

21ST CENTURY COMMUNITY LEARNING CENTER

**CONNECTING MOLOKAI M'S: "ME, MY MIND, MY
MANA'O"**

(CMM)

MOLOKAI COMPLEX OF SCHOOLS

2012-13

Evaluator

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EXECUTIVE SUMMARY

The 21st Century Community Learning Center Project, Connecting Molokai M's: "Me, My Mind, My Mana`o" (CMM) was a five-year project which embeds research-based effective features in after-school or school-community settings. The activities were organized into four components: Selfhood and Learning, Skills Maintenance, STEM Mind-Building and Strength-Based Community Building.

The academic year program began in Semester 2 of Year 1 since initial funding did not become available until Semester 1. Kaunakakai and Kilohana had programs throughout the 5 years. . Kualapuu, a charter school, had programs in Year 2 and 3, but chose not to continue due to extended day programs offered at their school.

The number of courses and enrollment steadily increased annually peaking in Year 4. The drastic reduction in project scope for Year 5 was due to insufficient funding for personnel, no available teachers and lack of interest for some components.

The number of partners increased dramatically from 3 in Year 1 to 16 in Year 2, 13 in Year 3, 20 in Year 4 and 26 in Year 5.

Sustainability of the project was seriously addressed by the project schools. Successful activities are being incorporated in the regular school program and schools are looking at things differently.

The summer program was initiated in Year 2 since initial funding became available during Semester 1 of Year 1 and the project year included the summer session prior to the academic year. Sites conducting summer programs increased from 1 in Year 2 to 4 in Year 5. Enrollment increased from 147 in Year 2 to 426 in Year 5.

Student, parent and teacher evaluations were generally very positive.

The evaluation design included formative and summative assessment of project objectives for program improvement and for determining effectiveness of the project. They included two objectives for each component, one for participation and one for completion of activities.

Conclusions and recommendation from the report are listed below.

CONCLUSIONS

1. The participation objective was met for the Skills Maintenance component. The completion objective was met by the Skills Maintenance and STEM components.
2. Five (5) of 6 sites implemented the program which was reduced in scope due to inability to carry over funds from Year 4.
3. Evaluation forms returned by students, parents, and teachers were generally positive, some very positive.

4. The number of classroom teachers rating the effect of the project on regular project attendees (attended 30 days or more) was 23 teachers for 185 students. At all schools students who needed to improve generally made Slight to Significant Improvements followed by No Change.
5. The math and reading/language proficiency objectives were met by all schools except Molokai High School.
6. The science proficiency objective was met by 3 schools and unmet by 2 schools.
7. The GLO student self-assessment was unmet for Homework Help and met for Math Whizz at Kaunakakai School.
8. The homework completion objective was met by all schools
9. The attendance objective was met by all schools except Maunaloa School.
10. Four (4) sites had summer programs. All students, parents and teachers generally rated the program positively.

RECOMMENDATION

Incorporate successful activities into the regular school program or through other funding sources.

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Appendix

A. General Learner Outcomes

B. Objectives by Components

C. Evaluation Forms

 Student Evaluation

 Parent Evaluation

 CMM Teacher Survey

 Teacher Survey

D. Acronyms

**CONNECTING MOLOKAI M'S: "ME, MY MIND, MY MANA`O"
(CMM)
EVALUATION
YEAR 5, 2012-13**

BACKGROUND

Connecting Molokai M's: "Me, My Mind, My Mana`o" was funded through the 21st Century Community Learning Center Program for five (5) years, 2008-13. Funding of \$377,911 was approved for the first, second and third years. Fourth year funding, expected to be 75% of first year funding, was \$283,433.25. There were no carryover funds from the fourth year so the fifth and final year funding allotment was \$188,956.

The project year is from June 1 to May 31. However, to coincide with the school calendar, activities are reported for the school year and the summer session preceding it. The summer program was held at three elementary schools, Kaunakakai, Kilohana and Maunaloa Schools; and Molokai Middle School.

School-year activities for Year 5 were conducted at five Molokai schools - Molokai (MKK) High School, Molokai (MKK) Middle School, and three feeder elementary schools: Kaunakakai, Kilohana, and Maunaloa Elementary Schools. Evaluation was based on data on the statewide standards, General Learner Objectives (Appendix A), project objectives (Appendix B) and implementation of project plans and activities. Evaluation forms (Appendix C), developed for feedback from students, parents, and teachers were used. Acronyms used in the report are defined in Appendix D.

COMMUNITY PARTNERS

- | | |
|--|---|
| 1. Air Force Research Laboratory | Career opportunities in STEM |
| 2. Catholic Food Ministries | Snacks |
| 3. Chaminade University | Educational Pathways |
| 4. First Lego League | Teacher training, robotics competition |
| 5. Hawaii Department of Transportation | Bus transportation |
| 6. Hawaii Robotics Organizing Committee | \$1,404 for MMS Robotics |
| 7. Kulana Oiwī | Staffing, snacks |
| 8. Leadership in Energy & Environmental Design | STEM education |
| 9. Maui Art League, Lahaina Arts Association | Art class supplies |
| 10. Maui Economic Development Board | \$22K STEM grants (4) |
| 11. Maui Economic Opportunity | Bus transportation |
| 12. Maui Police Department, Molokai Division | Staffing for leadership class |
| 13. Molokai Drugs | Robotics and business education |
| 14. Rose Yamada | Development/consultation services |
| 15. Science Applications International Corporation | Career opportunities in STEM |
| 16. Seabury Hall | Housing for FLL Team |
| 17. Summer Play and Learn Sessions (PALS) | Quality recreational programs at Maunaloa and Kilohana Schools |
| 18. TREX Enterprises Corporation | Career opportunities in STEM |

| | |
|--|---|
| 19. United States Air Force | Super computer education |
| 20. United States Navy Pearl Harbor | Navy careers and nuclear submarine visit |
| 21. University of Hawaii, ACE Reading | Instructional support |
| 22. University of Hawaii, Extension Service | Horticulture and Science Inquiry |
| 23. University of Hawaii Engineering Dept | Career opportunities in STEM |
| 24. ViaSat Corporation and Life Technologies | Career STEM education and bioengineering |
| 25. Wet and Wild | Career opportunities in STEM |
| 26. Jennifer Whitted | Robotics advisor/instructor |
| 27. Lloyd Yonemura | College prep, scholarship application and Senior Project mentor |

DESCRIPTION

Connecting Molokai M's: "Me, My Mind, My Mana`o" (CMM) has four components designed to meet the educational needs of the students through research-based after-school or school-community activities. The four components of this project are: 1) Selfhood and Learning, 2) Skills Maintenance, 3) STEM Mind-Building, and 4) Strength-Based Community Building. Together they represent a balanced program of activities that research has found to be necessary in community or after-school settings. Descriptions of the four components follow:

1. **Selfhood and Learning.** This component focuses on technology and computer skills, personal development, and sewing and design basics to strengthen self-sustenance. Its goal is to restore and/or strengthen respect, esteem, and aspirations as the foundation for successful learning and transition into higher education and career changes. The target is secondary students, young adults, unemployed parents and other community members.
2. **Skills Maintenance.** This component complements the regular school program by supplementing essential skills development with tutoring, computer-assisted interactions for math and reading, and authentic experiences in science inquiry through the study of the environment. It focuses on the essential skills emphasized by the Hawaii DOE (DOE). Its goal is to maintain and connect essential skills in accordance with prescriptions by teachers and/or computer-assisted and other programs for elementary and secondary students.
3. **STEM Mind-Building.** This component focuses on the development of higher-level thinking skills emphasizing concepts and skills relating to the areas of science, technology, engineering, and mathematics. Its goal is to explore and apply complex and critical-thinking skills within the context of robotics and CAD. This component targets elementary and secondary students from grades 3 through 12. Age-appropriate groups are used and learning is built into collaborative teamwork. Teachers are also targeted to stimulate and enhance the use of technology in the classroom.
4. **Strength-Based Community Building.** This component is designed to capture the beauty and history integral to the diverse cultures represented on the island. In the development of the local ethnic awareness, concepts of diversity, commonality, and

change are shared. The goal is to use the affective and cultural strengths in the diverse ethnicities of Molokai to bring people and energies together toward a sound future based on education. This component targets children, young adults, and community members. Activities are areas of interest and pride among community members.

YEAR 5 ACTIVITIES BY COMPONENTS

Year 5 activities are discussed below according to the academic year program followed by the preceding summer program. The academic year program was conducted at five schools as shown in the table below. MKK is used as a code for Molokai. The summer program consisted of classes at Kaunakakai, Kilohana and Maunaloa Elementary Schools and Molokai Middle School.

ACADEMIC YEAR PROGRAM

COMPONENT COURSES BY SCHOOLS

| COURSE | KAUNAKAKAI | KILOHANA | MAUNALOA | MKK MIDDLE | MKK HIGH |
|--------------------------------|------------|----------|----------|------------|----------|
| Selfhood and Learning | | | | | |
| Hana Hou Tuesday | | | | | X |
| ePrep | | | | | X |
| Skills Maintenance | | | | | |
| ACE Reading | Sem 2 | | | | |
| Academic Support | | | | X | |
| Tutor Support | | | X | | |
| Reading Tutoring | | Sem 1 | | | |
| Homework Help K | X | | | | |
| Homework Help 1 | X | | | | |
| Homework Help 2 | X | | | | |
| Homework Help 3 | X | | | | |
| Homework Help 4 | X | | | | |
| Homework Help 5 | X | | | | |
| Homework Help 6 | X | | | | |
| Horticulture | | X | | | |
| Math Whizz | X | | | | |
| Computer-Assisted Math/Reading | | X | | | |
| STEM MIND-BUILDING | | | | | |
| Advanced Robotics | Sem 2 | | | | |
| Beginning Robotics | Sem 2 | | | | |
| CAD | | | | X | |
| FLL Robotics | Sem 1 | | | X | |

| | | | | | |
|--|----|--|--|--|---|
| Vex Robotics | | | | | X |
| Strength-Based Community Building | | | | | |
| Instrumental Music | | | | | |
| Brass | XV | | | | |
| Violin | XV | | | | |
| Tahitian Beginner | XV | | | | |
| Tahitian Advanced | XV | | | | |

The courses are described below according to components.

Selfhood and Learning

Two Selfhood and Learning courses were offered at Molokai High School.

The Molokai High School Library hosted **Hana Hou Tuesday** every Tuesday and Thursday from 2-6 p.m. from August 28, 2012 through April 25, 2013. Volunteers staffed Hana Hou Tuesday for the first five weeks so that the program could have an earlier start date. Hana Hou Tuesday and Thursday had three main objectives: 1) struggling high school students will be exposed to engaging, high interest leveled reading resources and will share their experiences using social networking technology, high interest leveled books, digital audio books, electronic books, and multi-media tools (Flip Video cameras); 2) families will be able to support their students and themselves by using web-based and library resources; and 3) all learners will be able to participate in “Monthly Library Highlights” focused on school-wide projects (i.e. Science Fair, National History Day, Senior Project) and literacy activities (i.e. poetry, digital storytelling).

The librarian provided assistance and library services to all members of Molokai’s high school community (students and their families) to ensure strength-based community building. This expanded school library services to the community after normal school hours and as an alternative to the one State Public Library night. Students benefited from individualized assistance to complete school-wide projects that were aligned with skills maintenance. Families accessed Internet resources to support their child’s learning and learned to check their child’s grades on Engrade, a computer program being used by Molokai High School that allows parents access to their child’s school progress. Through the purchase of computer-based literature, families that have Internet access at home were able to share databases and electronic books with a wider audience. Some families pursued personal interests to develop and maintain self-learning. In addition all learners were able to share their knowledge with others by learning and using social networking technologies with portable iPads. Flip video camera instruction was provided so that they had access to multimedia sharing opportunities as well as documentation evidence.

Scholarship and college application workshops were provided in various formats and with different presenters. Partnerships continued with Maui College, Molokai; AmeriCorps; and Lloyd Yonemura for college prep and scholarship sessions.

Funding for next school is being pursued through other grant applications. No favorable responses have been received yet.

ePrep, a program created by Karl Schellscheidt and Eric Barnes of Princeton University, helps students of all ability levels reach their educational goals. Students learn strategies to maximize standardized test scores. In addition to tips on standardized test-taking skills, the ePrep class focused on completing resume and personal statements, and discussions about “life after high school” using Grant Baldwin’s curriculum. Students researched colleges of interest(s), tuition, fees and admission requirements. They also explored different aspects of living on one’s own and prepared a budget using the salary of their chosen career.

Second semester focused more on SAT, PSAT, PLAN or SAT preparation using ePrep materials, scholarship research and completion, and collegiate athletic information. The students worked on building their repertoire of employable skills and participated in college and career fairs on campus. Students were well prepared and confidently signed up to take the SAT or ACT exams.

The ePrep class was closely linked to Molokai High School’s Hana Hou Tuesday and students benefited from community partnerships which included UH/MCC speakers, college recruiters, college students, and businesses. Planning strategies and guidance in time management helped students reach their goals.

