the project. The workshop topics included teaching the difference between conceptual versus procedural approaches to mathematics curriculum, fractions, and how to teach the bar-model method for solving word problems. These topics were selected by Drent and Kalk based on their experience teaching KauCC math students and observing what gaps and challenges those students have

in their math proficiency and knowledge base. In many ways, this workshop (and larger project) acts as a corrective feedback loop, where content experts (Drent and Kalk) are able to identify commonly missed or challenging topics, and go back upstream to provide elementary and middle school teachers strategies for improving teaching these concepts the *first* time students learn them. In contrast to the individual mentoring sessions, which are teacher-led, and focus on needs identified by the participating teacher, the workshops are pre-planned and mentor-led. The synergy of the two (individual mentoring and workshop) compliment each other, and create a balance within the project where each part of the mentoring pair is able to contribute to the direction of the learning. All 16 of the workshop attendees agreed or strongly agreed that the workshop lessons presented increased content knowledge of mathematics, provided them with practical strategies that address the needs of their student population (including Native Hawaiian students), and provided useful techniques to address student misconceptions in mathematics content knowledge. Participants shared that the content they found most beneficial were:



"The use of model drawing to solve word problems"

"I found everything beneficial but I am most looking forward to teaching the perimeter lesson."

"Conceptual teaching.
Why behind what we learn is so important."

The workshop was also an important recruitment activity for Cohort 2. As a result of combined recruitment efforts, the project team has recruited 14 participants for Cohort 2, to date.

Milestones, Deliverables, and Outcomes

The majority of all milestones, deliverables, and outcomes were either successfully met or exceeded during Year 1, or on track to be successfully completed by the close of Year 2.

Mentorship Professional Development

Activity 1.1 was partially met, as it originally planned to recruit 10 teachers from school 1. However, due to a delayed start on the project, small school size (Kanuikapono only has 6 elementary teachers who teach math at the school), and concern for reaching target numbers, the project team decided to recruit from two schools, and expanded its reach to include Kapa'a Elementary (not an original target school of the project). Recruitment activities ranged from marketing to teachers and school principals about the project, as well as promoting the cash stipends available to participants ($200 for workshop attendance and $2,000 per semester participation). Despite these efforts, only 6 participants were recruited for Cohort 1, and 5 were retained.

The project team gained valuable experience working with these 5 teachers in Year 1, and now have a better sense of what type of support math teachers are in need of, and how to make the project more accessible and meaningful to participating teachers. As previously mentioned, the project shifted to prioritize individual meetings over hui meetings, as well as integrated equity and curriculum development into hui meetings (rather than having these happen as discrete activities) in order to optimize and streamline teachers' time. The project team has also expanded the number of schools they are working with in order to reach more teacher participants and meet project activity goals. They have already begun recruiting teachers for Cohort 2, and to date are on track to exceed the 10 participants they expected to mentor/coach in Cohort 2, aiding their ability to reach target numbers by the close of the project.

The PD sessions delivered to Cohort 1 were delayed in their start date, as hiring processes were delayed, but the project team was still able to deliver 4 of 8 hui meetings (Activity 1.2), and exceeded the number of individual sessions they hoped to deliver: conducting 14 individual sessions instead of just 8 (Activity 1.3)- a notable success. As previously mentioned, hiring delays pushed back the project's commencement: the Project Manager role was renamed Project Coordinator, and hiring was delayed from Q1 to Q3 (Activity 1.10). The Mentorship Coach (MC) position (Activity 1.11) has been slightly more challenging to fill due to county and statewide hiring challenges. Recruitment for the position, now referred to as Math Teacher Mentorship Coach (MTMC) began in September 2023. Recruitment was extended to November 2023, but yielded no qualified candidates. In February 2024, the leadership team decided to expand the search and reposted the position as a hybrid, telework position to attract applicants on neighboring islands. The position description was modified by the PI and posted online for a 2nd recruitment cycle and expanded to three

additional advertisement sites (HireNet, Real Jobs Hawaii, and Indeed). Three candidates applied, but again, none were qualified. The lack of qualified candidates has also affected HIDOE in their own internal hiring process for a district-level math coach, a role they have not been able to fill, either. Until the position is filled, key team member and Co-PI, Gigi Drent, is serving as the interim MTMC.

Evaluation and Continuous Improvement

Activity 1.12 was accomplished by hiring Summer H. Helms, Inc. to perform the external evaluation; members of the evaluation team met virtually with project leadership in January, March and April, and attended the April math PD workshop and Cohort 1 reflections meeting, both in-person. Another notable success was Activity 1.13, evaluating PD for continual improvement. As mentioned, the individual and hui mentoring PD quickly adapted to better meet teachers needs, a prudent improvement based on teacher feedback. Teacher participants were surveyed anonymously at the end of Year 1, and interviewed in a focus-group type setting (Cohort 1 Reflections meeting) to submit their feedback to the project and evaluation teams. The leadership team is adept at taking participant feedback into consideration, and adjusting the project as necessary, rendering the project more useful and meaningful for teachers. For example, based on teacher's input, Activities 2.3 (equity-based workshops/meetings) and 3.2 (bimonthly curricular development meetings) were folded into the hui meetings in-order to streamline and optimize teachers' time.

Place-Based Curriculum Development

The final hiring task delay, specific to Activity 2.1, is that of hiring a Hawaiian Language Expert (HLE) to ensure the place-based curriculum development is available in Hawaiian language, since one target school (Kawaikini) is a dedicated Hawaiian immersion K-12 school. Filling the HLE position has been a challenge mainly due to the extremely limited applicant pool of individuals with a high level of Hawaiian language proficiency. The leadership team plans on using excess funds from the position vacancy in Year 1 to raise the hourly pay to attract a qualified candidate. Resultantly, the development of place-based curriculum, assessments and rubrics (Activity 2.2) has been delayed until the HLE is hired, and until partner school Kawaikini delivers the materials to be translated. It is expected that the delays in Year 1 will be able to be made-up and accomplished in Year 2.

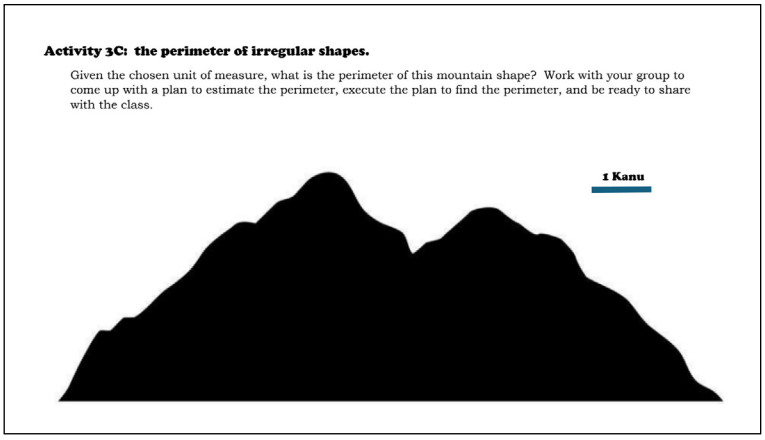


Table 1: Milestone and Deliverable Progress, Year 1

Objective	Tasks/Outcomes	Status
Objective 1: Increase the effectiveness (knowledge and quality) of K-12 mathematics instruction through a sustained, three-year professional development (PD) and mentorship program for at least 15 Kaua'i K-8 teachers that focuses on improving conceptual understanding of mathematics and pedagogy.	1.1 Recruit ten teachers from K-12 school 1 (Cohort 1).	Six teachers were recruited, five were retained. All five of the retained participants intend to continue in Y2. ✦ Partially met
	1.2 Conduct eight PD training and reflection sessions with Cohort 1.	Four hui training and reflection sessions were held with Cohort 1 participants. These were deprioritized in response to feedback from teachers that they needed more individual support (see Activity 1.3) These hui meetings embedded equity and curriculum development (Objectives 2 and 3) into the bi-monthly meetings, so as to embed into curriculum in a streamlined way ✦ Partially met
	1.3 Conduct eight mentoring/coaching sessions	A total of 14 individual mentoring/coaching sessions were held with 5 participants and MTMC, between February and March 2024. The number was increased in response to teacher feedback on the type of support they needed most. These sessions followed a three-part cycle: 1. Development of math lesson 2. MTMC observed the lesson when taught 3. Teacher and MTMC reflected on the lesson ★ Exceeded
	1.10 Hire Program Manager	Jade Bermudez hired as Project Coordinator (PC) in January 2024. ✔ Completed
	1.11 Hire Mentorship Coach (MC)	Multiple recruitment efforts were made, yielding several applicants, however no qualified applicant was identified. Co-PI Gigi Drent is serving as Interim MTMC until the position is filled. ⏸ Delayed
	1.12 Contract External Project Evaluator.	Summer H. Helms, Inc. contracted to complete externalevaluation. ✔ Completed
	1.13 Evaluate PD for continuous improvement.	Project team collected 4 anonymous participant feedback forms from Cohort 1 participants in March 2024 and held a Reflection focus group in April 2024. External Evaluator collected 16 anonymous surveys from April 2024 workshop participants. ✔ Completed

Objective 2: Develop and improve place-based, culturally appropriate curriculum, assessments, and rubrics for five elementary grade levels	2.1 Hire Hawaiian Language Expert (HLE)	Still in process of hiring. Should be completed at the beginning of Y2.	⏸ Delayed
	2.2 Annually develop place-based curriculum, assessments, and rubrics for one elementary grade level	Awaiting curricular materials from Kawaikini, and hiring HLE to translate. Cohort 1 teachers did create curriculum (lessons, assessments) with MTMC in English language for grades K, 1, 4 and 9-12.	⏸ Delayed
	2.3 Schedule and conduct two equity-based workshops/meetings for reflection and engagement	Embedded in Cohort 1 hui meetings	✔ Completed
Objective 3: Build high quality mathematics pathways for grades K-8 to achieve alignment and continuity with high school and dual credit mathematics, which will reduce the need for remedial instruction and create adequate preparation and equitable access for NH students.	3.1 Provide math faculty release time for two Co-PIs for curricular development	Faculty Co-PIs received 1.5 credits per semester of release time and payment for summer grant duties in 2023	✔ Completed
	3.2 Bimonthly meetings for curricular development	Embedded in Cohort 1 hui meetings	✔ Completed
	3.3 Share work at Annual Math Summit	Math Summit planned to be held at the end of Year 2. Cohort 1 teacher presented at the April 2024 workshop, presenting curricular materials and teaching strategies learned during the project.	⏸ Delayed

