Frameworks for Success in Science

Hilo Complex Area - Hilo, Hawaii

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Pascale Creek Pinner
N.B.C.T. Hilo Intermediate School & MSP Curriculum Coordinator
Dr. Denise Uehara
MSP External Evaluator
Ray Mizuba
MSP Principal Ka‘ūmana Elementary School
Cathy Iwaoka
MSP Schoolwide Coordinator, Ka‘ūmana Elementary School
Rose Ann Michaud
MSP Teacher, Ka‘ūmana Elementary School
Lee Ann Ragasa
MSP Teacher, Hilo Union Elementary School

OUR KEIKI LOVE SCIENCE IN HILO

The instructional practices and assessments discussed or shown are not an endorsement by the U.S. Department of Education

Frameworks for Success in Science

Goals

- Develop vertically and horizontally aligned elementary science curriculum for grades K-6 in the Hilo Complex elementary schools
- Utilize grade-level PLC's to develop, implement and evaluate common curriculum across elementary schools
- Deepen understanding of science content and pedagogy to strengthen student achievement and teacher efficacy

A SCHOOLWIDE COORDINATOR'S PERSPECTIVE

THIS IS WHERE MSP ALL BEGAN: WE HAD A DREAM…

CATHY IWAOKA

Ka‘ūmana Elementary School

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Participating teachers & Schools

Cohort I
Started Spring 2009
96 pd hours

Ka‘ūmana Elementary
All grades (K-6) = 13 teachers

Ha‘aheo Elementary
All grades (K-6) = 7 teachers

Hilo Union School
Grade 2, 3 & 5 (3 teachers)

Almost 600 students were impacted in year one

Cohort II
Added in Summer 2010
96 pd hours

Chiefess Kapiolani Elementary
Grades 1,3,4,5 & 6 = 6 teachers

Prince Jonah Kalaniana‘ole
Grades K-6 = 8 teachers

Ernest B DeSilva Elementary
Grades 4, 5 & 6 = 4 teachers

Over 1200 students now being impacted in year two

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MSP TEACHERS "TALK STORY"

USING PLCS TO DEEPEN SCIENCE CONTENT AND EFFICACY

Rose Ann Michaud

Grade K **Ka'ūmana Elementary School**

Lee Ann Ragasa

Grade 4 **Hilo Union Elementary School**

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Frameworks For Success in Science 2009-2010
Ninety six (96) professional development hours completed

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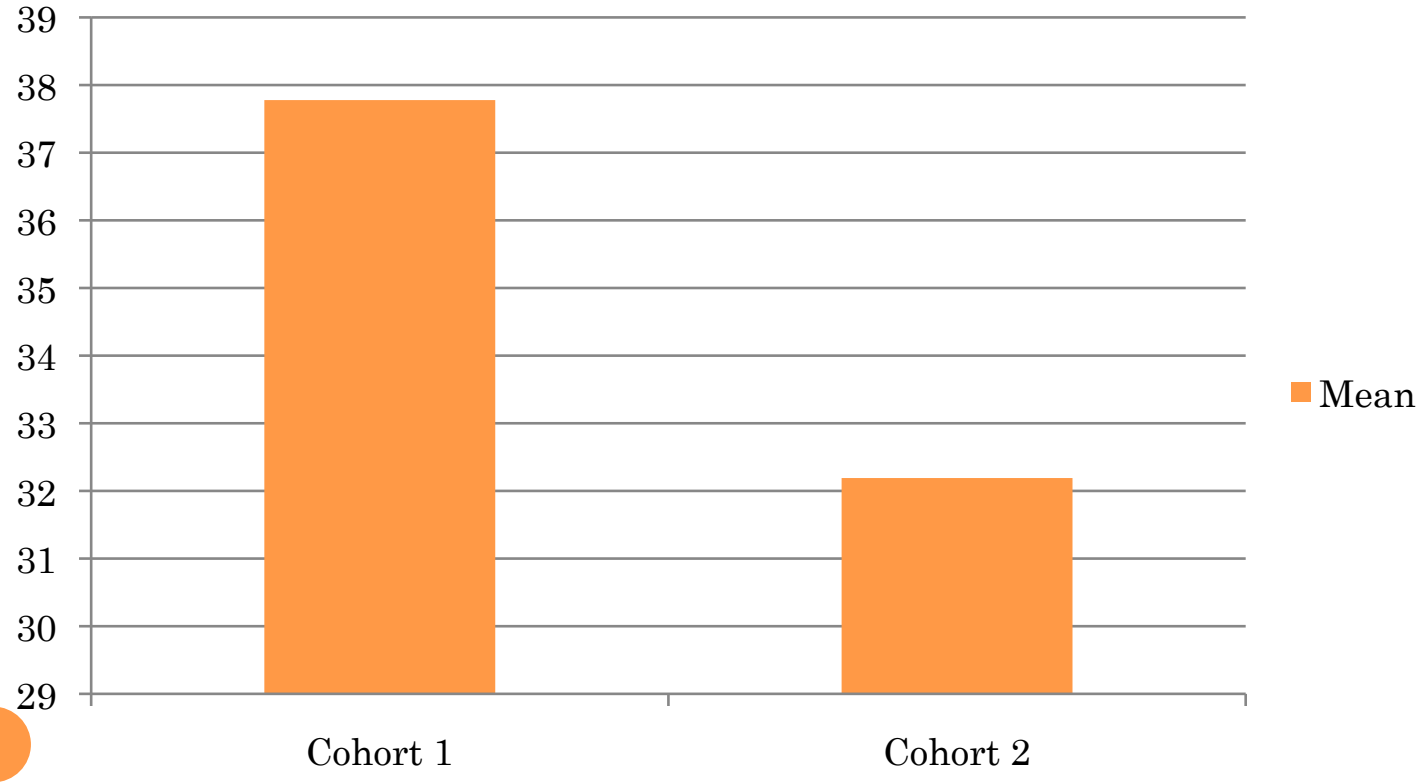
FRAMEWORKS FOR SUCCESS IN SCIENCE
MSP ASSESSMENT INSTRUMENTS

