

SHARING ISLAND KNOWLEDGE

Pacific Educators Present at International Mathematics Conference

By Sandy Dawson

A group of 26 Pacific island educators shared their approaches to the teaching and learning of mathematics at the Psychology of Mathematics Education (PME) Conference July 15-20 in Honolulu. The Islanders' participation was made possible through a grant from the National Science Foundation (NSF), which provided an opportunity for them to network with colleagues from 30 nations across the globe.

Educators from Palau, the Republic of the Marshall Islands, Guam, the Commonwealth of the Northern Mariana Islands, American Samoa, and the Federated States of Micronesia (Chuuk, Kosrae, Pohnpei, and Yap) were selected on the basis of their involvement in the DELTA or MENTOR projects. Their presentations included poster displays on mathematics and culture in their region (see sidebar). Besides giving to the conference, the Pacific island educators took away new perspectives and fresh research on the teaching of mathematics.

Approaches used by small communities in rural South Africa were often more relevant to Pacific island mathematics educators than approaches from the continental U.S. Similarly, Pacific Islanders found that colleagues from more remote and less developed regions of the world were eager to explore the knowledge and experience they had acquired during the past four years through NSF-funded projects facilitated through PREL.

The PME conference afforded a first opportunity for mathematics educators from small Pacific islands to interact with and come to know their colleagues from across the globe. Let us hope that there will be many more such opportunities in the years to come.

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PME Ethnomathematics Highlights

Because of a growing interest in ethnomathematics, the Pacific island educators at the PME conference shared mathematical ideas and ways of working typical of their home communities. The excerpts below are taken from some of their poster presentations.

Pohnpeian Fractions

The concept of fraction is present in the Pohnpeian culture. The word for fraction is *kis*, which means "little bit of." *Kis* is used when dividing food. Food is divided according to rank or status and then by village clans. The clan divides the food among families according to size and need. The fraction " $\frac{1}{2}$ " is expressed using two different terms, depending on how it is halved. *Apali* is used for objects divided vertically or by length, and *elep* is used for objects divided horizontally or by width.

Pernis Diopulos

Chamorro Measurements

- dedo*: the length of the second joint of the index finger
- hemi*: the length from the tip of the index finger to the spread thumb
- kodu*: the length from the elbow to the end of a clenched fist
- kuatta*: the length from the end of the thumb to the end of the little finger when the hand is spread
- bara*: arm length from the shoulder to the end of the fingers
- brasa*: length from finger tip to finger tip, with both arms outstretched

Peter E. Patacsil

Telliakl (Palauan Appointment Calendar Days)

Weaving *telliakl* was a system Palauans used before the Westernized calendar was introduced. Today, it is still used to count days after the death of a person who holds a title. If the deceased comes from the high clan, the person closest to the deceased must weave *telliakl* in the form of a string for a certain number of days. After that period has passed, the children or the immediate family of the deceased bury the deceased's personal betelnut basket bag and other favorite belongings at the taro patch.

Hadleen Medalarak



Photo: Nancy Lane

▷ A lesson plan on Discovering Patterns and Symmetry in Weaving is available on the Ethnomathematics Digital Library site at www.ethnomath.org/resources/lessons/weaving.pdf. The plan was prepared by Ms. Magdalene Augafa, a PREL Pacific Educator in Residence, who presented it at the Pacific Educational Conference in Pohnpei.