Table 2: Teacher Participant Outcomes for Objectives 1-3, Year 1

Program Activity	Teacher Participant Outcomes	Status
Through math workshops and coaching, participants will:	1. Dive deep into foundational math concepts such as the fundamental importance of place-value, number operations, fractions, percents, ratios, and word problems, etc.	April workshop addressed fractions, ratios, and word problems. Mentoring sessions covered: decimals, decimals and fractions on a number line, number bonds, bar model, double ten frames, number sentences, number talk with perimeter and mixed numbers, measuring length, measuring perimeter, measuring area, measuring length and perimeter. ✔ Completed

Continued: Through math workshops and coaching, participants will:	2. Discover the importance of model drawing and visuals in introducing math concepts to foster student understanding.	Bar model drawing was a key topic at the April 2024 workshop.	✔ Completed
	3. Analyze student work to diagnose misconceptions and provide solutions for improvement.	Mentoring sessions addressed student misconceptions and needs, and designed lessons specifically to address these. Workshop featured several examples of "incorrect" steps and thinking, which were discussed and integrated into the learning process.	✔ Completed
	4. Explore classroom strategies to encourage number sense and growth mind-set in mathematics to create a positive student attitude towards mathematics.	Hui mentoring sessions surfaced the concept of developing "Number Talk" with students, as well as use of math journals, both of which were tools to increase number sense and foster growth mind-set.	✔ Completed
Through Lesson Studies, participants will:	5. Share a lesson video of teaching a math concept for the group to discuss, reflect, and provide feedback on the efficacy of the teaching and learning.	This was modified from watching video lessons, to watching a live lesson at the April 2024 workshop. Volunteer participants taught a short lesson, and teachers discussed and reflected on the efficacy of teaching strategies used and the impact on student learning.	✔ Completed
	6. Scaffold the lessons so that what the group learns from one lesson can improve the next lesson (or can improve the same lesson taught by a different teacher at a later date).	The April 2024 workshop was scaffolded in a way such that fractions lead to bar models. Mentoring sessions followed individual trajectories within grade levels (ie, measurement, to perimeter, to area).	✔ Completed
	7. Build a routine for regular, deep reflection.	Embedded in observation-feedback loop in mentoring sessions. April 2024 workshop integrated reflection throughout the presentation.	✔ Completed
	8. "Go deep" into reflecting and questioning their own teaching practices and their students' understanding to foster improvement.	Mentoring participants cited this as one of the most useful aspects of the mentoring process- the time and support to do this, and to receive support to find solutions and answers to their questions. Workshop also featured many reflection opportunities on teaching and learning.	✔ Completed

Through Curriculum Development:	9. Create place-based curriculum and assessments to supplement the schools' currently adopted curriculum to foster student engagement, which will lead to improvement in student understanding of mathematics.	Mentoring sessions led to the development of 7 place-based lessons, co-created with MTMC and taught by Cohort 1 participants, as a supplement to the school's iReady Math Curriculum. Workshop participants also received a curriculum packet created by co-PIs that can be used to supplement teachers' current curricula. Feedback from teachers in both mentoring and workshops indicate teachers feel these curricula lead to improved student engagement and understanding.	✔ Completed
Through math workshops and coaching, participants will:	10. Collaborate with others at all levels, grade-level teams, and content area teams across schools and districts, to establish a vision and strategic plan to enhance teaching and learning.	Mentoring participants collaborated across grade levels at hui meetings. Mentoring hui also chose a new curriculum to pilot at their school, aligning them with the other schools in the district. The April 2024 Workshop brought together participants from three schools, spanning grades K-5. Vision to enhance teaching and learning was articulated by lessons on conceptual teaching, however strategic plans have not yet been addressed or defined.	✦ Partially met
	11. Align expectations with local and national standards and requirements.	Lessons created by mentors and MTMC supplementally to school 1's iReady Math Curriculum, which aligns to state and national standards.	✔ Completed

EVALUATION ACTIVITIES

The principal goal of the evaluation is producing credible, timely, and actionable information to support successful project implementation. In doing so, the leadership team can make formative adjustments as needed, and inform key players and collaborators of the outcomes and impact of the project.

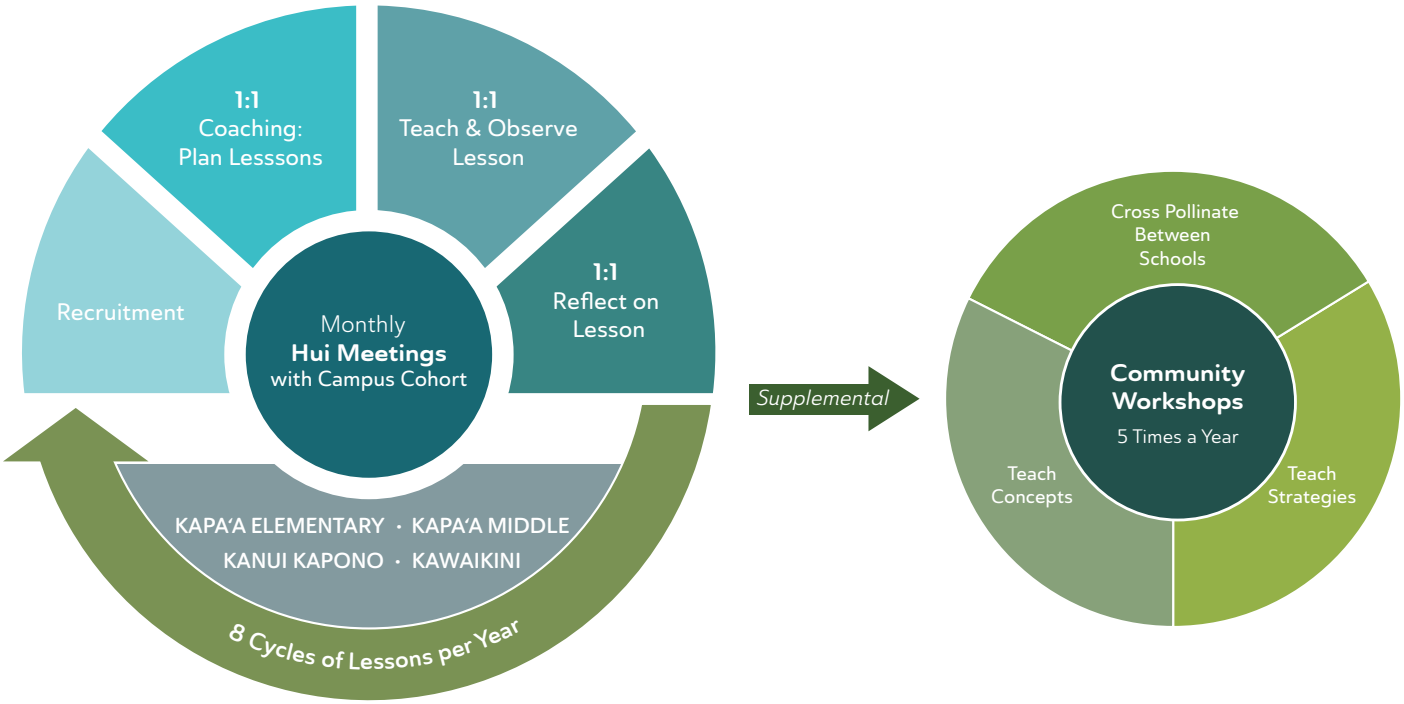
This first annual report predominantly explores the roll-out and implementation of the project to date, leaning heavily on qualitative data. Preliminary data has been gathered from Cohort 1 participants in order to assess formative project milestones and outcomes, while quantitative data and impact assessment will be measured and addressed in subsequent annual reports. The evaluation utilized a variety of data collection and analysis strategies, including observation of workshop and Hui meetings and summarizing meeting minutes, coding of outreach and recruitment efforts, administration of surveys that required both qualitative and quantitative analysis, and analysis of day-to-day implementation efforts–all of which aimed to support mid-program formative adjustments. The sum of all data collection and analyses provides a better

understanding of relationships between program activities and outcomes. This report tracks to the original evaluation questions which guide the entire evaluation process.

Evaluation Question 1: How do professional development and mentorship activities contribute to developing teacher content knowledge?

Two project activities in Year 1 developed teacher content knowledge: Cohort 1 mentoring sessions (both hui and individual), and the math PD workshop. These PD activities were quite different in their approach and content, and in that way, provide a nice compliment to one another. The content of the mentoring sessions was predominantly teacher-led: the MTMC responded to and provided customized content knowledge PD specific to what teachers asked for. Contrastingly, the content knowledge developed in the workshop was preplanned and mentor-led. In this way, each half of the mentoring pair (teacher and mentor) was able to lead and direct the development of teacher content knowledge.