Skills Maintenance

Skills Maintenance was comprised of ACE Reading, Academic Support, Tutor Support, Reading Tutoring, Homework Help, Horticulture, Math Whizz, and Computer-Assisted Math/Reading. The start and end dates, days and time of week, number of days per week, number of hours per week, number of weeks, number of students (adults denoted by A) are shown below by schools for Semesters 1 and 2 (top and bottom lines respectively). Some courses were offered for one semester only.

| Activity | Start Date | End Date | Days Of Week And Times | Days Per Week | Hours Per Week | # Weeks | Students |
|-----------------------------------|------------|----------|------------------------|---------------|----------------|---------|----------|
| SKILLS MAINTENANCE | | | | | | | |
| KAUNAKAKAI SCHOOL | | | | | | | |
| ACE Reading | 2./20 | 4/25 | M-Th 2:00 - 3:45 | 4 | 7 | 12 | 6 |
| Homework Help K | 9/10 | 12/6 | M,T,Th | 3 | 3 | 12 | 21 |
| | 1/7 | 4/25 | 2:00 - 3:00 | 3 | 3 | 14 | 13 |
| Homework Help 1 | 9/10 | 12/6 | M,T,Th | 3 | 3 | 12 | 20 |
| | 1/7 | 4/25 | 2:00 - 3:00 | 3 | 3 | 14 | 16 |
| Homework Help 2 | 9/10 | 12/6 | M,T,Th | 3 | 3 | 12 | 12 |
| | 1/7 | 4/25 | 2:00 - 3:00 | 3 | 3 | 14 | 11 |
| Homework Help 3 | 9/10 | 12/6 | M,T,Th | 3 | 3 | 12 | 4 |
| | 1/7 | 4/25 | 2:00 - 3:00 | 3 | 3 | 14 | 8 |
| Homework Help 4 | 9/10 | 12/6 | M,T,Th | 3 | 3 | 12 | 14 |
| | 1/7 | 4/25 | 2:00 - 3:00 | 3 | 3 | 14 | 15 |
| Homework Help 5 | 9/10 | 12/6 | M,T,Th | 3 | 3 | 12 | 15 |
| | 1/7 | 4/25 | 2:00 - 3:00 | 3 | 3 | 14 | 11 |
| Homework Help 6 | 9/10 | 12/6 | M,T,Th | 3 | 3 | 12 | 11 |
| | 1/7 | 4/25 | 2:00 - 3:00 | 3 | 3 | 14 | 9 |
| Math Whiz 7-4 | 9/10 | 12/6 | M,T,Th | 3 | 3 | 12 | 19 |
| | 1/7 | 4/25 | 3:00 - 4:00 | 3 | 3 | 14 | 11 |
| Math Whiz 8-6 | 9/10 | 12/6 | M,T,Th | 3 | 3 | 12 | 19 |
| | 1/7 | 4/25 | 3:00 - 4:00 | 3 | 3 | 14 | 8 |
| KILOHANA SCHOOL | | | | | | | |
| Gardening | 10/16 | 12/7 | T,Th | 2 | 4 | 7 | 9 |
| | 1/15 | 4/25 | 3:00-5:00 | 2 | 4 | 9 | 8 |
| Reading Tutoring K-3 | 10/3 | 12/6 | T,Th 2:00 - 4:00 | 4 | 4 | 7 | 10 |
| | 1/17 | 4/25 | T, Th 2:00 - 3:00 | 2 | 2 | 9 | 7 |
| Reading Tutoring 4-6 | 10/23 | 12/6 | T,Th | 4 | 4 | 7 | 13 |
| | 1/24 | 4/26 | 2:00 - 3:00 | 2 | 2 | 9 | 10 |
| Computer- Assisted Math/Rdg | 8/22 | 12/9 | M,T,Th,F | 4 | 4 | 14 | 17 |
| | 1/14 | 4/24 | 2:00 - 3:00 | 4 | 4 | 9 | 14 |
| MAUNALOA SCHOOL | | | | | | | |
| Tutor Support 3- 4 | 8/27 | 12/5 | M -Th 2:00 - 3:00 | 4 | 4 | 15 | 21 |
| | 1/7 | 4/25 | M -Th 2:00 - 3:30 | 4 | 6 | 13 | 7 |
| Tutor Support 5- 6 | 8/27 | 12/5 | M - Th 3:00 - 4:00 | 4 | 4 | 15 | 16 |
| | 1/7 | 4/25 | M -Th 2:00 - 3:30 | 4 | 8 | 13 | 16 |
| Tutor Support K-2 | 9/17 | 12/5 | M - Th 2:00 - 3:00 | 4 | 4 | 12 | 17 |
| | 1/7 | 4/25 | M -Th 2:00 - 3:30 | 4 | 6 | 13 | 25 |
| MOLOKAI MIDDLE SCHOOL | | | | | | | |
| Academic Support 7 | 8/20 | 12/14 | M,T,W,Th,F | 5 | 15 | 17 | 65 |
| | 1/3 | 4/26 | 2:00 - 5:00 | 5 | 15 | 16 | 23 |
| Academic Support 8 | 8/20 | 12/14 | M,T,W,Th,F | 5 | 15 | 17 | 47 |
| | 1/3 | 4/26 | 2:00 - 5:00 | 5 | 15 | 16 | 17 |

The **ACE Reading** program at Kaunakakai School taught critical beginning and developing reading skills. The tutors were trained to follow a structured protocol and to use frequent verbal praise. They were encouraged to develop positive, caring, supportive relationships with their students.

At each ACE Reading session, students 1) practice reading fluency skills; 2) learn new sounds or words; and 3) respond to comprehension questions about a story. Typically, the tutoring sessions are provided for 30 minutes daily over 8-12 weeks. There are before and after program assessments, and weekly reading fluency and comprehension probes, which take about 5 minutes to administer.

Video self modeling is at the heart of ACE Reading. A 2-minute “feedforward” video of the student sounding out words, reading fluently, and answering comprehension questions is made by the video technician and viewed by the student before the tutoring session. A digital camera and computer editing made the construction of the self-modeling videos economical and time efficient. This intervention has been found to accelerate improvement in most students.

The ACE classes ended with a class party and viewing of the children's videos. Teachers and parents were invited.

Molokai Middle School (MMS) **Academic Support** was to help students receive extra support time with homework, long-range class assignments, projects such as Science Fair and research papers required in the core content areas. It was created for the many students who have no adult available after school to ask questions when they need help, nor do they have an appropriate place at home to do homework. Many students do their homework “on the fly” between school and ball practice with little opportunity to reflect and focus. The class gives students the opportunity to work in a safe, quiet place that is conducive for learning with teachers and paraprofessionals present to monitor them as they work on assignments. It has the added bonus of being on campus where the computer lab is available and classroom teachers can be reached if clarification of the homework assignment or project is needed and to provide feedback to teachers when appropriate. Periodic checks between the classroom and Academic Support are made and the students receive the instructional follow-up needed.

A partnership with Uplinks helped give students a balanced program that included a Core Concept component that taught character and leadership skills, and provided activity classes and snacks (not available through the project). The Uplinks program offered special events throughout the school year. Leadership Day, Movie Night sleepovers, Volleyball Tournaments and other events served as a “draw” to encourage students to participate in after-school programs. The partnership helped students stay motivated to learn and included parent contact.

Another aspect of the MMS Academic Support class was targeted instruction for non-proficient students identified by the HSA scores, school-wide monthly benchmark

assessments, and teacher recommendations. Once identified, students in need of interventions were recommended for after-school support. Content aligned with the Hawaii Common Core Standards in language arts, math, and science. Most students needing interventions utilized the Math Whizz program for math and the Achieve 3000 program for reading. Cognitive Tutor was used for advanced math students during second semester.

The Kilohana School **Computer-Assisted Math/Reading** was created to balance the classroom assignments with differentiated, interactive computer-assisted learning in math and reading. Teachers monitor the students as they work independently on Math Whizz (see page 11 for description) and Achieve 3000 programs. Student reports are generated at the end of each semester and shared with the classroom teachers.

The objectives for Achieve 3000 are to look back at texts that students are reading to find answers and clarify meaning, write meaningful responses to text questions, and pass the Achieve 3000 multiple-choice questions with a score of at least 65%. Class objectives are to complete at least one Math Whizz lesson and one Achieve 3000 lesson per week and to continue to increase individual Math Age scores in Math Whizz and lexile scores in Achieve 3000.

Achieve 3000 provides web-based, individualized learning scientifically proven to accelerate reading comprehension, vocabulary, writing proficiency and performance on high stakes tests for grades 2 -12. Each day one high interest topic created from current AP news articles is sent from Achieve 3000 to each member of the class via Achieve 3000 email. Each article is scientifically matched to each student's individual lexile reading level, thus providing differentiation for every student. Daily articles can also be selected by topic from the Achieve 3000 archives. Each lesson follows best practices known to support growth in reading.

Each section includes a link to research to help set a schema, a lesson on reading for information, questions to demonstrate mastery of the text, graphic organizers to help the student create meaning, and opportunities to form an opinion based on the expository text and the student's life experiences. Students are recommended to complete two 45-minute lessons per week in order to make the gains suggested by the research. Allowing students to access Achieve 3000 after school supports the work that is already being done in the classroom. Often students do not have the time for two 45-minute lessons during the school day. Progress reports are accessible to teachers on-line and available to families. Motivation is a critical factor in achievement. Achieve 3000 has a built-in motivational tool that allows students to play games, earn stickers, and participate in worldwide polls with other students. The interesting topics are designed to develop an intrinsic interest in literacy and a true love of learning. Students are able to track their progress, select their

own articles and email other students when using the program. Achieve 3000 is also accessible during non-instructional time such as at home, holidays and weekends.

Homework Help at Kaunakakai School was created because many Molokai students have no adult available after school to ask questions when they need help, nor do many have an appropriate place at home to do homework. Many students do their homework "on the fly" between school and ball practice with little opportunity to reflect and focus. Homework Help gave students the opportunity to work in a safe, quiet place that is conducive for learning with two adults (one teacher and one educational assistant) present to monitor them as they work on assignments. In addition, Homework Help has the added bonus of being on campus where classroom teachers can be reached if clarification of the homework assignment is needed and to provide feedback to teachers when appropriate. Periodic checks between the classroom and Homework Help were made on a feedback form and on the instructional follow-up the students received based on their homework.

Due to the large enrollment, students were divided into seven grade level classes from K through 6. The objectives for Homework Help were to complete math homework assignments; to work independently and ask for assistance when needed; and to read silently, 20 minutes for grades K-2, 30 minutes for grades 3-4, and 30+ minutes or assigned minutes for grades 5-6.

Students were required to sign in each day. The school's homework policy ensured all students came with homework. If homework were completed, extra practice opportunities were given to the students. These extra assignments supported the quarterly benchmarks in math and reading. Students who completed their assignments were allowed to play educational board games, read quietly or work on additional paper-and-pencil activities such as math computation, word games, and logic puzzles.

The **Horticulture** class at Kilohana School was a hands-on class where students had an opportunity to learn how to grow and care for plants from seedlings to harvest, learn about local plant varieties, and learn how to use gardening tools and instruments to care for plants. Several of the students were continuing the class from the previous years where they learned elements of composting with an emphasis on studying how worms are a vital part of soil quality and plant health. Students were given worm boxes and raised worms for the garden. Students continued to care for the worms and apply their knowledge to the Kilohana garden. In year 5, students expanded their knowledge of horticulture using digital cameras, digital microscopes and continued their sustainability project in aquaponics, aeroponics, and vermiculture. Using these forms of land and plant management with a focus on the local environment are easily enjoyed by students and families. The Kilohana garden serves as a model for local families.

The class was divided into three segments. During the first segment the students observed their plants and recorded observations in their garden logs. The next segment focused on content. Topics introduced throughout the year included:

- microscopic investigation of soil types

- plant requirements for optimum growth (light, water, nutrients)
- plant life cycles
- digital study of plant propagation
- beneficial and non-beneficial insects
- step-by-step processes of planting seeds and transplanting seedlings
- growing plants and vegetables for sustainability and subsistence using vermiculture, aeroponics, and aquaponics
- tools and equipment that aid gardening (Lab Quest, soil quality pH, and digital temperature instrument)
- growing native Hawaiian plants
- elements of composting
- caring for and using worms to support gardens

The third segment of the class was hands-on gardening. During the year the students created a photographic display of the plants as they grew, built a display of soil types as seen with the digital microscope, investigated microorganisms within the soil and created sustainability projects in both aeroponics and aquaponics. Learning modern gardening techniques and the use of scientific equipment helped the students learn essential skills needed to establish and maintain their sustainability projects. The goal was to help them become more self-sufficient, self-sustaining, and responsible for their own food security.

Kaunakakai School **Math Whizz**, a computer-based program, focuses on the essential skills emphasized by Hawaii Common Core State Standards. Incorporating the latest research on student learning, the program provided access to K-8 math content through individualized instruction to remediate, reinforce and accelerate learning. Embedded formative and summative assessments provided instruction based on real-time student data. All students began with a placement pre-test to assess their current level of mathematical understanding.

The objectives were to: 1) demonstrate increased "math age" using the program's pre- and post-tests, 2) demonstrate increased gains in the program's math strands, and 3) demonstrate a positive attitude towards math.

Math Whizz has several learning support models: Core Enrichment, Intervention Programs, Extended Day, Summer School Programs, Acceleration/Gifted & Talented, Special Education, and Remedial Support. All students, especially ELL, SPED and disadvantaged students, enjoyed the "game" format of the program and were captivated by the graphics, helping to keep them focused on the lessons.

In addition to the Math Whizz class, students could access Math Whizz during Computer Lab and at home. Parent engagement was encouraged, allowing them to access their child's math reports and educating them to encourage appropriate usage. Regular classroom teachers could monitor progress of their students attending the Math Whizz class, allowing them to more accurately target their instruction during the school day.

Kilohana School **Reading Tutoring** classes were created to provide interventions for non-proficient students as identified by the HSA scores, school-wide monthly assessments, and teacher recommendations. Content for the course aligns with the Hawaii Common Core State Standards in Language Arts. Because instruction is specifically targeted toward missing critical skills and concepts, the Reading Tutoring class is designed to accommodate a class size no larger than ten students.

The objectives of the Tutoring class were to provide individualized remedial instruction in the students' specific area of need, improve students' study habits, and improve homework assignment completion. Consistent communication with the student's regular education teacher helped to ensure that instruction offered in Reading Tutoring is appropriately targeted. Both teacher-led and computer-assisted instruction was used to provide remedial instruction. Computer programs used varied according to the needs of the learners. Computer programs such as Education City, Discovery Education, River Deep, Achieve 3000, and Read Naturally were used to support student learning.

Maunaloa School **Tutor Support** was organized into three grade levels, K-2, 3-4 and 5-6, so that appropriate content levels could be addressed. Many of the students had attended Tutor Support classes in previous years and welcomed the opportunity to return.

Tutor Support was created to link directly to the regular education classroom to support students needing more time to understand concepts or to practice skills that are identified by their teachers as needing reinforcement. Targeted content as identified by the HSA scores, school-wide quarterly assessments, teacher recommendations and Edison Monthly Benchmarks was provided. Content for the course aligns with the Hawaii State Common Core Standards in Language Arts, Math, and Science.