Description of Data Collected	Tool or Assessment Used
Teacher pre/post science content assessment	Project MOSART (included select HSA Life Science Items)
Teacher pre-collaborative practices survey	HLW Collaborative Practices Survey
Classroom pre/post-observations annually	HLW Classroom Observation Checklist
Teacher pre/post self efficacy measure	HLW MSP Teacher Self-Efficacy Questionnaire
Teacher on-going perceptions of PD and student impact	Group Interviews; Questionnaires
Teacher post-treatment survey	HLW MSP Post-treatment Survey-Pedagogical Preparedness
Student achievement data	Hawaii Statewide Assessment - Science
Student assessment data	Harcourt Science Text pre/post

Preliminary Findings

Mean Difference Cohort 1 and Cohort 2
Science Content Self Efficacy Survey



Cronbach's alpha = .82 (N=39)

F=1.7, p=.14

Cohort I: M = 37.80, SD = 4.5

Cohort II: M = 32.2, SD = 3.5, t(37) = 34.2, p = .000, two-tailed.

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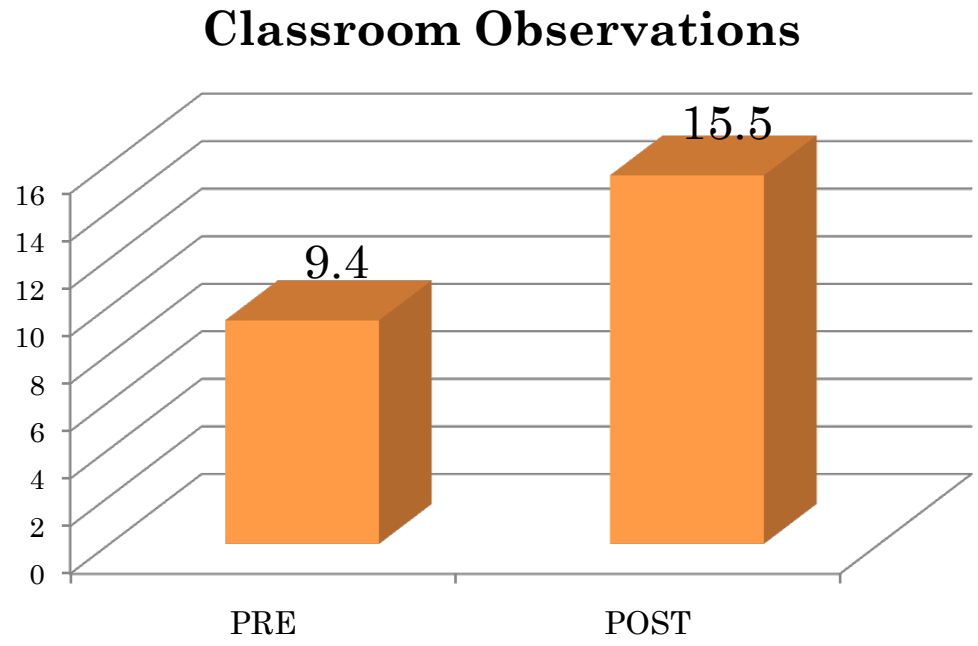
Preliminary Findings
Teaching Science Observations

Instructional Practices (Cohort 1 – Year One)

Teachers were observed implementing more science instructional practices after about five months of targeted, sustained and individualized science professional development activities.



There was a significant difference in the scores for the pre-treatment observation (M=9.4, SD=3.3) and post-treatment observation (M=15.5, SD=2.4) conditions; t=9.2, p < .01.