Image 1. Observation Feedback Loop

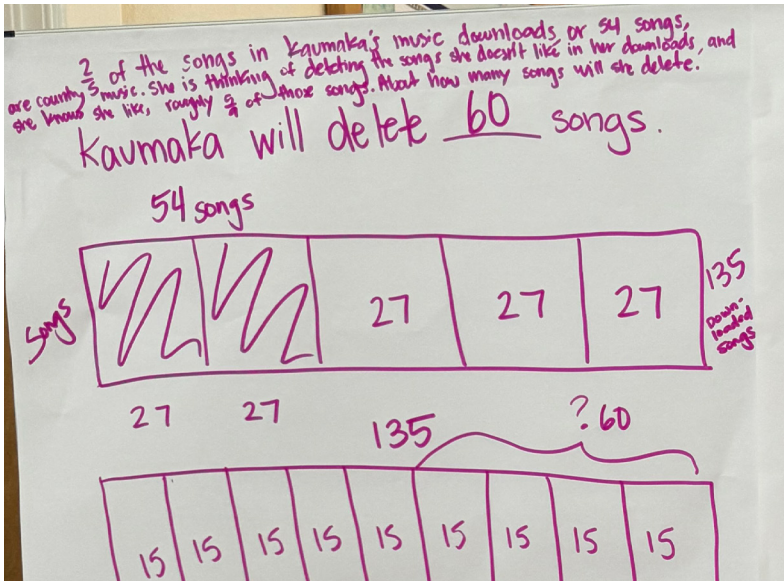


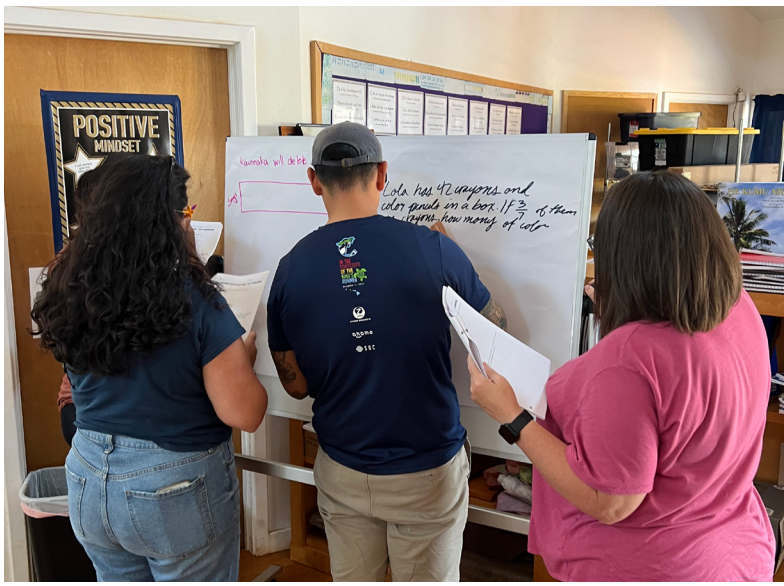
The Cohort 1 hui and individual mentoring sessions influence teacher content knowledge in myriad ways. The individual mentoring sessions are structured as a three-part cycle that both provide teachers with content knowledge (coming from the MTCM, an expert in math content), and further support them by observing and refining the teacher's application and teaching of that content knowledge. Most elementary

and middle school teachers are trained under a multiple-subject credential, and receive math as a part of their teacher training, not the sole focus of their program. In partnership with the MTMC, they are able to address questions they encounter in practice, and receive individualized, math-specific support from a content expert. The first part of the mentoring cycle is a pre-lesson brainstorming and lesson plan creation session held 1:1 with the teacher participant and MTMC. In this session, the teacher identifies a timely topic she is working on with her class, based on the school's current iReady Math Curriculum. Together, the teacher and MTMC create a lesson plan that is engaging, relevant and place-based (as much as possible), drawing on the MTMC's expertise in math content knowledge. The planning session also allowed time for the teacher and MTMC to talk through classroom management strategies, curriculum questions, and other best practices of math pedagogy. In the second part of the cycle, the teacher implements the co-created lesson with her students. The MTMC observes the lesson (this year, all observations were completed in person), and completes an Observation Feedback form. The third part of the cycle is a post-lesson reflection meeting in which the teacher and MTMC meet to discuss how the lesson went, go over the Observation Feedback form, and reflect on the teacher's successes and challenges.

Content knowledge was also developed through the math PD workshop. This year, the project team was able to deliver only one workshop, however, next year the goal is to deliver 5 workshops over the course of the academic and project year. The workshop was designed and delivered by the project co-PIs Gigi Drent and Loni Kalk. The purpose of the workshop was to deepen the participating teacher's knowledge and understanding of specific target concepts identified by the co-PIs through a backwards design process. This process is informed by the Co-PIs' roles as KauCC math instructors, and the common gaps in mathematical understanding they observe in their KauCC math students. Armed with this knowledge, they have identified specific content areas to teach elementary and middle school teachers, so as to improve the teaching and student learning of these concepts. The workshop began with introducing the foundational importance of

teaching math conceptually (versus procedurally). This distinction relates and connects strongly to the project's goal of improving place-based, culturally informed curricula, as conceptual teaching (and subsequent student learning and understanding) move beyond memorization of a set of steps, and embed meaning and context to why and where mathematical concepts connect to students' lives. The main content of the workshop focused on deepening participating teachers' understanding of Fractions and how to utilize a Bar Model to solve word problems. This content was delivered in a highly engaging, interactive, and meta-analytical way, giving teachers much involvement in the learning process, and discussion on how and why the strategies used in the presentation are effective mathematics teaching strategies. The co-PIs facilitated the workshop in such a way that teaching strategies were embedded into the math content training. They modeled and made visible the importance of using intentional terminology with students (such as the terms "boundary", "equal parts", "whole" vs "set" based on the context), integrating a "quick flash" into lessons as a way to generate engagement and curiosity, using novel and non-typical examples in such a way that the teacher does not always know the answer which authentically demonstrates and facilitates the learning process with the teacher acting as a "master learner", and unpacking students' thought processes to make learning more visible (even incorrect answers deepen the learning process, as misconceptions are discussed, addressed, corrected—contributing to more well-rounded understanding for all learners). They dove deeply into how to teach Bar Models, providing teachers with a step-by-step method to teach students this concept, as well as general strategies for solving any mathematical word problem (starting by writing as answer statement with a blank space for the number, labeling who and what, chunking the question, drawing a representation





and labeling what you know and what you need to know). The co-PIs utilized an inquiry-based method, discussing and making visible not only the content, but also the process of how to assess what is and isn't going on in the individual math problems, persisting through challenges, and making mistakes along the way, all which lead to deeper understandings and breakthroughs that help the learner arrive at the final answer. Teacher participants were able to engage in the lesson presentation not only from the view point of learners, but they were also invited to practice in the teaching role, implementing the strategies the co-PIs had taught them on the spot. These rehearsals offered an opportunity for teachers to further reflect on both the teaching, and learning, of the concepts, deepening the experience, and offering opportunities to discuss, analyze, and reflect. The workshop also featured a presentation by Cohort 1 participant Elizabeth Sancho, who presented lessons on Measurement, Perimeter and Area that she had developed in her mentoring sessions, and taught to her 4th grade class.

"Both mentoring and workshop participants unanimously report high satisfaction and improved outcomes as a result of professional development activities.

Evaluation Question 2: What resources were provided to participants to help build and support their teaching capacity?

Mentoring participants received multiple resources from the project to build and support their teaching capacity. Each mentoring participant received a $2,000 stipend to compensate for the time they spent on mentoring PD activities. Further, they were supplied with iPads and accompanying accessories necessary for integrating iPad use into their classrooms, as well as classroom supplies for student use, including white boards, 3D shapes, and student notebooks for math journals.

Workshop participants received a $200 stipend for their attendance. At the workshop, participants were also provided with a substantial lesson packet that included copies of the place-based and culturally relevant lessons created by Drent and Kalk, along with the many example problems presented in the workshop.

Additionally, a repository of all of the individual lessons and assessment that have been developed in the 1:1 mentorship sessions are being cataloged and shared in a Google Classroom site. This repository will serve as a valuable resource for project participants moving forward, as all of the curriculum developed will be available for access and use across participating school sites.

Evaluation Question 3: Are participants reporting feeling better equipped to teach foundational math concepts?

Both mentoring and workshop participants unanimously report high satisfaction and improved outcomes as a result of professional development activities. Participants' feedback was collected via a mentoring

Reflection session/focus-group with Cohort 1 participants, as well as survey results.

Mentoring participants participated in a Reflection focus-group session at the close of Cohort 1 activities. In this session, participant feedback was solicited by both the leadership team, as well as the external evaluation team via semi-structured interview questions. Qualitative responses were recorded and summarized. Mentoring participants also were anonymously surveyed in order to collect additional qualitative data.

March 2024 Anonymous Participant Reflection Questionnaire Responses

Question 1: *How did time spent with the Mentorship Math Coach and Hui meetings with your colleagues impact your content knowledge and teaching strategies?*

A. This time together has already been so valuable. I have already implemented supplemental materials to help give the students a more solid foundation for math concepts.

B. I feel like I was able to deepen my understanding of some math concepts and continue to fine tune different strategies for teaching to engage my students. The Hui meetings with my colleagues allowed me to collaborate with other teachers and share ideas, strategies, and resources. Through our discussions and reflections on our teaching practices, I was able to gain new perspectives, learn from the experiences of others, and improve my own teaching strategies. The support and guidance from the Mentorship Math Coach and my colleagues through these meetings helped me feel more confident in my content knowledge and ultimately, better equipped to provide quality math instruction to my Kindergarten students.

C. The Mentorship Math Coach provided valuable insights and guidance on how to effectively deliver math concepts to students, as well as practical tips for classroom management and differentiation. I was able to learn new teaching techniques and strategies that I could implement in my own classroom to better engage students and enhance their understanding of math concepts.
The Hui meetings with my colleagues allowed for collaboration and sharing of ideas, resources, and best practices. It was helpful to hear about the experiences and perspectives of other math teachers, and to discuss challenges and successes in teaching math. These meetings provided a supportive and collaborative environment where we could learn from each other and grow professionally.

Question 2: *Please provide an example of what you have learned and how it was implemented.*

A. Gigi designed a couple of lessons on perimeter. The students used string, paperclips, erasers, etc to help find the perimeter of different 2D objects. Not only did they enjoy the hands-

on learning and the opportunity to explain their thinking, they got a greater understanding that the perimeter of something is a boundary.

B. One thing I learned is how to implement more number talks to help my students better relate to numbers. For example, playing a game of gold fish, but using objects on the cards (words, tally marks, ten frames, fingers, etc.,) to show the given amount.