Tutor Support offered four days a week from August 27 thru April 25 was taught by teacher volunteers for the first four weeks until funding became available. Objectives were to: 1) participate in Daily Math Practice, Six Minute Solution, and current events, 2) complete math homework, 3) read silently for the assigned time, 4) work independently and 5) complete one computer-based learning lesson per week. During the first half of the class all students participated in direct instruction in math and reading. Daily Math Practice, a 36-week program, was used to strengthen math skills in computation, word problems, number sense, geometry, graphing and measurement. The Six-Minute Solution, a program designed to increase reading fluency was also used. Current events were covered in order to support the students' background knowledge. Individual tutoring of some of the students followed. For students able to work independently, the remaining class time was spent on completing their math assignments, writing in their reading journals, or reading silently.

Students also had the opportunity to work independently on computer-based programs, Math Whizz and Achieve 3000. The interactive math computer software conducts diagnostic assessment of the students and allows for differentiated content depending on an individual's strengths and weaknesses. Student progress reports are generated at the end of each semester and are shared with the classroom teacher. Achieve 3000 provides web-based, individualized learning scientifically proven to accelerate reading comprehension, vocabulary, writing proficiency and performance on high stakes tests for

grades 2-12. The objectives for Math Whizz are to demonstrate increased “Math Age” according to the site, demonstrate gains/progression in math strands, and demonstrate a positive attitude toward math.

Both Math Whizz and Achieve 3000 were also accessible during non-instructional time such as at home, holidays and weekends.

STEM Mind-Building

This component was comprised of Beginning and Advanced Robotics, CAD, FLL Robotics and Vex Robotics. The start and end dates, days and time of week, number of days per week, number of hours per week, number of weeks, number of students (adults denoted by A) are shown below by schools for Semesters 1 and 2 (top and bottom lines respectively). Some courses were offered for one semester only.

| Activity | Start Date | End Date | Days And Time Of Week | Days Per Week | Hours Per Week | # Wk | Students |
|------------------------------|------------|----------|-----------------------|---------------|----------------|------|----------|
| KAUNAKAKAI SCHOOL | | | | | | | |
| Advanced Robotics | 1/7 | 4/22 | M 3:00 - 4:30 | 1 | 1.5 | 14 | 6 |
| Beginning Robotics | 1/8 | 4/23 | T 3:00 - 4:30 | 1 | 1.5 | 14 | 6 |
| FLL Robotics | 9/10 | 12/6 | T, Th 3:00 - 4:30 | 2 | 6 | 12 | 11 |
| MOLOKAI MIDDLE SCHOOL | | | | | | | |
| CAD | 9/10 | 12/4 | M,W | 2 | 2.5 | 13 | 4 |
| | 1/14 | 4/24 | 3:00-4:15 | 2 | 2.5 | 8 | 5 |
| FLL Robotics | 9/11 | 12/5 | T,Th 2:30-4:00 | 2 | 3 | 13 | 6 |
| | 1/8 | 2/28 | T,Th 3:00-4:30 | 2 | 3 | 8 | 6 |
| MOLOKAI HIGH SCHOOL | | | | | | | |
| Vex Robotics | 9/14 | 12/6 | F | 1 | 1.5 | 15 | 10 |
| | 1/4 | 2/22 | 2:00 - 3:30 | 1 | 1.5 | 6 | 6 |

FLL Robotics was offered during the first semester and **Beginning** and **Advanced Robotics** during second semester at Kaunakakai School. **CAD** and **FLL Robotics** were offered at Molokai Middle School and **VEX Robotics** at Molokai High School during first and second semesters.

Kaunakakai School **Beginning Robotics** was an introductory robotics class for students in grades 4-6 who have never taken a robotics class in grades K-3. Students are introduced to the NXT Mindstorm platform. They learn to take inventory and identify the parts and pieces in the kit. Students then build a “basic bot” and explore simple

construction techniques and implement engineering principles as they design and build their bot. Next, students are introduced to basic programming with Level 1 challenges such as following a straight line, squares, circles, etc. Students test and run programs according to challenge requirements.

During the second half of the Beginning Robotics class, students are given Level 2 challenges. Level 2 challenges include linking Level 1 challenges in a series, a bulldozing/push challenge, a transportation/delivery challenge, a hole in one/hitting a target challenge, and a retrieval/pull challenge. Level 2 challenges require students to rethink and modify their robot design and programming. Students build attachments that push, pull, deliver, or hit challenge pieces from one point on the mission mat to another. Students are also introduced to the use of a third motor. Students are encouraged to reflect on testing results and/or to stabilize construction to ensure consistency. The Beginning Robotic students plan on continuing next school year.

Advanced Robotics was a Level 3 robotics class for grades 4-6 students who had taken a robotics class before. Class objectives were to help students learn to design, modify and apply technology, explore careers in robotics and help students understand how people, science and technology work together.

Students were introduced to an inquiry unit on gears. Students learned how a gear works, the parts of a gear, and how to create mechanical advantage through gear ratios. Students were able to distinguish how to gear up or gear down as they chose between torque and power vs. speed. Students applied this knowledge in a Level 3 speed challenge.

Students were also introduced to how sensors work and advanced programming. Students were encouraged to complete Level 3 challenges such as detecting or reacting to sound using the Sound Sensor, triggering an on/off position on a challenge piece using the Touch Sensor, and avoiding obstacles on the mission mat and determining distances using the Ultrasonic Sensor to detect an object and measure its proximity in inches or centimeters. Other Level 3 challenges included following a straight line, square or circle using a Light Sensor to read light intensity (lightness or darkness) from the surrounding environment (the line) and sorting different colored LEGO bricks or locating different colored lines and challenge pieces using the Color Sensor. Level 3 challenges encouraged students to expand their exploration of construction techniques and programming as they implemented engineering principles into their robot design using the NXT Mindstorm kit and software. Technology was further emphasized as students engaged in critical thinking and problem solving as they inquired about systems and how each robotic part relates to every other part. Students tested and ran programs according to challenge requirements. Technology was revisited as students rethought and modified design and programming to reflect testing results and/or to stabilize construction to ensure consistency. The students plan to continue working with robotics after the school year ends. They were inspired by the Molokai Golden Eyes robotic team who won the Hawaii state championship.

The objectives of Molokai Middle School **Computer-Aided Design** (CAD) were to: 1) learn to use the Google Sketch Up Program; 2) work collaboratively on a 3D project of the students' choice; and 3) understand the basic geometric concepts and their

coordinates on three axes. The class used computers and CAD software that assist engineers and designers in a wide variety of industries to design and manufacture physical products ranging from buildings, bridges, roads, aircraft, ships and cars to digital cameras, mobile phones, TVs, clothes and computers.

Each class began with guided instruction on the Sketch Up 3D modeling features followed by guided practice. Students progressed from basic introductory information to beginning their own project. The following 3D modeling features were introduced:

- Edges and faces – straight lines and faces in 2D shapes
- Push/Pull – to extrude a flat surface into a 3D shape
- Precise dimensions - for building scale models
- Follow Me tool – to create curved outlines
- Paint Bucket – to apply colors
- Groups and Components – to build doors, windows, trees, chairs, etc.
- Shadow Engine - to add shadows
- Scenes – to create animations
- Sketch Up Instructor – dialog boxes to guide students

During hands-on learning time, instruction was differentiated so that students could work at their level of understanding and skill. Many of the CAD students also participated in FLL Robotics competition and were able to apply their newly-learned skills to their projects.

The **FLL Robotics** class was for students in grades 4-9 who had taken either the Beginning or the Advanced Robotics class.

Students engaged in an inquiry-based learning project within a variety of STEM fields. Students identified a community problem and then created an innovative solution to the problem. Identifying and solving community issues required students to interview local experts, to survey local citizens, and to decide collectively what the best solution was for their community exemplifying how science, technology and society are interrelated.

Students self chose, designed, researched, conducted, implemented and orally presented projects to their peers, families, schools, community and to a panel of FLL judges. The research project provided a vehicle for interweaving the Hawaii Common Core State Standards in Math and Literacy, and the Hawaii State Standards in Performance Arts with Technology at its forefront.

Technological skills were taught and students were required to gather information from expert and primary resources via Skype interviews, locate information on student-friendly websites, collect resources by highlighting, save information to Word documents, and present information on PowerPoint presentations, brochures, and spreadsheets, etc.

Classes for Kaunakakai and Molokai Middle School required students to compete in a First Lego League (FLL) robotics tournament. The Molokai Middle School team prepared for the 2012 “Senior Solutions” competition and competed at the Maui District Tournament on November 10, They won the District competition and went on to win the Hawaii State Championship held on December 1, 2012 at the Neal Blaisdell Center. Following the win at the state level, they went on to compete at the FLL national competition held in California where they won a trophy from the competition’s primary sponsor, ViaSat Satellite Corporation and Life Technologies. In addition to sharing their level of excellence in robotics, they also shared their Hawaiian culture by dancing Hula and playing the ukulele in front of thousands of spectators. The team got a personal visit from Congresswoman Tulsi Gabbard and County Councilwoman Stacy Crivello. Each student received a Certificate of Special Congressional Recognition. Kaunakakai’s team, called “Snow White and the Seven Seniors” competed in the Maui District FLL Competition and placed as 2nd alternative for state competition. In addition to 21st Century funds, the team received grants from the Maui Economic Development Board and from Women in Technology to help with travel costs. The FLL challenge they faced was to invent technological innovations to improve the quality of life for the elderly. The team “invented” sight recognition glasses, created a CAD of their invention, built their robot to meet the FLL challenges and participated in countless hours of community service at Home Pumehana on Molokai.

Students were also required to program a 2½ minute-autonomous robot to score points on a thematic playing surface. Students presented their robot and technical design during a 5-minute FLL Tech presentation before judges. Students were encouraged to demonstrate critical thinking and problem-solving skills in their mission strategy, innovative design through stable robot construction, and consistency in program execution using sensors. Molokai robotics teams were also encouraged to incorporate technology with a computer-aided design (CAD) model of their robot.

A final component of the class was the opportunity for students to visit and explore STEM career fields with various technological and engineering companies, as well as, universities and educational institutions. Students met and learned from STEM professionals, engineers, and professors. Students visited the Air Force Research Laboratory, the ViaSat Satellite Corporation and Life Technologies, the TREX Enterprises Corporation, the University of Hawaii at Manoa, Chaminade University and a United States Navy nuclear submarine based at Pearl Harbor.

Molokai High School **VEX Robotics** students were also members of the Molokai High School VEX Robotics Club. Students discovered, invented and investigated robotics using scientific process skills with the VEX Robotics Design System. Students learned about the VEX substructure, design process, and building a prototype bot, and familiarized themselves with inventory to organize the VEX equipment. They learned how to program using the Robot C software and computer language and familiarized themselves with the rules and parameters of the thematic robotics challenge game, Gateway.

As the class progressed, students prepared for various competition tournaments. In addition to 21st Century funds, the VEX class was awarded a \$5,000 grant from the Maui Economic Development Board to help fund off-island travel. Competitions for the school year included the “Ring of Fire” competition in Kapolei, Oahu and the Pan Pacific International Competition at the Hawaii Convention Center in Honolulu. During the Pan Pacific International Competition the team advanced to the quarter finals.

During the competitions the teams are required to program a 30-second autonomous program followed by a 2 ½ minute manually controlled round. Students are encouraged to make design modifications for their robot that meet the parameters of the thematic robotics challenge game. Modified bot designs and programming reflect testing results, a stable construction, accuracy and consistency.

A final component of the VEX class was the opportunity for students to visit and explore STEM career fields with various technological and engineering companies, as well as, universities and educational institutions. Students met and learned from STEM professionals, engineers, and professors. During the school year, VEX students toured Chaminade University and the University of Hawaii at Manoa Physics Department to learn about STEM career opportunities. In addition, students visited the Science Applications International Corporation to learn firsthand the opportunities a STEM education can provide.

During the entire competition season, students learn more than just about building robots. They also learn about building critical life skills....teamwork, problem solving, time management, and effective communication. VEX allows students to raise the bar and expectations through state and international competitions, providing a measurable standard. Students also catalyze interest in STEM career paths....preparing for a work force for the 21st century. They are able to make abstract concepts concrete, making learning relevant and engaging. They learn that innovation is needed to solve global issues. Students also learn about “gracious professionalism,” helping and collaborating on a global scale and respecting the time and knowledge of others.

Strength-Based Community Building

Due to unavailable funding for the Strength-Based Community Building component, last year’s instructors for instrumental music and Tahitian exercise volunteered to teach the classes for the entire year at Kaunakakai School.

The **Instrumental Music Program** provided an opportunity for students of all ages to learn to play a musical instrument. The instruments for instruction were the violin and the brass family (trumpet, trombone). Students learned how to read music and produce a sound on their chosen instrument.

The **Tahitian Exercise** class offered students many of the movements of Tahitian dance in a less formal setting, giving students and adults the opportunity to experience a part of their culture while increasing wellness through exercise. The class covered the basic

fundamentals of Tahitian dance, as well as the skills that improve muscle control, flexibility and tone in two levels, beginner and advanced.

SCHOOL YEAR PROGRAM FINDINGS

Findings by Components, Parents and Teachers

Evaluation forms (Appendix C) were administered to students, parents, project teachers and regular teachers for feedback on the project. The students responded to six General Learner Outcomes (GLOs) and Project Activities. The GLOs (Appendix A) were rated according to a 4-point scale: Always, Usually, Sometimes, Rarely. The Project Activities listed below were rated according to a 3-point scale: Usually, Sometimes, Rarely.

1. I met the class objectives
2. I participate in class
3. I pay attention in class
4. I behave well in class
5. I get along well with other students

The parents responded to GLOs, helpfulness and adequacy of the class. The 5-point GLO scale was Strongly Disagree, Disagree, Neither Disagree nor Agree, Agree or Strongly Agree. They responded Yes, No or Not Applicable to helpfulness in 5 areas: math, reading, science, personal development and importance of education. They rated adequacy of the class (content, teaching, pacing, environment, and interaction) according to a 5-point scale from Poor (1) to Excellent (5).