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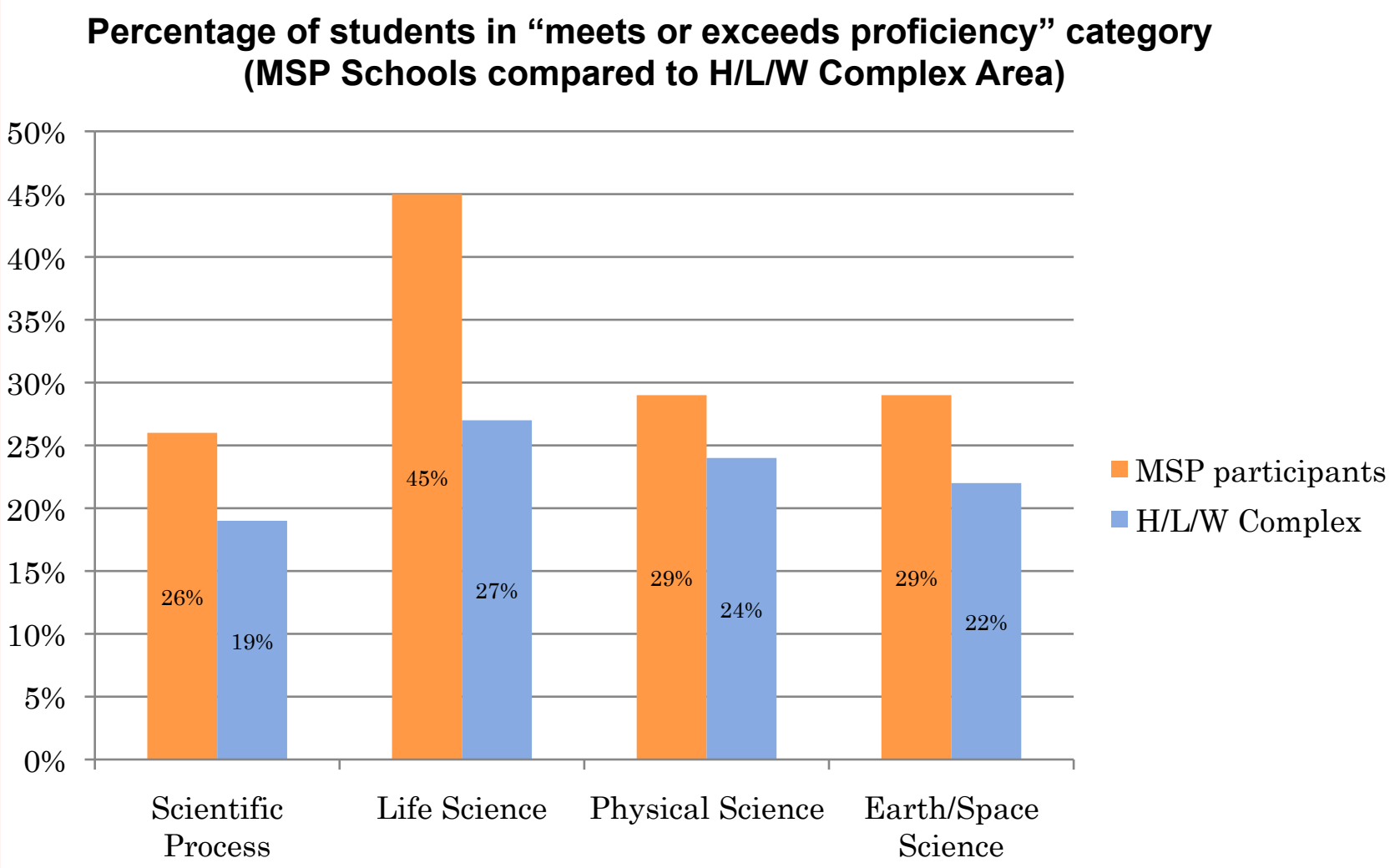
Preliminary Findings
Hawaii Statewide Assessment (HSA)
Grade 4 - Science



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Professional Learning Communities
Frameworks Impact on Personnel

- PLCs grow over time and are unique in their development (strengths, needs)
- New PLCs are being developed; Principals, Schoolwide Coordinators, UHH partners, school Technology Coordinators
- Supplies & equipment have been purchased & distributed to practice lessons at PD sessions and to use in the classroom
- TKC website has grown into a powerful sharing tool between teachers, grade levels and schools
  http://www.kohalacenter.org/frameworks/10webcastsgrade6.html

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IMPACTS ON TEACHING SCIENCE IN THE HILO COMPLEX

- Benchmark maps continue to be revised by all participating teachers during every PLC meeting
- Quarterly thematic units/lessons with identified vocabulary and common assessments continue to be revised and published after every PLC meeting
- Benchmark and Unit maps provide the framework for professional development meeting days that occur twice per academic quarter, during intercessions and the summer
- Vertical science content alignment from grades K-10 for Hilo Complex Schools continues through the MSP Curriculum Coordinator

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