C. One valuable lesson I have learned is the importance of differentiation in mathematics instruction. Every student learns differently and has their own unique strengths and areas for growth. It is essential to provide varied opportunities and resources to cater to the diverse needs of students. Moving forward, I plan to implement differentiated instruction strategies in my classroom. For example, when introducing a new concept like fractions, I can offer multiple entry points for students to engage with the material. This could involve providing hands-on manipulatives for kinesthetic learners, visual aids for visual learners, and verbal explanations for auditory learners. Additionally, I can offer extension activities or additional support for students who need a challenge or extra help. By incorporating differentiation into my curriculum, I aim to create a more inclusive and supportive learning environment where all students can thrive and reach their full potential in mathematics. This approach will not only benefit students academically but also foster a positive and inclusive classroom culture.

Question 3: *How did strategies developed or improved within the grant project focusing on math carry over to your teaching methods of other disciplines?*

A. In the past several years, things that teachers used to take for granted like how to work effectively in a group have gone out the window. Students really need to practice working in a group so that when they are working in a group they are practicing values like respect for others, fair play, and taking turns. Gigi and I spoke up about some ways to help manage group work and so the students have been working on their group skills in other disciplines.

B. One of the key strategies I worked on was utilizing hands-on manipulatives to teach mathematical concepts. I found that this approach not only enhanced my students' understanding of math concepts, but it also helped them develop their fine motor skills and spatial awareness. Additionally, I have incorporated more group work and collaborative learning opportunities in my classroom. By working in groups, students are able to learn from each other, share their ideas, and develop important social and communication skills. This has enhanced their overall learning experience and made lessons more engaging and interactive.

C. The strategies improved within the grant project focusing on math can carry over to my future teaching methods of other disciplines by emphasizing critical thinking, problem-solving skills,

and a growth mindset. By incorporating these elements into my math curriculum, it is possible to apply them to other subjects such as science, English, and history. Encouraging students to think critically and approach problems from different angles will not only help them excel in math but also in other academic areas. The use of hands-on activities, group work, and real-world applications in the math curriculum can be translated to other disciplines to make learning more engaging and practical for students. In addition, the collaboration and professional development opportunities provided by the grant project can also be applied to other disciplines. By working closely with colleagues, sharing best practices, and continuously seeking out new resources and strategies, I can improve my teaching skills and foster a culture of continuous improvement in all areas of my curriculum.

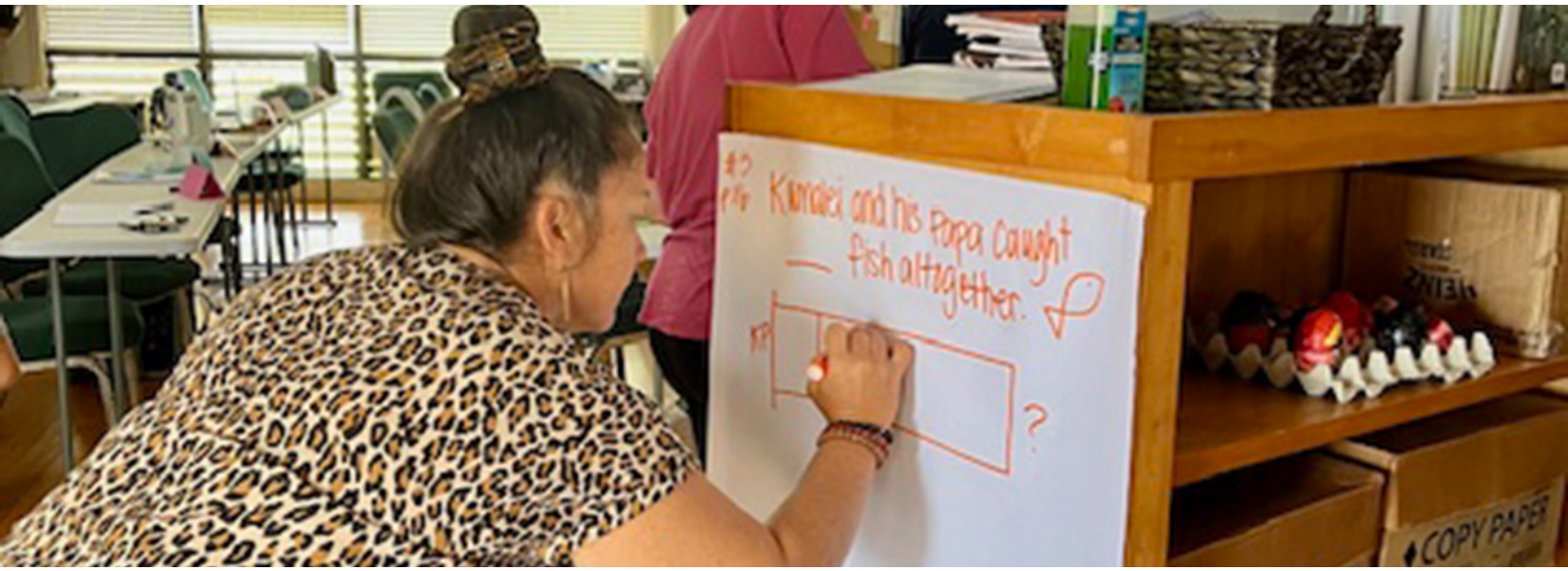
Question 4: Are there any additional comments you would like to share about the impact of your experience?

A. Just so grateful that I get to be a part of this. It is so important and the kids are already benefiting.

B. I appreciate how much effort and time the Mentorship Math Coach gave to help myself, as well as my colleagues make better connections to math. In doing so we can further help our students start thinking relationally to math and not just computationally.

Question 5: *Are there any suggestions you would like to make for this project going forward?*

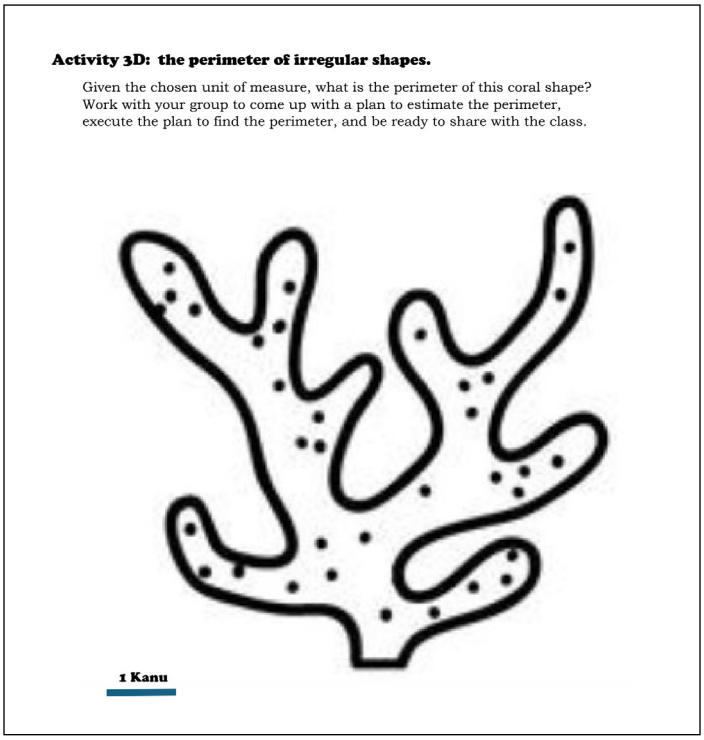
A. The only suggestion I would make is possibly starting the program in the beginning of the school year. I found it difficult to put extra time towards deepening math concepts when we have [our] end of the year events happening throughout [the] second semester.



In the Reflection session, Cohort 1 participants mirrored these sentiments:

Question 1: *What were three things you found helpful?*

Participants highlighted that the helpful aspects of the mentoring PD included topics covered (Number talks and Place value), resources supplied (Manipulatives and Magnetic Number Boards) and mentorship activities (creativity from MTMC in creating novel and engaging lessons, collaboration, advice on tools to use in the classroom, pacing of a lesson, coaching on how to introduce and conclude lessons, support in choosing new curriculum for school, and deep dives into math content and questions).



Question 2: *What were three things you have implemented into your classroom?*

Participants noted that they have shifted their approach from whole-classroom, didactic teaching, to rotating stations, based on the MTMC's classroom observations and suggestions. This shift allowed for differentiation of student abilities/needs, and teachers note that it is more fun for their students. Participants also spoke to how implementing Number Talk led to improved student understandings. All mentioned that the lessons created in the mentoring sessions were well liked and integrated into their current curriculum.

Question 3: *What were three things you would like to work on next year?*

Teachers expressed their desire to get support around classroom management and guidance on integrating tech (iPad) use. They also spoke to their desire to develop more vertical alignment across grades, and more consistent and meaningful use of the math journals. Participants also noted the need to involve parents in the endeavor to improve math outcomes in students, especially related to homework completion.

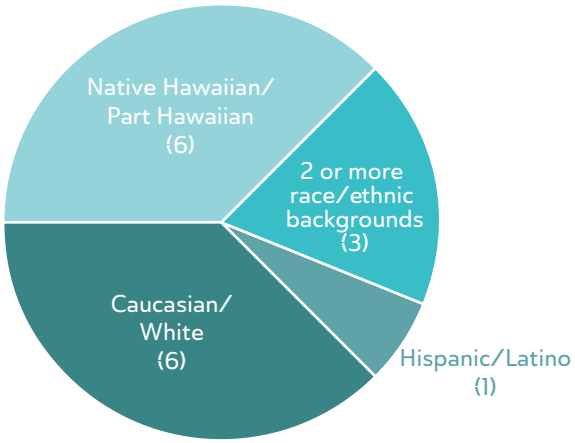
Workshop participants were administered a survey following the April PD workshop to gather their feedback on the effectiveness of the workshop in improving their mathematics instructional capacity. All sixteen participants (14 teachers and 2 instructional coaches) that attended the workshop completed the survey.

April 2024 Math PD Workshop Participant Survey Responses

Participant Background

Survey Question 1: Which race/ethnic background do you most identify with?