The CMM teachers rated students on behavior, GLOs and 3 class objectives on a 7-point scale: Significant Improvement, Moderate Improvement, Slight Improvement, No Change, Slight Decline, Moderate Decline, or Significant Decline. The behaviors rated by the CMM Teachers were:

1. Participating in class
2. Attending class regularly
3. Being attentive in class
4. Behaving well in class
5. Performing academically
6. Coming to class motivated to learn
7. Getting along well with other students

The regular classroom teachers rated the 30-day students on the same 7-point scale on 10 behaviors, GLOs and 2 class objectives (math proficiency and reading proficiency). The behaviors rated were:

1. Turning in homework on time
2. Completing homework to your satisfaction

3. Participating in class
4. Volunteering (e.g. for extra credit or more responsibilities)
5. Attending class regularly
6. Being attentive in class
7. Behaving well in class
8. Performing academically
9. Coming to class motivated to learn
10. Getting along well with other students

Responses to the surveys are discussed below by components. Responses are included if there were at least 10 respondents per group. For open-ended questions, items with two or more respondents with the same response were intended to be included but most respondents had no comments.

Selfhood and Learning

ePrep

ePrep at Molokai High School was a year-long course with 6 students enrolled in Semester 1 and 12 in Semester 2 for a total enrollment of 18. However, no evaluation forms were administered for Semester 2 so data were available for only 6 students.

Hana Hou Tuesday

Hana Hou Tuesday and Thursday was very well attended. Combined first and second semester sign-in sheets had a multiple count of 2,409 student signatures: 1,841 students, 66 parents, 23 families, 286 staff, and 193 community members. The average attendance for semester 1 was 50 and 37 for semester 2. Purpose for attending indicated on the sign-in sheets included library use, assistance with homework, senior project, science fair, History Day projects, research, Book Fair, Ohana night, assistance with scholarships, Compass Test preparation, Math Day, and tutoring by certified teacher volunteers in math, reading, Spanish and Japanese. Targeted tutoring started on September 4 from 2-4 p.m. to help students one-to-one or in small groups.

Hana Hou Tuesday and Thursday was advertised throughout Molokai High School and all feeder schools. Many volunteers made the program a success. Each session had teachers, seniors, and community members volunteering to help attendees complete their purpose for attending. The Catholic Food Ministry provided food for snacks.

Skills Maintenance

ACE Reading

ACE Reading was a Semester 2 class at Kaunakakai School with six (6) students.

Academic Support

Of the 84 Academic Support student surveys returned (enrollment 154) at Molokai Middle School, Always, Usually and Sometimes ratings ranged from 100.0% to 95.2% for GLOs and Usually and Sometimes ratings for project activities were either 100.0% or 98.8%.

The teachers rated 108 of 154 enrollees. The percent of student behaviors rated significant, moderate or slight improvement ranged from 93.5% to 89.8% (2 of 7 <90%). The GLO ratings ranged from 98.1% to 88.9% (1 of 6 <90%). The class objectives and the percent of improvement ratings were:

- 1. Complete assignments 92.6
- 2. Increase scores in math 93.5
- 3. Increase scores in reading 90.7

The student and teacher ratings were very positive.

Computer-Assisted Math/Reading

Computer-Assisted Math/Reading was a year-long course at Kilohana School with 25 enrollees. Student evaluation forms were returned by 23 students. All students rated themselves Always, Usually or Sometimes on GLOs and Usually and Sometimes on project activities.

The teacher rated all students Significant and Moderate Improvement (more significant than moderate) on behavior, GLOs and class objectives. The class objectives were:

- 1. Read and do math skills on the computer
- 2. read and do math for specified time
- 3. improve reading and math skills

The student and teacher ratings were very positive.

Homework Help

Homework Help was offered year-round at Kaunakakai School for grades K-6. The number of student evaluation forms returned, the enrollment and the number of students rated by teachers for each grade are shown below with Semesters 1 and 2 figures in parentheses.

| | <u>Returns</u> | <u>Enrolled</u> | <u>Rated</u> |
|---|----------------|-----------------|--------------|
| K | 33 (20+13) | 34 | 33 (20+13) |

| | | | |
|-------|------------|-----|------------|
| 1 | 31 (15+16) | 36 | 31 (15+16) |
| 2 | 17 (11+6) | 23 | 24 (13+11) |
| 3 | 12 (4+8) | 12 | 12 (4+8) |
| 4 | 19 (11+8) | 29 | 27 (12+15) |
| 5 | 22 (11+11) | 26 | 22 (11+11) |
| 6 | 16 (8+8) | 20 | 18 (9+9) |
| Total | 150 | 180 | 167 |

Always, Usually and Sometimes ratings by students for GLOs was 100.0% except for one student who rated GLO 5 as Rarely. For project activities Usually and Sometimes ratings ranged from 98.7% to 96.0%. Student comments included liked the class (7), class helped us (3) and was fun (3).

The teacher ratings for Significant, Moderate or Slight Improvement in behavior ranged from 92.2% to 79.6%. Most of the others were rated No Change. The GLO improvement ratings ranged from 91.0% to 80.2% with most of the others No Change. The range of project objectives listed below rated Significant, Moderate or Slight Improvement was 89.2% to 83.8%. All the others were No Change except one for Objective 3 was Slight Decline.

1. Completed math homework assignments
2. Asks for assistance when needed
3. Reads silently for assigned time

The very positive student self ratings were higher than the teacher ratings which were positive .

Horticulture

Horticulture evaluation forms were returned by all 17 student enrollees at Kilohana School. The GLO ratings of Always, Usually and Sometimes ranged from 100.0% to 88.2%. All students rated project activities Usually or Sometimes. Students commented that learning horticulture was fun (3).

The teacher rated 16 of the 17 students on behavior, GLOs and class objectives. The percent of students who made Moderate or Slight improvement in behavior was 93.8% (15 of 16 students) and GLOs was also 93.8% except for GLO 3 which was 100.0%. The class objectives listed below were 93.8% as well. There was No Change for one of the 16 students.

1. Identify garden tools and uses of the tools
2. Understand pros and cons of modern organic ag methods
3. Demonstrate knowledge of local plant varieties

The student and teacher ratings were very positive.

Math Whizz

Math Whizz at Kaunakakai School was divided into grades 3-4 and 5-6 classes. Evaluation forms were returned by 34 of 55 enrollees. The percent of student responses for the GLOs as Always, Usually or Sometimes ranged from 100.0% to 94.1%. Students (97.1%, 33 of 34) rated project activities Usually or Sometimes.

The teacher rated 36 of 55 enrollees on behavior, GLOs and class objectives. Fifteen (15) grades 5-6 students of 36 enrollees made significant improvement in all categories. The ratings for significant, moderate and slight improvement for all students rated was 97.2% for behavior (except attending class regularly was 88.9%) and GLOs (except GLO 2 was 94.4%). Class objectives listed below were rated 100.0%.

1. Demonstrate increased "math age" according to site
2. Demonstrate significant "gains/progression" in math strands
3. Demonstrate positive attitude towards math

Student and teacher ratings were very positive.

Tutor Support

Tutor Support at Maunaloa School was offered in Semesters 1 and 2 for grades K-2, 3-4 and 5-6. For grades K-2, 39 of 42 enrollees returned student surveys and were rated by the teachers. For grades 3-4, of 18 enrollees 17 returned student surveys and 18 were rated by the teachers. For grades 5-6, all 32 enrollees returned student surveys and were rated by the teachers. The percent of student ratings of Always, Usually, or Sometimes on GLOs ranged from 100.0 % to 95.5% and Usually or Sometimes ratings for project activities ranged from 98.9% to 94.3%. Grades 5-6 students commented that homework help helped get my work done (5).

The percent of Significant, Moderate, or Slight Improvement teacher ratings for behavior ranged from 87.6% to 79.8% and for GLOs from 80.9% to 73.0%. The class objectives and the percent improvement ratings are shown below.

- | | |
|--------------------------------------|------|
| 1. work on math homework assignments | 80.9 |
| 2. read silently for assigned time | 74.2 |
| 3. work independently | 74.2 |

The teacher ratings were much lower than the student ratings. The mode for the K-2 teacher ratings for Semester 2 was No Change which had an average of 13.1 for behavior, 16.7 for GLOs and 14.0 for class objectives of 22 enrollees.

Reading Tutoring

Reading Tutoring was offered year-round at Kilohana School for grade levels K-3 (17 students) and 4-6 (23 students). Always, Usually and Sometimes ratings of the 34 students (enrollment 40) ranged from 100.0% to 94.1% for the GLOs and the Usually and Sometimes ratings for project activities ranged from 100.0% to 91.2%. Students thanked teachers for their help (2).

The teacher ratings for Significant, Moderate or Slight Improvement in behavior was 97.4% of the 39 students rated. The GLO improvement ratings were 97.4% except for GLO 7 which was 100.0% The percent of improvement of class objectives listed below was 100.0%

1. Read grade-level books
2. Read for specified time
3. improve reading skills

The student and teacher ratings were very positive.

STEM Mind-Building

Beginning Robotics

Beginning Robotics was a Semester 2 class at Kaunakakai School with 6 enrollees.

Advanced Robotics

Advanced Robotics was a Semester 2 class at Kaunakakai School with 6 enrollees.

CAD

Computer-Aided Design (CAD) was a year course at Molokai Middle School with 9 enrollees.

FLL Robotics

First Lego League (FLL) Robotics was a Semester 1 class at Kaunakakai (KK) School with 11 enrollees and a year course at Molokai Middle School (MMS) with 12 enrollees. Student evaluation forms were returned by 22 of the 23 enrollees and teachers rated all 23 students. All students rated the GLOs as Always or Usually except one student at Kaunakakai rated "I use critical thinking and problem-solving strategies" as Rarely. All Project Activities were rated as Usually or Sometimes except one student at MMS rated "I get along with other students" as Rarely.

The teachers rated all 23 students on behavior, GLOs and class objectives. All MMS students were rated as making Significant or Moderate Improvement in all three categories in Semester 1 and in Semester 2 all made Significant Improvement. At Kaunakakai School all students were rated as Significant or Moderate Improvement

except 3 made Slight Improvement, 1 No Change and 1 Slight Decline (attendance). The class objectives were:

1. design, modify and apply technology to solve a problem
2. explore career options in robotics
3. understand that science, technology and society are interrelated (KK)
3. participate in FLL robotics competition (MMS)

The results were very positive for both students and teachers.

Vex Robotics

Vex Robotics was a year course at Molokai High School. There were 10 attendees in Semester 1 and 6 in Semester 2. Evaluation forms were returned by 7 of the 10 attendees and teachers rated all 16 attendees. The teacher ratings were very different for the two semesters. Semester 1 ratings were all improvements, Significant, Moderate or Slight. Semester 2 ratings were generally No Change, followed by Moderate Improvement for behavior, and Slight Improvement for GLOs and class objectives.

Strength-Based Community Building

This component was not funded for Year 5. Year courses in Instrumental Music (Violin and Brass) and Tahitian Beginner/Advanced at Kaunakakai School were taught by volunteers.

Parent Evaluation

Parents were asked to respond to a survey on GLOs, helpfulness of the class and adequacy of the class. The number of parent returns by schools is listed below.

| | |
|----------------------|------------------------|
| Kaunakakai (KAU) | 119 |
| Kilohana (KIL) | 50 |
| Maunaloa (MAU) | 57 |
| Molokai Middle (MMS) | 53 |
| Molokai High (MHS) | 5 (not discussed; <10) |
| Total | 284 |

The percents for agreeing or strongly agreeing with the GLOs at 4 schools are shown below. The highest percents at each school are bolded. Kilohana had the highest percents with all 6 > 90%. MMS had 4 > 90%, Maunaloa had 3 > 90%, and Kaunakakai had 2 > 90%.

| GLOs | KAU | KIL | MAU | MMS |
|------|-------------|-------------|-------------|-------------|
| 1 | 86.6 | 96.0 | 91.2 | 90.6 |
| 2 | 92.4 | 98.0 | 94.7 | 92.5 |
| 3 | 90.8 | 98.0 | 84.2 | 98.0 |
| 4 | 89.9 | 94.0 | 84.2 | 88.7 |
| 5 | 89.1 | 98.0 | 86.0 | 90.6 |
| 6 | 84.0 | 96.0 | 93.0 | 88.7 |

Yes responses for helpfulness of the class at the 4 schools are shown below. Kilohana had the highest percents with 4 > 90%, Maunaloa Kaunakakai had 2 >90%, and MMS had the lowest with all 5 <90%.

| HELPFULNESS | KAU | KIL | MAU | MMS |
|------------------|-------------|-------------|-------------|-------------|
| Math | 92.4 | 90.0 | 96.5 | 86.8 |
| Reading | 91.6 | 92.0 | 93.0 | 86.8 |
| Science | 62.2 | 84.0 | 68.4 | 83.0 |
| Personal Dev | 87.4 | 96.0 | 89.4 | 84.9 |
| Importance of Ed | 89.9 | 94.0 | 89.5 | 86.8 |

The percent of parents who rated adequacy of the class a 4 or 5 on a 5-point scale for the 4 schools is shown below. Kilohana had the highest percents with 4 > 90%, Kaunakakai and MMS had all 5 <90% and Maunaloa had the lowest with all 5 <80%.

| ADEQUACY | KAU | KIL | MAU | MMS |
|-------------|-------------|-------------|-------------|-------------|
| Content | 88.2 | 96.0 | 78.9 | 81.1 |
| Teaching | 87.4 | 92.0 | 78.9 | 83.0 |
| Pacing | 84.0 | 88.0 | 77.2 | 86.8 |
| Environment | 88.2 | 92.0 | 78.9 | 88.6 |
| Interaction | 87.4 | 90.0 | 77.2 | 83.0 |

Comments offered were:

Kaunakakai School

- thank you (5)
- helped finish homework, helped with motivation, enriching, learned more, understands better, improved in studies (5)

Kilohana School

- better reader, get extra help when needed (4)
- loved and learned horticulture, sustainability (3)

Generally, parent responses were very positive.

Regular Teacher Evaluation of CMM Students

Regular classroom teachers were asked about the effect of the project on their students. The number of teachers and the number of regular project students (attended 30 or more days) rated are shown below by schools.

| <u>School</u> | <u>Number of Teachers</u> | <u>Number of Students</u> |
|----------------|---------------------------|---------------------------|
| Kaunakakai | 12 | 79 |
| Kilohana | 3 | 12 |
| Maunaloa | 5 | 41 |
| Molokai Middle | 3 | 53 |
| Total | 23 | 185 |

One hundred eighty-five (185) regular project students were rated by 23 regular classroom teachers. The predominance of regular attendees was 79 at Kaunakakai School where they were rated by 12 classroom teachers on behavior, GLO and class objectives (math and reading proficiency). The tables below show the changes for all schools in the project.