The race/ethnic background of the respondents was diverse, including Hawaiian/Part-Hawaiian (38%), Caucasian/White (38%), Hispanic/Latino (6%), and two or more race/ethnic backgrounds (19%).

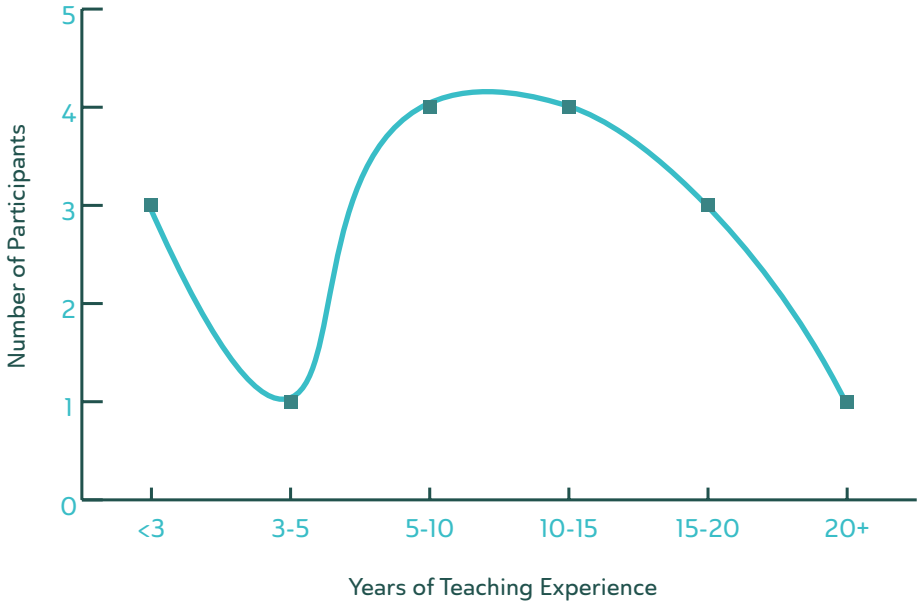


Survey Question 2: Are you Hawaiian or part-Hawaiian?

Seven respondents were Hawaiian or part-Hawaiian, and nine were not Hawaiian or part-Hawaiian.

Survey Question 3: How long have you been working in the classroom?

The participating teachers have a wide range of teaching experience: 3 teachers (19%) have less than 3 years of classroom experience, 1 teacher (6%) has 3-5 years, 4 teachers (25%) have 5-10 years, 4 teachers (25%) have 10-15 years, 3 teachers (19%) have 15-20 years, and 1 teacher (6%) has more than 20 years experience.



Workshop Impact

Survey Question 4: The concepts taught in the workshop increased my content knowledge of mathematics

The concepts taught in the workshop increased the mathematics content knowledge of 100% of participating teachers (81% strongly agree and 19% agree).

Survey Question 5: The workshop provided me with practical strategies that address the needs of my student population, including Native Hawaiian students

The workshop provided 100% of teachers with practical strategies that address the needs of their student populations, including Native Hawaiian students (88% strongly agree and 13% agree).

Survey Question 6: The workshop provided me with useful techniques to address student misconceptions in mathematics content knowledge

The workshop provided 100% of teachers with useful techniques to address student misconceptions in mathematics content knowledge (88% strongly agree and 13% agree).

Lessons from the workshop that were most beneficial for participating teachers

Survey Question 7: What lessons, if any, from the workshop did you find the most beneficial to your teaching?

Many respondents reported that the **fractions and bar model for word problems were most beneficial** for their teaching. A few mentioned conceptual teaching, and one mentioned the perimeter lesson.

Survey Question 8: How could the delivery or content of this workshop be more relevant to your teaching?

The majority of teachers (81%) reported that the workshop delivery and content were good as is. Three suggestions for improvement were offered: "Time to talk with grade levels about the progression", "Continue work on conceptual understanding with the use of models.", and "I would like lower el math", referring to lower elementary grade levels.

"Time to talk with grade levels about the progression"

"Continue work on conceptual understanding with the use of models."

"I would like lower el math"

Teachers who were satisfied with the lessons provided the positive feedback:

"This workshop was incredibly relevant to my teaching"

"It's very relevant, I'd like more of it"

"The delivery was great and I enjoyed working on the problems myself instead of just seeing the problems and seeing the answers"

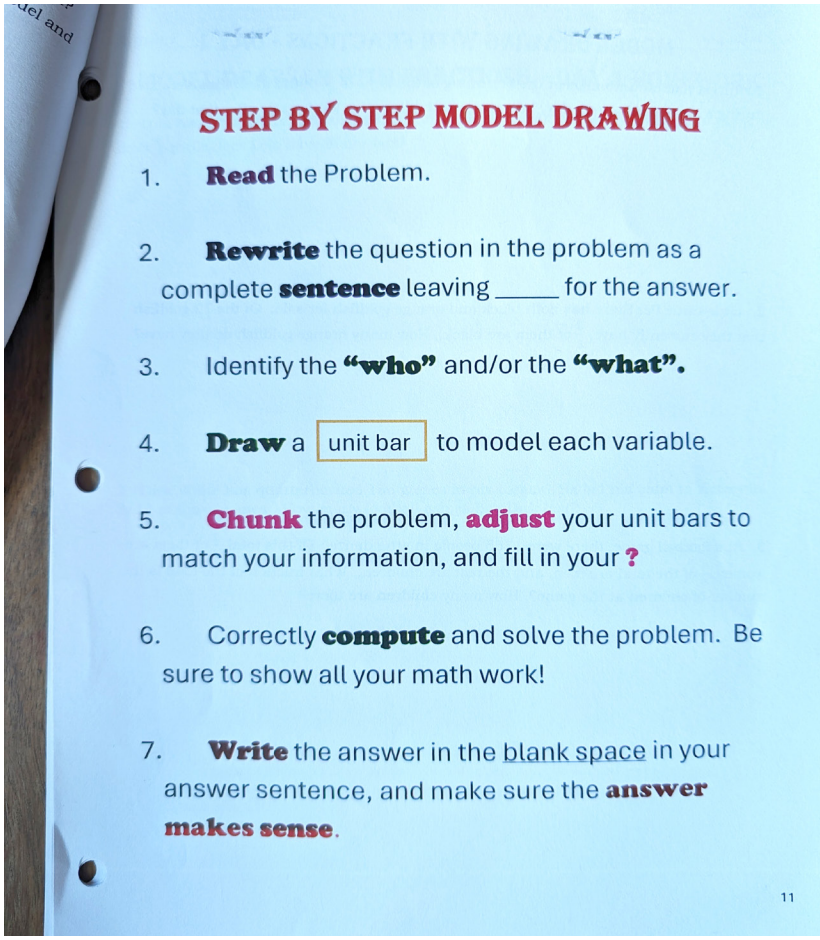
"It was great!!!!"

Survey Question 9: What future topics would you like to see presented?

The teachers provided numerous topics that they would like to see presented in future workshops. These topics included: measurement, addition and subtraction, multiplication and division strategies, double digit multiplication, long division concepts, percentages, models for dividing fractions, base ten, fractions, multiplying and dividing decimals, number sense, measurement conversion, reversals for lower levels, balancing equations, and topics for Kindergarten.

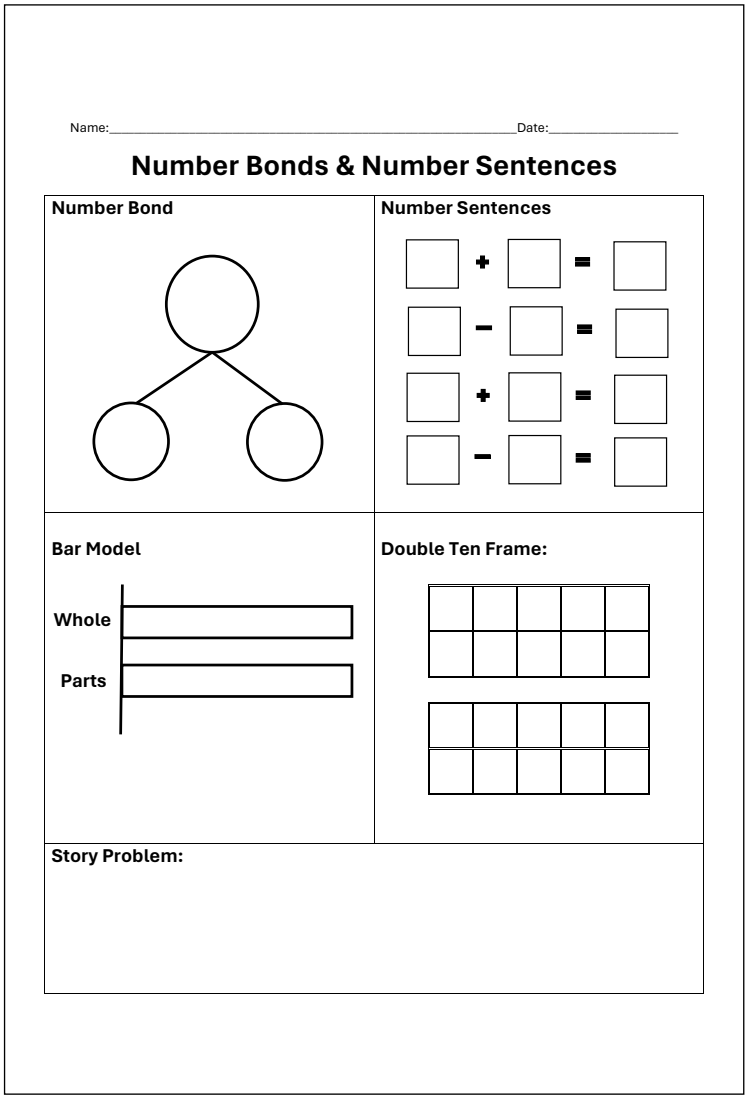
One participant responded, "Math isn't my strong suit so I'm excited to absorb math content", and another praised "the deeper understanding of how the lessons are being presented. The "why" was awesome".

As evidenced by these comments, teachers are hungry for this knowledge, and the relevancy of the lessons presented.



Evaluation Question 4: How are place-based, culturally appropriate curriculum, assessments, and rubrics being created?

In regards to Objective 1, as discussed in Evaluation Question 1, mentoring sessions primarily function to develop place-based, culturally relevant curriculum, including lesson plans, assessments and rubrics.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Number Bonds & Number Sentences

Number Bond	Number Sentences
Bar Model	**Double Ten Frame:**
Whole Parts	
Story Problem:	

As a result of individual mentoring, Cohort 1 participants co-created seven complete lessons with MTMC, all of which have been uploaded to a Google Classroom to be shared and disseminated to all project participants, present and future. Further, PD workshop participants were provided with a packet of lesson plans specific to the content taught in the workshop (Fractions and Bar Models), as well as a copy of one of the lesson plans created and presented by a Cohort 1 participant- a 4th grade lesson on Measurement, Perimeter and Area.

In regards to Objective 2, due to the delay in hiring a Hawaiian Language Expert (HLE), the translation of one grade level of math curriculum for Kawaikini school has not been completed. The project outlined creating curricular materials one grade level per year of the project, so, in order to make up for the unfinished curriculum in year 1, the HLE will need to complete five grade levels of math translation in the four remaining project years. They plan to use the unused funds from Year 1 to increase the hourly pay rate to attract a qualified candidate. Further, the project leadership team is awaiting curricular materials from Kawaikini.

Evaluation Question 5: To what extent is the project leadership team conducting bi-monthly (every two months) meetings to develop high quality mathematics pathways for grades K-8?

The project leadership team embedded these meetings into the monthly hui meetings at Kanuikapono. This decision came from feedback from teachers on how full their schedules already were, and the need to streamline and optimize sessions in order to meet as many project goals within the least amount of

meetings. In total, Cohort 1 met 4 times as a hui, and because of the delay in the project start date, those meetings were more frequent than every two months: the hui met 4 times in two months, so approximately every 2-3 weeks.

PROJECT OUTCOMES

Evaluation Question 6: Did teaching content knowledge improve participants' ability to teach foundational math concepts as a result of professional development and mentorship activities?

Content knowledge was mainly taught to mentoring participants through the co-creation of lessons. In that process, the MTMC was able to draw on her math content expertise to teach and guide her mentee teacher on the content topic the teacher participant identified for the session. As reported in Evaluation Question 3, all of the teacher participants in Cohort 1 reported an increase in their ability to teach foundational math concepts due to program PD activities, through survey and the Reflection session focus-group.

Also reported previously under Evaluation Question 3, the 16 workshop participants completed a survey at the end of the workshop. The findings of this survey show that the workshop had a positive impact on all of the teachers' and academic coaches' mathematics content knowledge; provided practical strategies that address the needs of their student populations; and provided useful techniques to address student misconceptions in mathematics content knowledge. The concepts taught in the workshop increased the mathematics content knowledge of 100% of participants; provided 100% of participants with practical strategies that address the needs of their student populations, including Native Hawaiian students; and, provided 100% of participants with useful techniques to address student misconceptions in mathematics content knowledge.

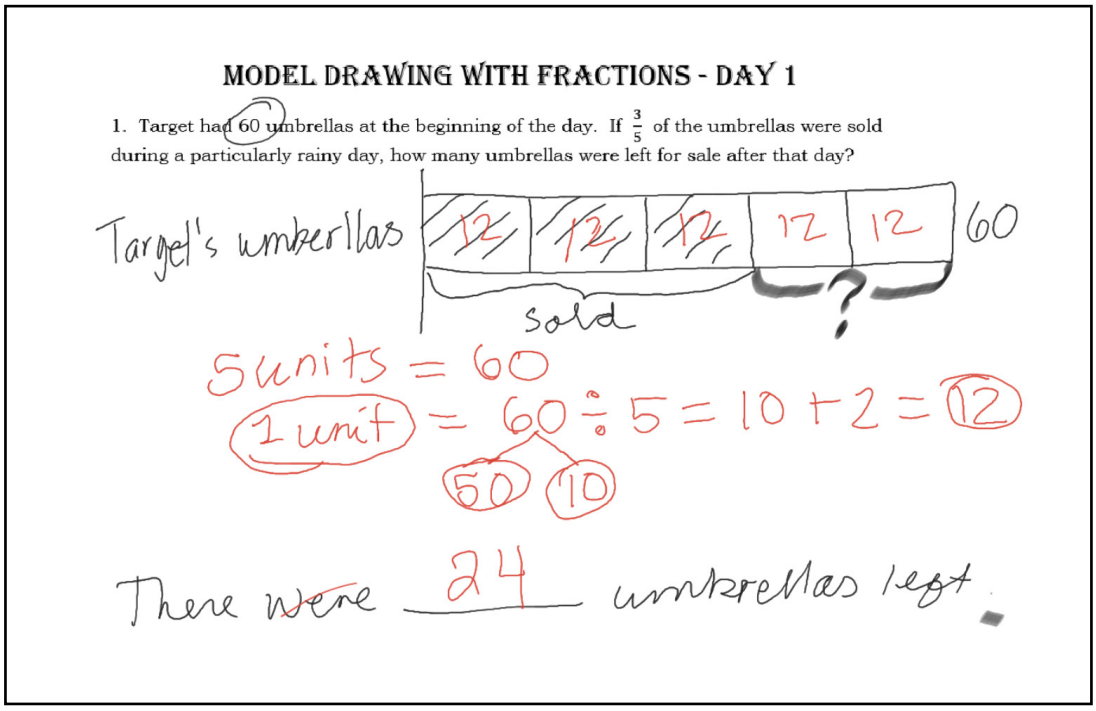
Evaluation Question 7: What professional development and mentorship strategies were most useful (i.e., workshops, 1:1 coaching)?

Since there was very little overlap in the mentoring and workshop participants this year, it is difficult to rank them, however, data from both sets of participants suggest that both the 1:1 mentoring, and the workshop, were each highly useful to participants in their own right.

Mentoring participants identified 1:1 coaching as the most useful PD activity.

In the Cohort 1 Reflection session, mentoring participants identified 1:1 coaching as the most useful PD activity. They highlighted that the mentoring they received from the MTMC led to not only highly engaging lessons, but also strategies for classroom management, such as creating rotating stations, incorporating daily "number talk" into daily classroom routines, and use of math journals. Further, the mentoring hui acknowledged how helpful the MTMC was in choosing the new curriculum for the school.

In the workshop participant survey, the majority of participants found the workshop delivery and content to be good as is and not in need of any substantial changes. Three suggestions for improvement were offered: (1) time to talk with grade levels about the progression, (2) continued work on conceptual knowledge with the use of models, and (3) additional coverage of lower elementary mathematics. The teachers provided numerous topic ideas for future workshops that can be used by KauCC in planning upcoming workshops.



Lesson Plan developed by Gigi with and for Elizabeth.

Evaluation Question 8: How were the resources provided by the project effective in helping participants build their teaching capacity?

The mentoring and workshop stipends provided financial support to participants to compensate for their time invested in PD activities. Mentoring sessions added to participating teachers' already very full plates. The stipend they received provided financial recompense for their time and energy spent in individual mentoring sessions and hui meetings. The April PD workshop was held on a Saturday morning, a precious window of free time for busy educators, yet wielded 16 participants, 15 of whom had not previously participated in any project activities! Compensating participants with stipends helps to attract participants to the program, and motivate their on-going participation.

The lessons (curricular resources) created and provided by the project were effective in helping build teaching capacity by supporting multi-discipline teachers with targeted and sustained math support. The teacher participants are trained broadly in multiple disciplines- having access to a math expert (MTMC), and resources directly from that expert, have deepened participating teachers' math knowledge and capacity.

In the Cohort 1 Reflection session, teacher participants spoke of needing more training on how to implement iPad use in the classroom, including guidance on what apps are best to use, and organizing those apps by grade level. They asked that the MTMC train the teachers on how to use the apps. Based on this feedback, the project leadership team has planned the first workshop of Year 2 to cover this topic.

Evaluation Question 9: How did reflection activities influence program activities and participant growth?

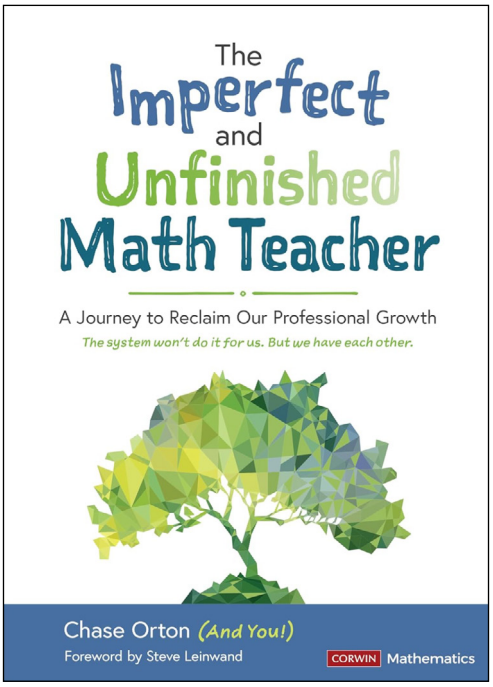
The leadership team took a proactive and responsive approach to feedback from Cohort 1 participants, both formatively and summatively.

Mentoring teacher participants expressed that the mentoring activity afforded them the luxury of structured reflection in order to more purposely chart their path, and draw from their MTMC's expertise.

Formatively, feedback from teachers highlighted the need to prioritize individual, 1:1 sessions, and to streamline hui meetings in order to optimize time and work with teachers' schedules. Mentoring teacher participants expressed that the mentoring activity afforded them the luxury of structured reflection in order to more purposely chart their path, and draw from their MTMC's expertise to answer their questions and provide solutions to their classroom challenges. For example, mentoring teacher participants reflected on how much of the challenge that comes up in teaching is related to classroom management, and especially catering to a diverse set of needs and abilities in math, across their class. The MTMC suggested breaking up the students into math stations, to both address classroom management, as well as differentiation. This strategy was highlighted

by multiple teacher participants to have made a positive impact on their classroom environment, teaching process, and student learning.