Kaunakakai School N=79

| To what extent has the student changed his/her behavior in terms of items listed below. | | Do Not Need to Improve | Significant Improvement | Moderate Improvement | Slight Improvement | No Change | Slight Decline | Moderate Decline | Significant Decline |
|--|---|-------------------------------|--------------------------------|-----------------------------|---------------------------|------------------|-----------------------|-------------------------|----------------------------|
| 1 | Turning in homework on time | 13 | 19 | 16 | 21 | 9 | 1 | | |
| 2 | Completing homework to your satisfaction | 12 | 20 | 19 | 22 | 5 | 1 | | |
| 3 | Participating in class | 11 | 21 | 22 | 18 | 7 | | | |
| 4 | Volunteering (e.g. for extra credit or more responsibilities) | 9 | 19 | 17 | 14 | 20 | | | |
| 5 | Attending class regularly | 16 | 18 | 15 | 4 | 26 | | | |
| 6 | Being attentive in class | 11 | 15 | 14 | 26 | 13 | | | |
| 7 | Behaving well in class | 11 | 13 | 17 | 24 | 13 | 1 | | |
| 8 | Performing academically | 9 | 17 | 23 | 26 | 4 | | | |
| 9 | Coming to class motivated to learn | 9 | 14 | 23 | 20 | 12 | 1 | | |
| 10 | Getting along well with other students | 8 | 12 | 18 | 29 | 12 | | | |
| 11 | Meeting the GLOs | | | | | | | | |
| a | Responsible for own learning | 9 | 16 | 18 | 32 | 3 | 1 | | |
| b | Understanding that human beings need to work together | 9 | 19 | 19 | 25 | 6 | 1 | | |
| c | Demonstrates critical thinking and problem-solving strategies | 10 | 18 | 18 | 25 | 5 | 1 | | |
| d | Recognizes and produces quality performance and products | 9 | 18 | 21 | 25 | 6 | | | |
| e | Communicates effectively | 12 | 19 | 18 | 24 | 6 | | | |
| f | Uses a variety of technologies effectively and ethically | 12 | 18 | 17 | 26 | 6 | | | |
| 12 | Meeting the class objectives | | | | | | | | |
| a | Math proficiency | 9 | 21 | 26 | 20 | 3 | | | |
| b | Reading proficiency | 8 | 22 | 25 | 21 | 2 | | | |

Kilohana School N=12

| To what extent has the student changed his/her behavior in terms of items listed below. | | Do Not Need to Improve | Significant Improvement | Moderate Improvement | Slight Improvement | No Change | Slight Decline | Moderate Decline | Significant Decline |
|--|---|-------------------------------|--------------------------------|-----------------------------|---------------------------|------------------|-----------------------|-------------------------|----------------------------|
| 1 | Turning in homework on time | 3 | | 3 | 6 | | | | |
| 2 | Completing homework to your satisfaction | 5 | | 3 | 4 | | | | |
| 3 | Participating in class | 2 | | 5 | 5 | | | | |
| 4 | Volunteering (e.g. for extra credit or more responsibilities) | | | 2 | 8 | | | | |
| 5 | Attending class regularly | 6 | 2 | 3 | 1 | | | | |
| 6 | Being attentive in class | 4 | | 5 | 3 | | | | |
| 7 | Behaving well in class | 8 | | 4 | | | | | |
| 8 | Performing academically | 1 | 2 | 8 | 1 | | | | |
| 9 | Coming to class motivated to learn | 6 | | 3 | 3 | | | | |
| 10 | Getting along well with other students | 7 | 1 | 3 | 1 | | | | |
| 11 | Meeting the GLOs | | | | | | | | |
| a | Responsible for own learning | 2 | | 5 | 5 | | | | |
| b | Understanding that human beings need to work together | 4 | 1 | 3 | 4 | | | | |
| c | Demonstrates critical thinking and problem-solving strategies | | 1 | 10 | 1 | | | | |
| d | Recognizes and produces quality performance and products | | 2 | 10 | | | | | |
| e | Communicates effectively | 1 | | 6 | 5 | | | | |
| f | Uses a variety of technologies effectively and ethically | | | 12 | | | | | |
| 12 | Meeting the class objectives | | | | | | | | |
| a | Math proficiency | | 9 | 2 | 1 | | | | |
| b | Reading proficiency | | 9 | 3 | | | | | |

Maunaloa School N=41

| To what extent has the student changed his/her behavior in terms of items listed below. | | Do Not Need to Improve | Significant Improvement | Moderate Improvement | Slight Improvement | No Change | Slight Decline | Moderate Decline | Significant Decline |
|--|---|-------------------------------|--------------------------------|-----------------------------|---------------------------|------------------|-----------------------|-------------------------|----------------------------|
| 1 | Turning in homework on time | 5 | 24 | 9 | 3 | | | | |
| 2 | Completing homework to your satisfaction | 2 | 20 | 15 | 3 | 1 | | | |
| 3 | Participating in class | 16 | 7 | 14 | 4 | | | | |
| 4 | Volunteering (e.g. for extra credit or more responsibilities) | 12 | | 13 | 6 | 10 | | | |
| 5 | Attending class regularly | 19 | 10 | 9 | 2 | 1 | | | |
| 6 | Being attentive in class | 11 | 5 | 11 | 11 | 2 | 1 | | |
| 7 | Behaving well in class | 12 | 1 | 13 | 8 | 6 | 1 | | |
| 8 | Performing academically | 5 | 3 | 18 | 14 | 1 | | | |
| 9 | Coming to class motivated to learn | 13 | 5 | 8 | 14 | 1 | | | |
| 10 | Getting along well with other students | 14 | 2 | 11 | 9 | 5 | | | |
| 11 | Meeting the GLOs | | | | | | | | |
| a | Responsible for own learning | 11 | 8 | 11 | 8 | 3 | | | |
| b | Understanding that human beings need to work together | 15 | 8 | 12 | 4 | 2 | | | |
| c | Demonstrates critical thinking and problem-solving strategies | 7 | 4 | 13 | 13 | 4 | | | |
| d | Recognizes and produces quality performance and products | 4 | 6 | 17 | 11 | 3 | | | |
| e | Communicates effectively | 10 | 3 | 6 | 8 | 4 | | | |
| f | Uses a variety of technologies effectively and ethically | 12 | 7 | 17 | 4 | 1 | | | |
| 12 | Meeting the class objectives | | | | | | | | |
| a | Math proficiency | 2 | 6 | 14 | 16 | 3 | | | |
| b | Reading proficiency | 2 | 13 | 10 | 14 | 2 | | | |

Molokai Middle School N=53

| To what extent has the student changed his/her behavior in terms of items listed below. | | Do Not Need to Improve | Significant Improvement | Moderate Improvement | Slight Improvement | No Change | Slight Decline | Moderate Decline | Significant Decline |
|--|---|-------------------------------|--------------------------------|-----------------------------|---------------------------|------------------|-----------------------|-------------------------|----------------------------|
| 1 | Turning in homework on time | 17 | 5 | 8 | 11 | 8 | 3 | | 1 |
| 2 | Completing homework to your satisfaction | 14 | 5 | 11 | 11 | 8 | 3 | | 1 |
| 3 | Participating in class | 15 | 4 | 11 | 10 | 11 | 1 | | 1 |
| 4 | Volunteering (e.g. for extra credit or more responsibilities) | 14 | 3 | 9 | 7 | 19 | | | 1 |
| 5 | Attending class regularly | 25 | 4 | 5 | 2 | 16 | 1 | | |
| 6 | Being attentive in class | 20 | 4 | 8 | 6 | 11 | 3 | | 1 |
| 7 | Behaving well in class | 20 | 4 | 9 | 4 | 12 | 3 | | 1 |
| 8 | Performing academically | 18 | 4 | 10 | 9 | 7 | 3 | 1 | 1 |
| 9 | Coming to class motivated to learn | 17 | 6 | 10 | 6 | 11 | 2 | | 1 |
| 10 | Getting along well with other students | 21 | 4 | 6 | 8 | 13 | 1 | | |
| 11 | Meeting the GLOs | | | | | | | | |
| a | Responsible for own learning | 15 | 6 | 11 | 8 | 11 | 1 | | 1 |
| b | Understanding that human beings need to work together | 16 | 6 | 9 | 10 | 11 | | | 1 |
| c | Demonstrates critical thinking and problem-solving strategies | 13 | 5 | 10 | 12 | 12 | | | 1 |
| d | Recognizes and produces quality performance and products | 14 | 7 | 9 | 9 | 13 | | | 1 |
| e | Communicates effectively | 14 | 7 | 10 | 7 | 14 | 1 | | |
| f | Uses a variety of technologies effectively and ethically | 16 | 5 | 10 | 9 | 13 | | | |
| 12 | Meeting the class objectives | | | | | | | | |
| a | Math proficiency | 10 | 8 | 7 | 20 | 8 | | | |
| b | Reading proficiency | 10 | 4 | 9 | 12 | 14 | 3 | | 1 |

Except for students who did not need to improve, improvements at the various schools are reported below.

At Kaunakakai School most of the students made Significant or Moderate Improvement followed by Slight Improvement, then No Change.

At Kilohana School most of the students made Moderate Improvement (except for class objectives which had Significant Improvement), followed by Slight Improvement, then No Change.

At Maunaloa School most of the students made Moderate Improvement, followed by Significant and Slight Improvement, then No Change.

At Molokai Middle School most of the students made No Change (except for class objectives which had Slight Improvement), followed by Moderate or Slight Improvement, then Slight Decline.

Generally, regular teachers rated project students as making improvement.

Findings by Component Objectives

The first four years of the project addressed the formative assessment and evaluation objectives, while the fifth and final year addressed formative and summative evaluation objectives. The objectives are listed in Appendix B.

The objectives by components are discussed below. Participation and completion rates are reported as met or unmet.

Selfhood and Learning (ePrep) Hana Hou Tuesday was not designed for completion of course work, but there were 2,409 sign-ins (1,841 students, 66 parents, 23 families, 286 staff, 193 community members).

1. Activities will accommodate 160 participants each year. (duplicated count)

Unmet; 34 participants

2. 80% of the participants will complete one or more of the activities.

Unmet; 70.6% (24 participants)

Skills Maintenance (ACE Reading, Academic Support, Computer-Assisted Math and Reading, Homework Help, Horticulture, Math Whizz, Tutor Support, Reading Tutoring)

1. Activities will accommodate 360 participants each year. (duplicated count)

Met; 553 participants

2. 50% of the participants will complete one or more of the activities.

Met; 87.3% (483 participants)

3. Proficiency levels in reading and mathematics will reach or exceed the adequate yearly progress (AYP) expectations (2012).

Met; All schools except Molokai High School

Unmet; Molokai High School

4. Grade improvement by half a grade or more between Fall 2012 and Spring 2013 is reported below by schools. The number of students who had both Fall and Spring grades is shown as N, the number that increased in math (IM), the number who decreased in math (DM), the number who neither increased nor decreased in math (NM), and the number of (NM) who could not improve given that they had obtained the highest grade possible (CM) are reported. Similar numbers for reading/language arts are reported as IR, DR, NR, and CR.

| | Kaunakakai | Kilohana | Maunaloa | MMS |
|----|------------|----------|----------|-----|
| N | 89 | 12 | 48 | 53 |
| IM | 27 | 6 | 21 | 15 |
| DM | 2 | 1 | 0 | 4 |
| NM | 63 | 5 | 27 | 34 |
| CM | 4 | 0 | 0 | 34 |
| IR | 23 | 4 | 17 | 13 |
| DR | 6 | 2 | 0 | 7 |
| NR | 60 | 6 | 31 | 33 |
| CR | 4 | 0 | 0 | 4 |

Many more had increased grades than decreased grades in both math and reading/language arts. However, the largest number neither increased nor decreased their grades with only a few who could not improve given that they had obtained the highest grade possible, except for MMS math where all of them had the highest grade possible.

5. Proficiency levels in science will reach or exceed the prescribed DOE/NCLB expectations.

The percent proficient in science by schools in the grade levels tested are shown below for 2011-12. The school results are compared to the State proficiency levels.

| State | <u>Grade 4 45%</u> | <u>Grade 8 31%</u> | <u>Grade 10 22%</u> |
|----------------|------------------------------------|--------------------|---------------------|
| Kaunakakai | 30% | | |
| Kilohana | 54% | | |
| Maunaloa | 45% | | |
| Molokai Middle | | 34% | |
| Molokai High | | | 10% |
| Met; | Kilohana, Maunaloa, Molokai Middle | | |
| Not Met; | Kaunakakai, Molokai High | | |

STEM Mind-Building (Advanced Robotics, Beginner Robotics, CAD, FLL Robotics, Vex Robotics)

1. Activities will accommodate 165 students and 24 teachers per year. (duplicated count)

Unmet; 60 students
Unmet; 0 teachers

2. 80% of the participants will complete one or more of the activities.

Met; 95.0% (57 participants)

Strength-Based Community Building (Brass; Violin; Tahitian, Beginner and Advanced) No funding was available for this component in Year 5, but classes were taught by volunteers and no data were collected.

Additional objectives related to LOs, homework completion and attendance rates are discussed below.

1. 80% of the participants will have increased self-assessment ratings in four of the six General Learner Objectives (GLOs) of the Hawaii Department of Education. (Kaunakakai School data for Years 1 and 5)

Unmet (Homework Help)
Met (Math Whizz); 5 of 6 GLOs

2. Homework completion rates will increase as indicated by teachers. 2012-2013 homework completion rates were compared to 2008-09 for Kaunakakai School.