Summitively, the MTMC and Project Coordinator met with the Cohort 1 hui in a Reflection session at the close of Year 1. Feedback provided in this session was used to chart the next steps of the mentorship schedule, including the Summer work plan to develop pacing guides for each grade, as well as starting the Year 2 school year off with an iPad tutorial workshop. The session also raised the issue of classroom management, and the leadership team suggested the Cohort 1 hui read a book together in Year 2: *The Imperfect and Unfinished Math Teacher*. Mentorship participants also expressed a desire for more support with vertical alignment and articulation between grade levels, and the MTMC suggested that next year, the hui meetings will agree upon a topic for lesson plan creation, and then the mentor pairs will differentiate on that topic by grade level. In this way, the hui will work more cohesively to develop conceptual understanding across grade bands. Further, the MTMC will provide Cohort 1 with an Excel sheet that will help the teachers create pacing guides for their new curriculum next year, in order to create and compare timelines. The MTMC will work with Cohort 1 participants over the Summer (beginning of project Year 2) to create these pacing guides. The Reflection session surfaced the question of how to get parents more involved in building math capacity at Kanuikapono. This was not an original goal of the project, but has arisen out of the organic roll out of the program activities, as teachers estimate that less than 50% of students complete homework, a crucial practice for improving math capacity in students. The MTMC suggested reaching out to parents at the beginning of the year, as well as soliciting parent volunteers to work in the classroom specifically on math. Lastly, the Reflection session surfaced the idea of mentee-teachers from different schools observing one another as part of a Professional Learning Community (PLC).

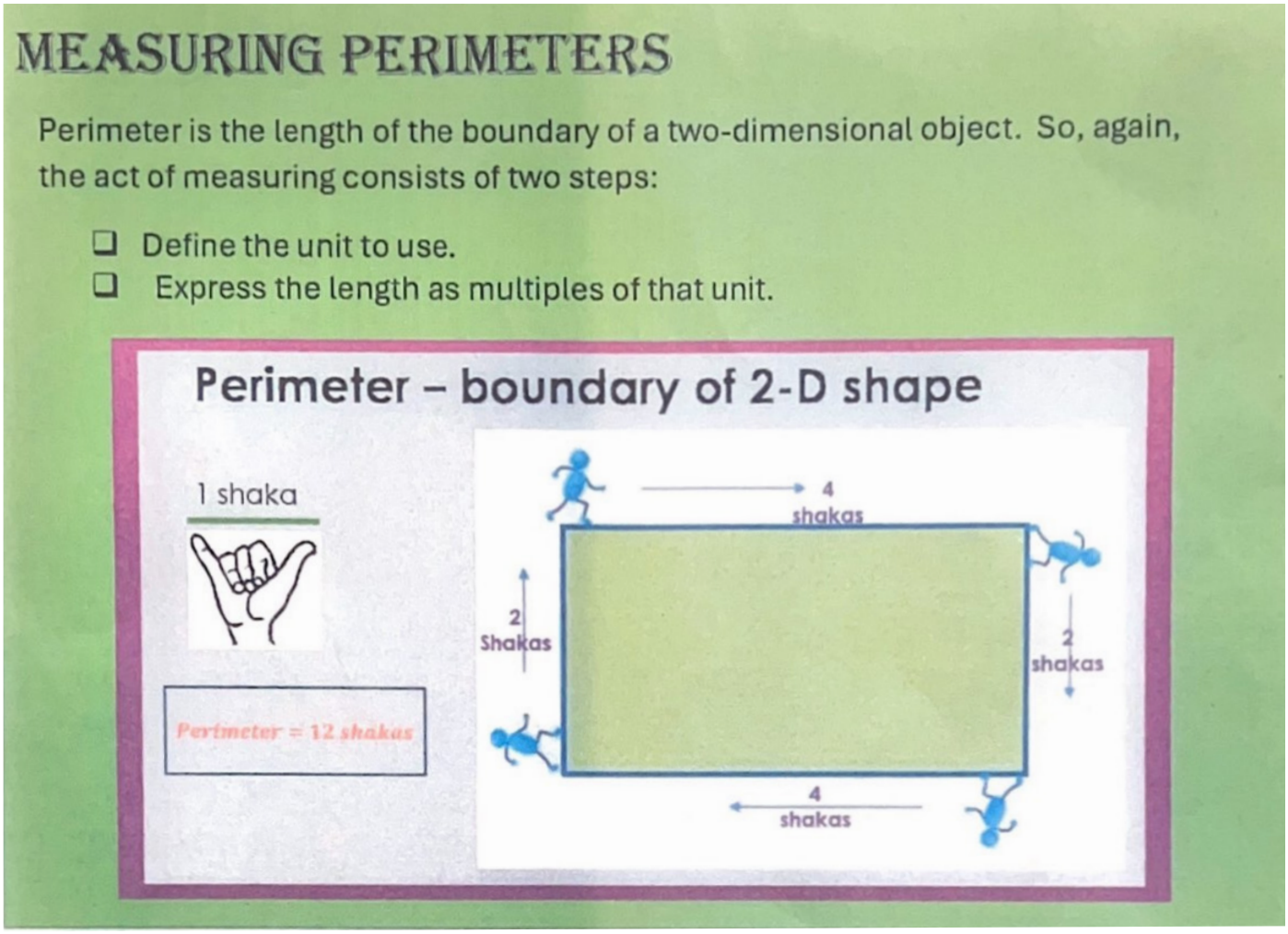


Evaluation Question 10: What was the participant retention rate for each participating school's cohort?

Cohort 1 started the year with six mentoring participants from two schools (Kanuikapono and Kapa'a Elementary). Four teachers were retained from School 1 (Kanuikapono), and one was retained from Kapa'a Elementary. All five teachers are expected to continue participation in Year 2. As previously noted, the Year 1 participant numbers were lower than projected, however, the project leadership team has expanded the project to now include more schools in their project, so as to make up for the lower participant numbers in Year 1.

Evaluation Question 11: Did the project successfully develop place-based curriculum and assessments?

With respect to Objective 1, seven place-based lessons and assessments were created by mentoring teacher participants through 1:1 mentoring sessions with the MTMC. These lesson plans were co-created, implemented with observation by the MTMC, and then refined (if needed) upon reflection. They incorporated hands-on, culturally-relevant and place-based strategies, such as measuring perimeter using a shaka (a friendly Hawaiian hand gesture) and measuring area of a banana leaf:



With respect to Objective 2, no curriculum was translated for Kawaikini school, as intended, due to the hiring delay of the HLE. The original project proposal outlined translating 1 grade level per project year, and the leadership team anticipates translation will begin in Year 2. It is anticipated that the HLE should be able to make up for the lost time, and be able to finish all 5 grade levels before the close of the project.

Evaluation Question 12: Did the curriculum and assessments pair well with the schools' currently adopted curriculum?

With respect to Objective 1, the math lessons created in the mentoring pairs were specifically tailored and informed by the teacher's current curriculum, as the lesson creation was based on real time need of teachers and the topics they were covering in their classes. The lessons built off of the foundational concepts, drawn and aligned to the school's currency adopted iReady Math curriculum, and expanded on these concepts by creating lessons that were hands-on, culturally-relevant, and engaging. In that way, each lesson created was in-line and integrated with the curriculum of each class, and improved the teaching and learning by deepening conceptual understandings and student engagement with the topics.

One of the unexpected outcomes of the project was the desire to choose a new curriculum at Kanuikapono Charter School (Cohort 1's school). The Cohort 1 hui meetings surfaced teacher dissatisfaction with the current curriculum due to its heavy emphasis on Language Arts. The teachers felt that the verbal emphasis created a barrier to accessing the actual math content for students, and they sought support from the MTCM in choosing a new curriculum for their school. The MTMC played a crucial role in facilitating the process by providing guidance and PD to teachers as they chose and are in transition to the newly adopted curriculum–Savvas enVision (Savvas Learning Company).The curriculum provides a vertical alignment and synchronizing of East Kaua'i public K-12 schools to a unified curriculum.

enVision Mathematics ©2024 Grades K-5

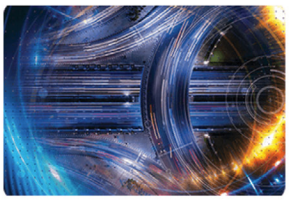
Problem-Based and Visual Learning

Grounded in problem-based and visual learning that enable students to gain a deeper understanding of math concepts, the newly updated *enVision Mathematics* K-5 also now features new resources to encourage student-led learning both in the classroom and at home

enVision Mathematics ©2024 Grades 6-8

Encourage Student Choice

enVision Mathematics Grades 6-8 makes math relevant to students with new resources to encourage student choice and to support learning both in the classroom and at home. It's all available on our newly-enhanced, award-winning Savvas Realize® Learning Management System



enVision A|G|A © 2024

Engaging, Relevant, and Adaptive Content

A new edition of the best-selling high school math program consisting of Algebra 1, Geometry, and Algebra 2, *enVision A|G|A* offers students choice in how they explore math through engaging, relevant, and adaptive content, delivered with the flexibility to help every student succeed.

enVision Integrated Mathematics © 2024

Finding Connections

A high school integrated math program that helps students see how the disciplines of mathematics are intertwined, with engaging and relevant content. *enVision Integrated Mathematics* offers time-saving options and resources. Re-energize students and help them become more self-directed and independent learners.

With respect to Objective 2, although no curriculum was translated in Year 1, the project leadership team did work with Kawaikini Charter school to identify the math curriculum they currently use (Singapore Math), so as to align the translated and adapted lessons as closely to this as possible.