Met; (77.2%, 58.8%; additionally 15.2% in 2012-13 did not need to improve)

3. School attendance rates (average daily attendance) will increase and average number of days absent will decrease.

Met; Kaunakakai, Kilohana, Molokai Middle and Molokai High School
 Unmet; Maunaloa

Data for 2008-09 and 2011-12 are shown below by schools.

| | ADA | | Days Absent | |
|----------------|--------------|--------------|--------------|--------------|
| | <u>08-09</u> | <u>11-12</u> | <u>08-09</u> | <u>11-12</u> |
| Kaunakakai | 94.9% | 95.3% | 9.0 | 8.4 |
| Kilohana | 95.4% | 95.7% | 7.9 | 7.6 |
| Maunaloa | 94.8% | 92.8% | 9.2 | 13.0 |
| Molokai Middle | 92.5% | 97.0% | 13.3 | 5.3 |
| Molokai High | 89.2% | 93.6% | 19.9 | 11.4 |

SUMMER PROGRAM

The Year 5 Summer Enrichment Program consisted of Skills Maintenance and Community Strength-Building at four schools as follows:

1. Skills Maintenance at Kaunakakai School, Kilohana School, Maunaloa School and Molokai Middle School.
2. Community Strength-Building at Kaunakakai School, Kilohana School, Maunaloa School and Molokai Middle School.

Evaluation surveys were administered to students, parents and teachers. Students were asked to self-rate themselves on GLOs and project activities. Parents were asked whether their children met the GLOs as a result of the class and whether the class helped in academic content skills, personal development, and importance of education. Teachers rated students on behaviors, GLOs and class objectives.

Each school program is described below.

Kaunakakai School

The Kaunakakai School summer enrichment program was held four days a week for four weeks from Monday, June 4 through Thursday, June 28, 2012 from 8:00 a.m. -12:00 p.m. for 106 students.

Students grouped by grades levels 1 - 6 were instructed by teachers from Kaunakakai School. Eight (8) paraprofessional tutors (PPTs) were hired to support student learning in the classrooms and resource rooms as well as help with supervision during non-instructional time.

Five 40-minute academic blocks, language arts, math, wellness and leadership, included four enrichment classes in music (violin), nutrition and fitness, art and technology instruction. Math and language objectives focused on targeted areas of need for each grade level based on the previous year's school-wide data and teacher input. Language

arts used a workshop approach focusing on the reading process, reading conventions, and reading response. Student objectives according to grade levels were: Grade 1 (Class 1) objectives were to: 1) learn story elements of plot, setting, character and problem/solution, 2) study author; and 3) make personal connections to text. Grade 1 (Class 2) objectives were to: 1) engage in reading narrative text, 2) increase comprehension, and 3) use proper sentence structure when writing about text. Grade 2 objectives were to: 1) identify story elements of character, plot and settings, and 2) identify errors in sentences and edit for grammar. Grade 3 objectives were to: 1) increase reading fluency and accuracy using grade appropriate narratives, and 2) write poems with sensory detail. Grade 4 objectives were to: 1) respond accurately to questions about text with annotation, 2) practice writing constructed responses, and 3) write a Haiku poem. Grade 5 objectives were to: 1) use a variety of reading strategies to construct meaning from a variety of texts, and 2) describe how the author's word choice and use of imagery contribute to meaning. Grade 6 objectives were to: 1) increase independent reading time using appropriate narratives and informational texts and 2) understand text forms and features of narrative, expository and descriptive writing. Activities in all classes included silent reading, oral reading and partner reading using library materials at each student's reading level. All students used Accelerated Reading, a set of computerized reading comprehension tests matched to the library collection.

All math classes focused on improving math skills and connecting math to real-world situations. Students began with WIST (Walk in and Start Thinking), solved a group problem utilizing real-world situations, and utilized the Math Whizz computer program. The levels of math difficulty were adjusted for each grade level. Each class spent the remaining one-half hour on grade-specific math skills. Grade 1 objectives were to increase number sense and operations. Grade 2 focused on patterns: 1) explain the difference between repeating and growing patterns and 2) describe and create addition and subtraction number patterns. Grade 3 objective was to deepen understanding of place value and solve two- and three-digit addition and subtraction problems. Grade 4 objectives were to: 1) practice for fluency with multiplication, 2) deepen understanding of factors, and 3) learn how to answer a constructed response. Grade 5 objective was to apply the inverse relationship between addition and subtraction and multiplication and division. Grade 6 objective was to strengthen math knowledge through the use of Math Whizz.

The music classes focused on an introduction to violin. A qualified teacher who specializes in instrumental music taught the classes. Students learned how to read music and produce a sound on their chosen instrument. Objectives were to: identify and play rhythmic values, quarter, half, and whole notes; read notes for, and play open "E" and open "A" and identify the major parts of the violin, and demonstrate correct bow grip and play up and down bow markings. Instruments were checked out to children after it was determined that the student is committed to the class and the instrument will be used appropriately and ethically. Parent/Caregivers sign an agreement to pay for lost or damaged instruments. All instruments checked out during the summer of 2012 were returned.

The Art objectives were: 1) use a variety of art tools and techniques, 2) express feelings through art, and 3) appreciate the art of others. Activities included drawing with several art media, mixing colors – color techniques for displaying emotion in art, and print making and collage. Students learned to work with shapes, create patterns, and use measurement when working with art. Students were given opportunities to see how art and math are interrelated. Each class included time to share the students’ art and an art display was placed in the school library.

The Nutrition and Fitness objectives were: 1) participate in regular physical fitness and conditioning, 2) understand how healthy eating of fruit contributes to good health and nutrition, and 3) learn rules and skills of baseball. Activities included class discussions on health and nutrition such as the healthy aspects of adding papaya to their diet. Students planted their own papaya for their families. A song was created by the students that contained some of the nutrition and health knowledge they learned in the wellness class. Elements of baseball were taught and students practiced batting, catching, throwing and base running. All students ran four laps around the playground daily along with body stretches to foster physical fitness and conditioning.

The Maui Police Department Leadership class was created in partnership with the police department with community agencies and programs such as Akaku, Alu Like’s Hoala Hou Program using the E Ola Pono drug and substance abuse prevention lessons, and the Pacific American Foundation's environmental education classes. Four community members teamed with a local police officer to instruct this course. The objectives were to: 1) learn the skills to prevent violence and substance abuse, 2) learn the skills to help care for natural resources, and 3) learn how to care for their bodies by making healthy choices. Students learned Hawaiian values and concepts as they relate to their own lives. Healthy choices that help to prevent heart disease such as exercises and not smoking were discussed. Akaku helped the students learn how to make public service announcements to help spread their new knowledge to the public. Students helped to create a public service announcement for Molokai which aired on local TV. The police presentation was focused on bullying from the DARE program. It helped students identify what a bully is, who could be a bully, and how and where bullying can take place. It emphasized what they could do as a victim and safe reporting techniques without fear of retaliation. Students learned vocabulary words such as bystander, power, and control. Different kinds of bullying such as cyber bullying using the computers and going on facebook were shared as well as consequences if caught bullying which is harassment and an actual crime if reported to the police.

The Keiki Steps to Kindergarten class for 25 pre-K students was held Monday through Friday from 8:00 a.m. – 11:00 a.m. from July 7 to 20, 2012. The class was designed to help pre-K children transition from home to school successfully. Offered throughout Hawaii, this early childhood education program was created in collaboration with the "Institute for Native Pacific Education and Culture," and Kamehameha Schools. Keiki Steps to Kindergarten helps children ease into a group-learning environment which enhances every child's ability to excel academically. The program helps socialize young children who have never gone to school before. The children and parents participated in activities to learn skills that are important for school success. While children learned to

follow directions and socialize with other children, parents learned developmentally- and culturally-related activities the family can enjoy at home to support their child's learning. Learn to share, take turns, and raise their hands are a few of the basic skills the children learned so they can have success on their first day of kindergarten. All of the children entered Kaunakakai School's kindergarten class for school year 2012-2013.

Evaluation

Student grade-level forms were returned by 68 or 70.8% of the 96 students. Students also self-rated themselves in the enrichment classes with 52 respondents in PE/Nutrition, 27 in MPD Leadership, 66 in Art, 77 in Music and 76 in Computer Lab for a total of 298 or 77.6% of the 384 students. The results were generally positive for all grade level and enrichment classes with students responding Always or Usually to meeting the GLOs and Usually and Sometimes for project activities. Student comments were very positive - they liked/loved the program content and teachers.

Parent forms were returned by 43 parents for a return rate of 44.8% of student attendance. The results were generally positive for the GLOs with the majority of the parents Agreeing or Strongly Agreeing with the GLOs. For class activities, the majority of the parents responded "Yes" to whether the class helped in math, reading, science, personal development and importance of education. On a 5-point scale from poor to excellent, the majority of the parents responded 4 or 5 (excellent) when rating content, teaching, pacing, environment and interaction. Comments shared were all positive and appreciative - one comment was "wonderful program. I am so appreciative of all the resources we have for our keiki as a result of the 21st Century Program."

Seven (7) grade-level teachers evaluated 89 students on behaviors, GLOs and class objectives. The teachers generally rated the students as making Significant, Moderate or Slight Improvement in all areas, except for grade 4 where ratings for behaviors and GLOs had more No Change than Slight Improvement with no Significant or Moderate Improvement ratings. Significant Decline in attendance was noted for 8 students in grades 4-6. The five (5) enrichment class teachers generally rated the students as making Significant Improvement. The number of students rated for each course is shown in parentheses below. The three objectives for each class were:

Grade 1 (23)

1. read narrative text for comprehension
2. engage in math games for number sense and to practice conservation of numbers
3. write sentences

Grade 2 (15)

1. explain the differences between repeating and growing patterns; describe and create additions
2. identify errors in sentences and edit for capitalization, proper nouns, spelling and punctuation
3. identify character, plot and setting

Grade 3 (14)

1. write poems with sensory detail

2. read grade-appropriate narratives and informational text with fluency and accuracy
3. learn place value, solve two- and three-digit addition and subtraction problems and measure length

Grade 4 (14)

1. read, listen and mark with post-its in response to text-dependent questions
2. provide constructed response on reading, write haikus and word shape poetry
3. strengthen multiplication facts in constructed response and games

Grade 5 (10)

1. describe how the author's choice of words or use of contributes to overall quality and readers enjoyment
2. use range of writing within a variety of grade-appropriate formats for a variety of purpose and audience
3. apply the inverse relationship between addition, subtraction and multiplication and division to solve problems

Grade 6 (13)

1. understand the different types of writing
2. increase basic math knowledge
3. increase reading time

Art (88)

1. use a variety of art tools and techniques
2. express themselves through art
3. appreciate the art of others

Computer Class (75)

1. produce documents
2. produce presentations
3. produce spreadsheets

PE/Nutrition (85)

1. participate in regular physical fitness and conditioning
2. become nutrition healthy eating fruits
3. participate in physical activities

Molokai Police Department (51)

1. learn the skills to prevent violence and substance abuse
2. learn skills to help care for their natural resources
3. care for their bodies through healthy choices

Violin (77)

1. identify and play rhythmic values - quarter, half, whole note, etc.
2. read notes for and play open E and open A
3. identify major parts, demonstrate correct bow grip and play up and down bow markings

Kilohana School

The Kilohana School summer enrichment program was conducted through a partnership with Summer Play and Learn Sessions (PALS). The mission of PALS is to provide a safe, nurturing and quality recreation program for the children of Maui County that addresses physical, social, cultural, and educational needs during summer and

intersession breaks. The summer program consisted of Horticulture, Arts and Crafts, Theater, Storytelling, Physically Fit, Keiki Steps, and Ukulele classes. To offer flexibility for families, students could register for only one class or sign up for the entire program. Most summer students registered for both 21st Century classes and PALS. Since PALS was a full day program, students were “pulled” from the PALS program to attend 21st Century classes. Although 35 students registered for the summer program, 32 students attended regularly Monday through Friday from June 12 to July 9. For many students, the classes were a continuation from the previous school year. An “open” computer lab was available during the lunch hour for students to explore the internet, word process, or play computer-based learning games. A certified teacher was available in the computer lab to assist students as needed.

The Keiki Steps to Kindergarten class for 9 pre-K students was held Monday thru Friday from 7:00 a.m. – 1:00 p.m. from June 4 to 14, 2012. The class was designed to help pre-K children transition from home to school successfully. Offered throughout Hawaii, this early childhood education program was created in collaboration with the "Institute for Native Pacific Education and Culture," and Kamehameha Schools. Keiki Steps to Kindergarten helps children ease into a group-learning environment which enhances every child's ability to excel academically. The program helps socialize young children who have never gone to school before. The children and parents participated in activities to learn skills that are important for school success. While children learned to follow directions and socialize with other children, parents learned developmentally- and culturally-related activities the family can enjoy at home to support their child’s learning. Learn to share, take turns, and raise their hands are a few of the basic skills the children learned so they can have success on their first day of kindergarten. All of the children entered Kilohana School’s kindergarten class for school year 2012-2013.

Horticulture was held on Mondays and Tuesdays from 8 - 11 am. In this hands-on class, students had an opportunity to learn how to grow and care for plants, understand the pros and cons of organic gardening methods, learn about local plant varieties, and learn how to use gardening tools and instruments to care for plants. “Da Greenhouse” donated gardening supplies, fertilizers and an aeroponics kit. The objectives were to expand the existing fruit, vegetable, and the aquaponics garden; learn how microscopes are used in horticulture; monitor the ph values needed to grow various plants and vegetables; and to learn about aeroponics. The class was divided into three one hour segments. During the first segment the students learned about aeroponics firsthand using the donated kits. The second hour focused on vermaculture, which was elements of composting with an emphasis on studying how worms are a vital part of soil quality and plant health. As in the previous year, students were given worm boxes to raise worms for the garden. They learned how to care for the worms, the life cycle of the worm and gained knowledge of the benefits worms provide to horticulture. The third hour was hands-on gardening and caring for their worms and the aquaponics garden created in the previous school year. This course will be continued during school year 2012-2013.

Multiple two-hour sessions of Arts and Crafts were offered Monday through Wednesday. Students in grades K-3 attended the first session and students in grades 4-6 attended the second session. Community members volunteered in the K-3 class to support the

students. The objectives for both sessions were to design and create scenery, costumes and props; create puppets and masks for stories; and use a variety of art and technology media to create art. Storytelling, a K-3 class, was held for two hours on Monday through Wednesday. The objectives were to express ideas through creative movement, choral speaking, and rhymes; identify the elements of character and setting; and adding details from personal experience when acting. Theater, a grades 4-6 class, was also held Monday through Wednesday for two hours. The objectives were to create a dramatization by collaborating as actors, directors, and scriptwriters; participate in a short performance, and use voice and facial expressions to show the character's emotions. The Theater, Storytelling and the Arts and Crafts classes worked synergistically to help create a play production "The Lions Enchantment" performed by the upper grades and "Baby Bear, Baby Bear, What Do You See" performed by the lower grades. The drama had several scene and costume changes, and was very well received by the audience on family night.