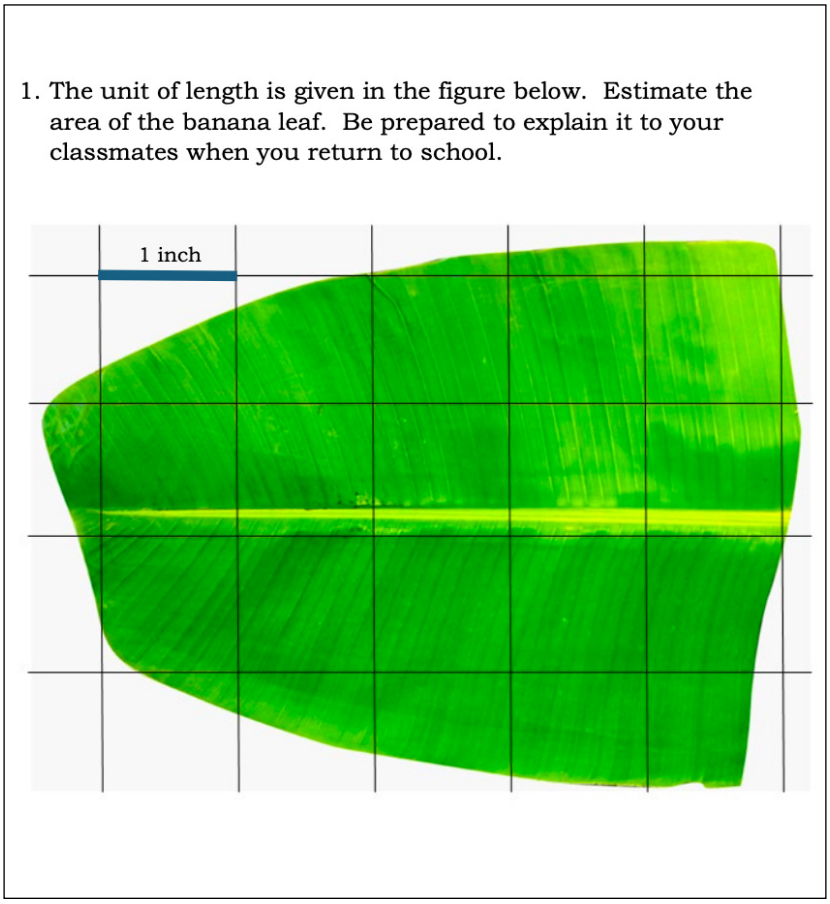
Evaluation Question 13: Did the proposed curriculum align with or exceed local and national standards and requirements?

The lesson plans created in the mentoring pairs were aligned with Kanuikapono's current iReady Math curriculum, which is in alignment with state and national standards. The translated curriculum for Kawaikini will likely be based off of Singapore math's English-language math curriculum, which is also aligned with state and national standards.

Evaluation Question 14: To what extent were place based curriculum recommendations shared with the greater community via conference presentations and/or published articles?

The Annual Math Summit is intended to be held starting in Year 2. One Cohort 1 teacher, Elizabeth Sancho, presented her place-based curriculum produced through her mentoring PD at the April Workshop. The lesson she presented was a lesson on measuring length, perimeter, and area, and utilized place-based and culturally relevant elements, such as estimating measuring using a shaka, paper clips and string, as well as measuring place-based shapes (coral, mountain ranges, and local flora).

All of the lessons and assessments that were created by the mentoring pairs have been collected and shared in a Google Classroom site. Future cohort participants will have the benefit of accessing this previously created curricula, and add their own, newly developed curriculum to the repository.



Evaluation Question 15: Did project leadership successfully develop high-quality mathematics pathways for grade levels K-8?

The hui meetings allowed teachers within the same school (Kanuikapono) to collaborate and articulate their curricula. One teacher expressed how helpful it is to know not only what the grade before her is expected to

learn/know in relation to math, but that she also wanted to know what the grade after hers is going to teach so that she could better prepare her students for their next step of their math learning trajectory. Knowing what comes before and after an individual grade level, and seeing students learning as a more cohesive trajectory relates directly to objective 3, and creating high quality pathways.

By aligning the curriculum across different grade levels and ensuring consistency in teaching practices, the project fosters a seamless educational experience for students as they progress through their academic journey. This harmonization not only enhances the quality of education but also promotes a cohesive and standardized approach to learning within the K-12 school system. The project's commitment to supporting vertical alignment and curriculum synchronization reflects a broader impact on education practices and student learning outcomes beyond the traditional boundaries of the academic world.

CONCLUSION AND RECOMMENDATIONS

Year 1 of the *E Kūkulu Ke Kahua a Pa'a* project was a success by nearly all measures. The primary objective of delivering PD to teachers (via mentoring and workshops) was successfully implemented, albeit delayed and on a subsequent modified schedule. To this end, the project leadership team has now established a greater understanding of how to effectively deliver project activities, and is going into Year 2 with great momentum. The team has been adept at modifying project activities to respond to participant feedback in order to optimize the impact and feasibility of participation. As a result of their efforts, all participants in both the mentoring hui and the workshop unanimously report that the PD activities have contributed to deepening their math content knowledge and building their teaching capacities.

The mentoring cohort has been a resounding success, largely due to consistent and in-depth coaching by co-PI Gigi Drent, a highly motivated and qualified mentor. Due to the delay in finding a qualified applicant for the MTMC role, Drent has temporarily filled in as interim MTMC until such time that a suitable candidate becomes available. Drent's contributions as MTMC have been critical in building teacher content knowledge, teaching capacity, lesson creation, and classroom management strategies. The success of Cohort 1 sets a promising tone for future cohorts, and the project team is using the formulated data and lessons learned during implementation to enhance the effectiveness of project activities and outcomes. Recruitment outcomes for Cohort 2 showed significant improvement, with 17 individuals recruited compared to six in Cohort 1. This demonstrates the project's ability to continuously enhance its

recruitment efforts and attract more participants to the mentoring PD.

Outreach, awareness, and recruitment activities were also undeniably impactful. Marketing and outreach materials were produced in unison with the mentoring program development process. The project team then invested countless hours into school outreach, raising teacher awareness of PD activities, and recruiting participants for workshops and Cohort 2 mentoring. In addition to meeting with all Kaua'i HIDOE elementary and middle school principals, the project team also gave teacher presentations on the project on multiple occasions at local schools. At least 17 people (seven more than the number anticipated) have already been recruited for Cohort 2. Outreach served the dual purpose of increasing teacher awareness of PD workshops and recruiting teachers and academic coaches to the mentoring cohort.

Feedback from workshop participants further reinforces the positive impact of the PD: 100% of the teachers and coaches who attended the April workshop reported satisfaction with the course, as well as an increase in their math content knowledge and instructional capacities as a result of the workshop.

At least 17 people *(seven more than the number anticipated)* have already been recruited for Cohort 2.

Although the curriculum development objective has been delayed due to HLE hiring, it is expected that the activity should be able to be accomplished in the remaining four project years. Further, the lessons created in the mentoring activity also, unanticipatedly, advance the curricular development progress on this objective. Further, although the Annual Math Summit will not be held until project Year 2, mentor participant work was shared out and presented at the April 2024 workshop, as well as cataloged for future access and use in a digital repository.

Throughout Year 1, the project has utilized a diverse range of activities and methods to achieve substantial progress towards its objectives. All outcomes and milestones outlined in the work plan are on track to be met or even exceeded by the end of Year 2. This further solidifies the success of the mentoring and workshop efforts, as a result of the well-executed recruitment strategies employed.

In tracking the progress and evolution of the E Kūkulu Ke Kahua a Pa'a project over Year 1, the evaluation team offers the following reflections and recommendations to the project leadership team, as they move into Year 2:

1. The creation of a PLC hui between schools. Since many of the participating schools are small, and only have 1-2 teachers per grade level, an inter-school PLC element to the project would allow teachers within the same grade band to collaborate, observe one-another, share resources, and discuss grade-level specific issues related to math pedagogy. This could be worked into workshops by giving time to collaborate in grade-bands, and/or worked into mentoring hui activities such as teachers observing other teachers.

2. Integrating a leadership component to the mentoring hui, such that participants that have already gone through at least 1 year of mentorship with MTMC mentor new cohort participants.

APPENDIX

Mentoring Materials

Mentoring Recruitment Presentation
https://docs.google.com/presentation/d/14x0Y86FAUlP9yAN-NTtpZk7TOFX_RiHA/edit#slide=id.p8

Lessons and Observations- Cohort 1
https://drive.google.com/drive/u/0/folders/1o3Srag0eKhyZXdWwwYkSUZrUz0kf6OCC

April Workshop Materials

Workshop Presentation
https://docs.google.com/presentation/d/1cTbzuZlhhCJx7Wd5QaxCeNaQpIPeUF38/edit?usp=sharing&ouid=102836387286011711858&rtpof=true&sd=true

Workshop Handouts for Participants
https://drive.google.com/drive/folders/1yqPresP02vZlR-_oJQqT7nz9ws8Qy5Rx?usp=drive_link

Participant Feedback

Cohort 1 Survey Responses- March 2024
https://docs.google.com/document/d/1X11EPmIhJLJ0MB8VTVHn2NgM4VgN7Mdd359mlJkc3_g/edit

Cohort 1 Reflection- Focus group responses April 2024
https://docs.google.com/document/d/1Nu4WpeAfpMHe5ZhDf7gmqBjb5wdyOIJG-OtTr2OWJzo/edit#heading=h.x8f4bs12bmxy

Evaluation Deliverables

Evaluation Plan
https://drive.google.com/file/d/1mNQ9bTTTqVHIu5kHTmx3w3qq5_ti8D9g/view?usp=sharing

Evaluation Presentation
https://docs.google.com/presentation/d/1TkYGr0H_oAk2S9MUB098mBqyIlViFzHs/edit?usp=drive_link&ouid=102836387286011711858&rtpof=true&sd=true

Workshop Participants Exit Survey Responses- April 2024
https://drive.google.com/file/d/1InYMgL57Sl9m1y1xXehB7FsnTlnit6r5/view?usp=sharing