Ukulele class was held for one hour per week for K-2 students and one hour per week for grades 3-6 students. The objectives for both beginner classes were to maintain a steady beat; recognize sound quality in instruments and voice; and sing and play at least one song. Students performed "Twinkle, Twinkle" and "Molokai Slide" on family night.

Physically Fit class was held for one hour Monday through Thursday. The objectives were to identify physical activity opportunities outside of school; learn the rules of various sports; and to set goals for improving components of personal health related to physical fitness.

The Kilohana Summer Enrichment Program ended with a Family Night on July 9. Families were able to visit the Kilohana garden, watch a play, and listen to the sounds of the Ukulele class.

Evaluation

Student forms were returned by 59 or 76.6% of the 77 students. The results were generally positive for all classes with students responding Always or Usually to meeting the GLOs and Usually and Sometimes for project activities. Student comments were very positive - they liked/loved the program content and teachers.

Parent forms were returned by 13 parents for a return rate of 16.9% of student attendance. The results were generally positive for the GLOs with the majority of the parents Agreeing or Strongly Agreeing with the GLOs. For class activities, the majority of the parents responded "Yes" to whether the class helped in math, reading, science, personal development and importance of education. On a 5-point scale from poor to excellent, the majority of the parents responded 4 or 5 (excellent) when rating content, teaching, pacing, environment and interaction. Comments shared were all positive and appreciative.

Six (6) teachers evaluated 77 students or 100% of their students on behaviors, GLOs and class objectives. The teachers generally rated the students as making Significant, Moderate or Slight Improvement in all areas, except for grade 4 where ratings for

behaviors and GLOs had more No Change than Slight Improvement with no Significant or Moderate Improvement ratings. The number of students rated for each course is shown in parentheses below. The three objectives for each class were:

Horticulture (13)

1. monitor the ph content necessary to grow various plants and vegetables
2. expand fruit and vegetable garden in garden boxes and aquaponics
3. learn how to use microscopes

Theater (8)

1. create a class dramatization by collaborating as actors, directors, and scriptwriters
2. perform a short performance
3. use voice and facial expression to show the characters' emotions

Storytelling (12)

1. express ideas through creative movement, choral speaking, rhyme, etc.
2. identify basic elements of character and setting
3. add details from personal experience to elaborate

Physically Fit (11)

1. identify opportunities for physical activity outside of the physical education class
2. learn rules and procedures for various sports
3. set goals for improving components of personal health related to physical fitness

Arts and Crafts (19)

1. design and create scenery, costumes and props
2. create puppets and marks for stories
3. use a variety of art and technology media to create art

Ukulele (14)

1. use an instrument to maintain a steady beat
2. recognize by sound quality various characteristics of instrument and vocal sounds
3. sing and play one song using an ukulele

Maunaloa School

The Maunaloa School summer enrichment program was conducted through a partnership with Summer Play and Learn Sessions (PALS). The mission of PALS is to provide a safe, nurturing and quality recreation program for the children of Maui County that addresses physical, social, cultural, and educational needs during summer and intersession breaks. The summer program consisted of math and reading skills maintenance, Horticulture, Math/Science, Arts and Crafts/Physical Fitness classes.

Sixty-two (62) students attended the program Monday through Friday from May 29 to June 21. Students began arriving between 7:30 am and 8 am daily. Breakfast was offered through county funding and informal social play filled the time until 8:15am, the official start of the day. Project activities were offered from 8:15 a.m. until 1:00 p.m. from Monday through Thursday. Recess was from 10:15 to 10:30 a.m. and lunch was from 11:30 a.m. to 12:00 noon. Students were grouped for all classes by grade levels (Pre-K, K-1, 2-3 and 4-6). In the reading and math tutor-support class, teachers were assisted by one other support adult. The math and reading objectives were based on the students' academic performance and targeted needs from the previous school year. The

teachers used research-based instructional materials to support instruction. Horticulture, Arts and Crafts/Fitness, and Math/science classes were offered as electives for grades 2 through 6. Grades 2-6 reading objectives were to build comprehension skills, improve writing skills, and practice working independently. Achieve 3000, a computer-based expository reading program, was incorporated to help build these objectives. Students also created poetry, and learned to create a basic Power Point presentation. Grades 2-6 math objectives were to strengthen basic math skills, use technology ethically to enhance learning in math, and to work independently. Math Whizz was incorporated to help build these objectives. Students were administered pre- and post-tests to measure growth in math computational skills. The Pre-K and K-1 classes were self-contained and, in addition to math and reading, offered science, art and physical fitness as an integrated part of their work in math and reading. Pre-K objectives were to strengthen fine motor skills, learn to cooperate with others, and learn about farm animals. A farm/animal theme was used throughout the day. A focus on building number sense using concrete examples and computation skills was emphasized in math. Reading focused on phonemic awareness and phonic skills. K-1 class objectives were to meet task completion on the daily student learning objectives, follow class rules, and cooperate with others. Daily math and reading objectives focused on math computation, phonics, reading for pleasure, and sight word recognition. Most of the children attending Pre-K and K-1 classes had no preschool experience prior to attending the summer program. In addition to building skills, these classes were designed to help the children acclimate to the school environment.

Two sections of Horticulture were offered to grades 2-6. The instructor, a local semi-retired botanist, donated hundreds of plants at all stages of growth for the students to experiment with. The objectives were to: 1) learn the principles of plant nutrition, 2) transplanting and re-potting techniques, and 3) basics of flowering plants and tomato production. Students were given classroom instruction and then practiced planting techniques and experimented with plant nutrition. All plants were given away to students and community members at the end of the summer program.

Arts and Crafts/Movement class was held for grades 2-3 and 4-6. The objectives were for students to be successful in tasks designed to be fun so that students could both receive and give positive encouragement, practice and improve fine and gross motor skills, and participate in fun physical fitness activities. Activities alternated daily between arts and craft activities and fun outdoor activities. Activities included making their family tree, a colored rice mosaic, playing softball, and playing kick ball.

Science class combined math and science computer-assisted learning to give students challenges that required them to apply their knowledge of math and science to solve problems. The objectives were to learn to think independently to come up with a solution, use logic to solve problems, and to participate in activities that would build their self-confidence. Math Whizz provided the math activities and Discovery Education website provided the science activities.

Summer PALS activities designed to foster athletic/physical fitness, social interaction, and summer crafts were held on Fridays and in the afternoons until 3:30 p.m. Activities included trips to the local pool in Kaunakakai and trips to Kilohana, Kaunakakai, and

Kualapuu Schools to play cultural games and perform basketball skill drills. Lunch was not provided, so students brought home lunches.

Evaluation

Student forms were returned by 75 (the K-1 class of 19 did not participate) or 62.0% of the 121 students. The results were generally positive for all classes with students responding Always or Usually to meeting the GLOs and Usually and Sometimes for project activities. Student comments were very positive - they liked/loved the program content and teachers.

Parent forms were returned by 27 parents for a return rate of 22.3% of student attendance. The results were generally positive for the GLOs with the majority of the parents Agreeing or Strongly Agreeing with the GLOs. For class activities, the majority of the parents responded "Yes" to whether the class helped in math, reading, science, personal development and importance of education. On a 5-point scale from poor to excellent, the majority of the parents responded 4 or 5 (excellent) when rating content, teaching, pacing, environment and interaction. Comments shared were all positive and appreciative.

Eight (8) teachers evaluated all 127 students on behaviors, GLOs and class objectives. The teachers generally rated the students as making Significant, Moderate or Slight Improvement in all areas, except for grade 4 where ratings for behaviors and GLOs had more No Change than Slight Improvement with no Significant or Moderate Improvement ratings. The number of students rated for each course is shown in parentheses below. The three objectives for each class were:

Tutor Support, Pre-K (15)

1. learn about farm animals
2. cooperate with others
3. strengthen fine motor skills

Tutor Support, K-1 (19)

1. meet daily learning objectives
2. cooperate with others
3. follow class rules

Tutor Support, 2-3 Reading (14)

1. think for themselves
2. use logic to solve problems
3. gain confidence in their own ways of figuring out for themselves

Tutor Support, 2-3 Math (14)

1. build math skills
2. use technology ethically
3. work independently

Tutor Support, 4-6 Reading (11)

1. build comprehension
2. improve writing skills
3. work independently

Tutor Support, 4-6 Math (11)

1. build math skills
2. use technology ethically
3. work independently

Horticulture (22)

1. learn principles of plant nutrition
2. learn transplanting/re-potting technique
3. learn flowering plant and tomato production

Arts and Crafts (21)

1. use positive encouragement
2. increase motor skills, gross/fine
3. engage in fun physical fitness

Molokai Middle School

The Molokai Middle School Summer Program was held from 7:45 a.m. to 12:30 p.m. from June 6 and to June 27. Transportation for the program was provided by the Maui Economic Opportunity bus service. Classes offered academic support, foundational math, science, and reading skill building, and enrichment. Enrichment classes included Art, Sewing, Drama, and Physical Fitness, Fun and Fitness and Hawaiian Values. The program was open to incoming 7th, 8th and 9th grades. The summer program was structured so that students could choose to attend classes only on Monday, Wednesday, and Friday; or only Tuesday and Thursday, or Monday through Friday. Activities were designed to incorporate building communication, team building, and interpersonal skills.

Math, reading and science content aligned with the Hawaii Common Core Standards in language arts, math, and science. Most students needing skill support utilized the Math Whizz program for math and the Achieve 3000 program for reading. Cognitive Tutor was used for advanced students. The objectives for reading were to learn and practice reading strategies to increase comprehension skills and retention; to use reading comprehension skills in the discussion of literature; and to utilize the Achieve 3000 Program for literacy proficiency. Math objectives were to build basic math skills; build confidence in math using individual goal setting; and to incorporate team building skills, critical thinking and problem solving when working on mathematical problems.

Math Whizz, a computer-based program incorporating the latest research on student learning, provided access to K-8 math content through individualized instruction to remediate, reinforce and accelerate learning. Embedded formative and summative assessments provided instruction based on real-time student data. All students began with a placement pre-test to assess their current level of mathematical understanding. Math Whizz has several learning support models: Core Enrichment, Intervention Programs, Extended Day, Summer School Programs, Acceleration/Gifted & Talented, Special Education, and Remedial Support.

Both teacher-led literature activities and **Achieve 3000** purchased by the DOE for all students for school year 2011-2012 were used to support students in reading skills. Students are recommended to complete two 45-minute lessons per week in order to make

the gains suggested by the research. Providing time during the summer helps support the state's efforts in implementing the program.

Achieve 3000 provides web-based, individualized learning scientifically proven to accelerate reading comprehension, vocabulary, writing proficiency and performance on high stakes tests for grades 2-12. Once a student takes the placement test, all reading material is sent to the student via the Achieve 3000 website. Each day one high interest topic created from current AP news articles is sent from Achieve 3000 to each member of the class via email. Each article is scientifically matched to the student's individual Lexile reading level, thus providing differentiation for every student. The differentiated lessons are scientifically proven to accelerate results in language arts in the form of lexile gains and dramatically increased scores on end-of-the-year standardized reading tests, including the Scholastic Reading Inventory (SRI), TerraNova and the Iowa Test of Basic Skills.

Daily articles can also be selected by topic from the Achieve 3000 archives. Each lesson follows best practices known to support growth in reading. Each section includes a link to research to help set a schema, a lesson on reading for information, questions to demonstrate mastery of the text, graphic organizers to help the student create meaning, and opportunities to form an opinion based on the expository text and the student's life experiences.

Achieve 3000 has a built-in motivational tool that allows students to play games, earn stickers, and participate in world-wide polls with other students. The topics are designed to develop an intrinsic interest in literacy and a true love of learning.

Teachers are able to access reports for each student, send specific assignments to each student via Achieve 3000's email, and print articles for whole group instruction. Parent reports are also available to families. Students are able to track their progress, select their own articles and email other students when using the program. It is also accessible at home.

The Science class was designed to give students an opportunity to learn to create a science project. The objectives of the class were to understand the rules and guidelines of the International Science and Engineering Fair that they need to know in order to participate in the Middle and High School Science Fair; conduct one large group science experiment; and to participate in discussions with former science fair winners and learn at least one tip for their science fair project. Activities included experimentation, note taking, internet research, and activities to help build organizational skills.

The enrichment classes were student interest based. Two physical fitness classes were offered: one for students wanting to have fun with sports and the other for students who wanted to learn more about personal health-related fitness. Physical Fitness objectives were to learn to monitor heart rate as it related to fitness; improve personal fitness as determined by pre- and post- tests; set goals for improving the component of personal health related physical fitness. Activities included strenuous exercise routines, jogging, and swimming. A field trip to the community pool helped the students understand how swimming can be used to increase physical health. The Fun and Fitness class was team-

sports oriented. The objectives were to practice good sportsmanship; show self leadership; and follow directions. Outdoor games and team sports were used to give the students the experiences they needed to meet the objectives.

Sewing classes gave both beginning and advanced students the opportunity to learn the basics of following a pattern to creating their own designs. The objectives were to learn the basics of how to use the sewing machine safely; use a pattern to create a product; and reach task completion on at least one product. Activities included making patchwork pillowcases, choosing a pattern of choice and making the garment, and creating a binder of sample stitches, helpful hints, and patterns for future sewing projects.

Drama class was offered so that the students would have an opportunity to learn to express themselves through the performing arts in constructive ways. Theatre specifically employs the use of all dimensions of learning. In this class students engaged in basic theatre techniques for creating a character through movement and voice. They were introduced to guidelines for being both an audience and a performer and were given opportunities to become familiar with terminology and conventions used in the art of acting. The objectives were to learn to express themselves by applying personal experience to acting; participate in basic theater techniques; and to become familiar with the terminology and conventions used in the art of acting. Short scripts were practiced within the class.

Art objectives were for students to explore materials and techniques used in art; and to discuss and share their work with others. The art activities were provided by a set up of various art stations where students explored and utilized the materials provided. An area for students to display their work allowed other students and the community to view them. Computers were available to display digital art works. Students were encouraged to share both written and verbal reflections of the art work. Although two students came to art regularly, the stations were available to all students as a one-time activity.

The Hawaiian Values class helped link Hawaiian values to today's life style. Students were taught how these values help to build a sense of community. The values of Aloha (love, affection), Laulima (work together), Malama (to care for), Kuleana (responsibility), Ha`aha`a (humility), Ho`omau (to persevere), and `Ike pono (to comprehend) were the focus. Students practiced the Hawaiian values they learned by working together to better the land and community. Together they made chili powder and poi. The class culminated with a field trip to clean up a beach at the Kahina Pohaku Fish Pond and to the Honouliwai Taro Patch.

Evaluation

Student forms were returned by 137 or 75.7% of the 181 students. The results were generally positive for all classes with students responding Always or Usually to meeting the GLOs and Usually and Sometimes for project activities. Student comments were very positive - they liked/loved the program content and teachers.

Parent forms were returned by 32 parents for a return rate of 17.7% of student attendance. The results were generally positive for the GLOs with the majority of the parents Agreeing or Strongly Agreeing with the GLOs. For class activities, the majority of the parents responded "Yes" to whether the class helped in math, reading, science, personal development and importance of education. On a 5-point scale from poor to excellent, the majority of the parents responded 4 or 5 (excellent) when rating content, teaching, pacing, environment and interaction. Comments shared were all positive and appreciative.

Nine (9) teachers evaluated 164 students or 90.6% of their students on behaviors, GLOs and class objectives. The teachers generally rated the students as making Significant, Moderate or Slight Improvement in all areas, except for grade 4 where ratings for behaviors and GLOs had more No Change than Slight Improvement with no Significant or Moderate Improvement ratings. The number of students rated for each course is shown in parentheses below. The three objectives for each class were:

Math (40)

1. use team building skills, critical thinking and problem-solving strategies
2. build basic math skills: use of math programs/manipulatives
3. build confidence in math, individual goal setting

Reading (24)

1. learn and practice various strategies to increase reading comprehension and retention
2. use reading comprehension skills in discussion of literature
3. utilize the Achieve 3000 program for literary proficiency

Science (35)

1. understand the ISEF rules and guidelines
2. conduct one large group science experiment
3. participate in discussions with former science fair winners and learn at least one tip for their project

Art (2)

1. learn various art materials and techniques
2. express their creativity
3. discuss and share their work

Drama (7)

1. learn to express themselves through performing arts
2. engage in basic theatre techniques
3. become familiar with terminology and conventions used in the art of acting

Fun and Fitness (18)

1. practice good sportsmanship
2. show self leadership
3. follow directions

Sewing (9)

1. learn the basics of using a sewing machine
2. learn to use a pattern to create a product
3. complete one product

Physical Fitness (13)

1. monitor fitness as determined by heart rate
2. improve fitness as determined by pre- and post-tests
3. set goals for improving the component of personal health-related physical fitness

Hawaiian Values (16)

1. gain knowledge of the 7 identified values for healthy life and community
2. practice the 7 values
3. set individual goals in the continued application of the values to enrich lives and community

ACADEMIC YEAR PROJECT EVALUATION

The academic year program began in Semester 2 of Year 1 since initial funding did not become available until Semester 1. The implementation of the program at each of the four elementary schools, Kaunakakai (KAU), Kilohana (KIL), Kualapuu (KUA), Maunaloa (MAU); Molokai Middle School (MMS) and Molokai High School (MHS) is displayed in the chart below. Kaunakakai and Kilohana had programs throughout the 5 years, Maunaloa started in Year 2 and Molokai Middle and Molokai High Schools started in Year 3. Kualapuu, a charter school, had programs in Year 2 and 3, but chose not to continue due to extended day programs offered at their school.

| YEAR | KAU | KIL | KUA | MAU | MMS | MHS |
|------|-------|-------|-----|-----|-----|-----|
| 1 | Sem 2 | Sem 2 | | | | |
| 2 | X | X | | X | | |
| 3 | X | X | X | X | X | X |
| 4 | X | X | X | X | X | X |
| 5 | X | X | | X | X | X |

The number of courses and enrollment by components, year and total is shown below. The number of adults in the courses are noted in the footnotes.

| YEAR | Selfhood and Learning | | Skills Maintenance | | STEM Mind-Building | | Strength-Based Community Building | | TOTAL | |
|------|-----------------------|------------------|--------------------|--------|--------------------|--------|-----------------------------------|------------------|---------|--------|
| | Courses | Enroll | Courses | Enroll | Courses | Enroll | Courses | Enroll | Courses | Enroll |
| 1 | 2 | 49 | 4 | 177 | 2 | 25 | 7 | 208 | 15 | 459 |
| 2 | 7 | 228 ^a | 6 | 224 | 1 | 146 | 16 | 775 ^b | 30 | 1373 |
| 3 | 3 | 970 | 15 | 632 | 6 | 143 | 12 | 682 | 36 | 2427 |
| 4 | 6 | 87 | 20 | 1315 | 7 | 229 | 17 | 887 | 50 | 2518 |
| 5 | 2 | | 14 | | 6 | | | | 20 | 540 |

a includes 52 adults

b includes 162 adults

The drastic reduction in project scope for Year 5 was due to insufficient funding for personnel, no available teachers and lack of interest for some components.

The number of partners increased dramatically from 3 in Year 1 to 16 in Year 2, 13 in Year 3, 20 in Year 4 and 26 in Year 5.

Sustainability of the project was seriously addressed by the project schools. Successful activities are being incorporated in the regular school program and schools are looking at things differently. Examples by schools are:

Kaunakakai

- Music program will be incorporated into the regular school day with volunteers
- Math Whizz and Achieve 3000 will be funded with school funds
- Robotics will be funded by the Maui Economic Development Board and volunteer instructors
- Targeted tutoring will be funded with Title 1 monies

Kilohana

- Horticulture will be continued with school funding, Strive High award monies and plant sales
- Targeted tutoring will continue and will be funded by school funds, Strive High award monies and Edison award monies (for making more than 10% gains)

Maunaloa

- After school tutoring will be instructed by volunteer teachers

Molokai Middle School

- Robotics will be funded by the Maui Economic Development Board, school funds and United Fund
- Bridges will be funded by school funds
- Summer Program (extended to include outgoing 8th graders) will be funded by school funds, Uplinks, Monsato grant, and "Friends of MHS and MMS," a community-based group

Molokai High School

- Vex robotics will continue with Maui Economic Development grants
- Hana Hou Tuesday will continue with volunteer teachers

SUMMER PROJECT EVALUATION

The summer program was initiated in Year 2 since initial funding became available during Semester 1 of Year 1 and project implementation began in Semester 2. Furthermore the project year included the summer session prior to the academic year.

The summer program during the project at each of the three elementary schools, Kaunakakai (KAU), Kilohana (KIL), Maunaloa (MAU) and the Molokai Middle School (MMS) are displayed in the chart below. Enrollment is for the enrichment classes.

| YEAR | KAU | KIL | MAU | MMS |
|------|---|--|--|--|
| 2 | (Facility Renovations) | | Authentic Reading, Remedial Reading, Robotics, Ukulele, Cooking, Friday Cultural Games N=147 | |
| 3 | Language Arts, Math, Creative Dance, Library Studies, Music, Nutrition/Fitness, Robotics N=106 | | Reading, Math, Computer Science, Music, Visual Arts/Physical Education, Hula, Cooking, Gardening N=48 | |
| 4 | Language Arts, Math, Wellness/Leadership, Space Camp, Visual Arts, Drama, Kamali'i Korner, STEM Moonbots N=116 | Keiki Steps to Kindergarten, Horticulture, Arts & Crafts, Drawing & Painting, Kempo, Violin N=65 | Reading, Math, Cooking, Hula N=48 | |
| 5 | Language Arts, Math, Wellness/ Leadership, Violin, Nutrition/ Fitness, Art, Technology N=106 | Keiki Steps to Kindergarten, Horticulture, Arts & Crafts,, Storytelling,/ Theater, Ukulele, Physically Fit N=77 | Reading & Math Skills Maintenance, Horticulture, Math/ Science, Arts & Crafts/Physical Fitness N=62 | Academic Support, Foundational Math. Science, Reading Skill Building, Art, Sewing, Drama, Physical Fitness/Fun and Fitness, Hawaiian Values N=181 |

Teacher training was conducted in Year 2 for 10 teachers in Bridges and in Year 3 for 6 teachers in Computer-Aided Design and 35 teachers in Discovery Education.

Sites conducting summer programs increased from 1 in Year 2 to 4 in Year 5. Enrollment increased from 147 in Year 2 to 426 in Year 5.

Student, parent and teacher evaluations were generally very positive.

CONCLUSIONS

1. The participation objective was met for the Skills Maintenance component which was the focus for Year 5. The completion objective was met by the Skills Maintenance and STEM components. No data was collected for Strength-Based Community Building.

2. Five (5) of 6 sites implemented the program which was reduced in scope due to inability to carry over funds from Year 4. Project focus was on Skills Maintenance implemented at the 3 elementary schools and Molokai Middle School (MMS). Kaunakakai had 9 courses (7 Homework Help, ACE Reading and Math Whizz), Kilohana had 3 courses (Reading Tutoring, Computer-Assisted Math and Reading, and Horticulture), Maunaloa had Tutor Support and MMS had Academic Support. For Stem Mind-Building 3 sites had robotics (Kaunakakai, MMS and MHS) and MMS also had CAD. MHS was the only school with Selfhood and Learning courses - ePrep and Hana Hou Tuesday. Kaunakakai was the only school with Strength-Based Community Building with instrumental music and Tahitian exercise taught by volunteers.
3. Evaluation forms returned by students, parents, and teachers were generally positive, some very positive. Some courses had low enrollment and low or no returns of evaluation forms.
4. The number of classroom teachers rating the effect of the project on regular project attendees (attended 30 days or more) was 23 teachers for 185 students: 12 teachers at Kaunakakai School for 79 students, 3 teachers at Kilohana School for 12 students, 5 teachers at Maunaloa School for 41 students and 3 teachers at Molokai Middle for 53 students. At all schools students who needed to improve generally made Slight to Significant Improvements followed by No Change.
5. The math and reading/language proficiency objectives were met by all schools except Molokai High School.
6. The science proficiency objective was met by 3 schools and unmet by 2 schools.
7. The GLO student self-assessment was unmet for Homework Help and met for Math Whizz at Kaunakakai School.
8. The homework completion objective was met by all schools.
9. The attendance objective was met by all schools except Maunaloa School.
10. Four (4) sites had summer programs. Kaunakakai School had language arts, math, wellness and leadership, violin, nutrition and fitness, art and drama. Kilohana School had Keiki Steps to Kindergarten, horticulture, arts and crafts, theater, storytelling, physically fit, and ukulele. Maunaloa School had math, reading, science, horticulture, arts and crafts and physically fit. MMS had art, sewing, drama and physical fitness, fun and fitness and Hawaiian values. All students, parents and teachers generally rated the program positively.

RECOMMENDATION

Incorporate successful activities into the regular school program or through other funding sources.

GENERAL LEARNER OUTCOMES

(GLOs)

Hawaii Department of Education

General Learner Outcomes (GLOs) are the over-arching goals of standards-based learning for all students in all grade levels. Observable behaviors, which are demonstrated in daily classroom activities, are evidence of GLOs. Student effort, work habits, and behavior are important and they must be evaluated separately from academic performance in the content areas (in accordance with Board of Education Policy 4501: Assessing/Grading Student Performance).

The GLOs should be an integral part of the school culture as the GLOs do not exist in isolation. The six GLOs are:

- **Self-directed Learner** (The ability to be responsible for one's own learning)
- **Community Contributor** (The understanding that it is essential for human beings to work together)
- **Complex Thinker** (The ability to demonstrate critical thinking and problem solving)
- **Quality Producer** (The ability to recognize and produce quality performance and quality products)
- **Effective Communicator** (The ability to communicate effectively)
- **Effective and Ethical User of Technology** (The ability to use a variety of technologies effectively and ethically)

OBJECTIVES BY COMPONENTS

Selfhood and Learning

1. Activities will accommodate 160 participants each year. (duplicated count)
2. 80% of the participants will complete one or more of the activities.

Skills Maintenance

1. Activities will accommodate 360 participants each year. (duplicated count)
2. 50% of the participants will complete one or more of the activities.
3. Proficiency levels in reading and mathematics will reach or exceed the adequate yearly progress expectations.
4. Grades in math and reading/language arts will improve by half a grade or more between Fall 2012 and Spring 2013.
5. Proficiency levels in science will reach or exceed the prescribed DOE/NCLB expectations.

STEM Mind-Building

1. Activities will accommodate 165 students and 24 teachers per year. (duplicated count)
2. 80% of the participants will complete one or more of the activities.

Strength-Based Community Building

1. Activities will accommodate 250 participants each year. (duplicated count).
2. 90% of the participants will complete one or more of the activities.

Additional Objectives

1. 80% of the participants will have increased self-assessment ratings in four of the six General Learner Objectives (GLOs) of the Department of Education.
2. Homework completion rates will increase as indicated by teachers.
3. School attendance rates (average daily attendance) will increase and average number of days absent will decrease.

APPENDIX C
EVALUATION FORMS

STUDENT EVALUATION

PARENT EVALUATION

CMM TEACHER SURVEY

TEACHER SURVEY

ACRONYMS

| | |
|------|--|
| AP | Associated Press |
| CAD | Computer-Aided Design |
| ELL | English Language Learners |
| FLL | First Lego League |
| HSA | Hawaii State Assessment |
| ISEF | International Science and Engineering Fair |
| MCC | Maui Community College |
| NXT | NeXT |
| PLAN | ACT's College Readiness Test |
| PSAT | Preliminary Stanford Achievement Test |
| SAT | Stanford Achievement Test |
| SPED | Special Education |
| STEM | Science, Technology, Engineering, Math |
| UH | University of Hawaii |