

POLYNESIAN



VOYAGING

VOLUME I NUMBER 4

SEPTEMBER 1974

SOCIETY NEWS

Edited by Sharon Serene

3 DAY CAMPOUT AND POLYNESIAN SAILING WORKSHOP AT KUALOA PARK

Learn how Polynesian Canoes were paddled, sailed and navigated by signing up for our workshop which will feature guest speakers, demonstrations, and plenty of practice on Hawaiian outrigger canoes and the Society's 40-foot double-canoe. Sponsored by the City and County of Honolulu Department of Recreation and the Polynesian Voyaging Society. Organized by Chuck Shipman, Ocean Recreation Specialist with the Department of Recreation.

WHEN: Oct. 11, 12, 13, 14th

WHERE: Kualoa Regional Park (see map below)

FEE: \$30.00 **NOTE:** Participants **MUST** provide their own camp style food and all camping gear.

PROGRAM:

Friday, October 11, 1974 3 PM-9 PM

Check in and set up camp. After dinner speaker will be Herb Kane with slide presentation "Polynesian Voyaging Society"; films on canoe voyaging.

9 AM-12 NOON (Beginners)

Saturday, October 12, 1974 9 AM-12 NOON 7 PM-9 PM
Introduction to course; rigging and lashing of the Hawaiian outrigger canoe; Hawaiian terms and functions of the various parts of the Hawaiian canoe; proper paddling techniques; steering and piloting the canoe.

9 AM-12 NOON (Advanced)

Sailing the Hawaiian outrigger canoe under the ancient Polynesian spritsail.

10 AM

Bobbi Meheula of the Hawaii Foundation for Humanities and Art will give a ti leaf craft demonstration.

Continuous:

Max Stanton of Church College will be demonstrating and skill training in canoe carving, rope making, adze making, lauhala weaving, knots and lashing, land finding techniques, and basic seamanship. Instruction will be held on the beach continuously thru Monday.

LUNCH

Tommy Holmes will be speaking on "Hawaiian Canoe Handling and Heavy Seas".

1 PM-4 PM

Surfing the Hawaiian outrigger canoe.

7 PM-9 PM

A lesson in "Astronomy and Navigation in Polynesia and Micronesia."

9 PM-12 MID. (Advanced)

Night sailing experience for star path steering and zenith star observation.

9 AM-5 PM

Sunday, October 13, 1974
Sailing the Hawaiian double-canoe (wa'a kaulua); Polynesian fishing techniques employing outriggers and double canoes.

Continuous:

George Bennett, a Specialist for the Department of Parks and Recreation, who just returned from Satawal Island, and Namalik, an island student navigator from Satawal Island, will be making and lashing adzes and will be available for questions on canoes and navigation.

DINNER

Dr. Ben Finney will be speaking on "Research on Pacific Voyaging"

(Beginners)

A discussion on "Canoe Lore of Kualoa"

(Advanced)

Open sea voyage from Kualoa to Kahana Bay (optional camp at Kahana Bay).

5 AM-7AM

Monday, October 14, 1974 "Discovers' Day"

Dawn voyage...Kahana Bay to Kualoa.

Advanced

9 AM-3 PM

Discovers' Day Sailing Canoe Races...Kualoa to Kaneohe Bay and return, hosted by the University of Hawaii Sailing Team.

3 PM

Clean up and break camp.

Please Note:

Please bring bathing suits, a warm pullover, towels, and sun screen or hat as this is a practical course taught on the beach and in the water.

Enrollment is limited so sign up early to assure yourself a place. To reserve a place in the course, please fill out the form below and mail it, along with your check, to the Polynesian Voyaging Society, 821 A Cedar Street, Honolulu, Hawaii 96814 or call the office at 524-2662. Deadline for check and application is October 4th!!!

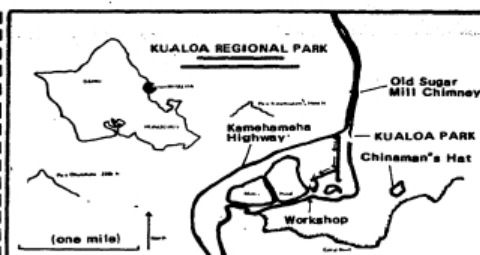
Polynesian Workshop Reservation

NAME _____

ADDRESS _____

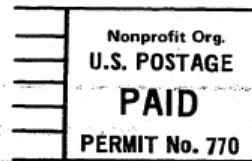
PHONE _____ ☐ Adult ☐ Teen ☐ Child

Mail to: Polynesian Voyaging Society, 821 A Cedar St., Honolulu, HI, 96814



$$g^{\alpha\beta}(\partial_\alpha \psi)(\partial_\beta \psi) = 0 \quad \text{on } \mathcal{H}^1 \quad \text{and} \quad \partial_\alpha \psi \partial_\beta \psi = 0 \quad \text{on } \mathcal{H}^1 \quad \text{for } \alpha \neq \beta.$$

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MINUTES OF THE EDUCATION COMMITTEE MEETING (PVS)

PRESENT:

Fred Cachola
 Cecilia Lindo
 Nani Lyman
 Nancy Mower
 Lynn Peters
 Gordon Pi'ianaia
 Sigfried Rambler
 Maka'ala Yates

Rowena K.
Daryl J. P.
Marlynn K.
Keli's Lauer.

The meeting was called to order by Fred Cachola, Education Chairman, at 4:00 p. m. at the Kamehameha School's Conference Room, on November, 4, 1976.

OUTLINE OF EDUCATION COMMITTEE

Fred Cachola outlined the Education Committee and its subcommittees.

- ✓ 1. Books--Nancy Mower
- ✓ 2. Curriculum Development--Sigfried Rambler
 - a. Elementary--Cecilia Lindo and Carolyn Togerson
 - b. Secondary--Nani Lyman, Keli'i Tau'a, Lynn Peters(?)
- 3. Curriculum Testing/DOE liason--Gordon Pi'ianaia
- 4. Material Products--
- ✓ 5. Research and Development--Gordon Pi'ianaia and Maka'ala Yates

OBJECTIVES OF EDUCATION COMMITTEEIMMEDIATE

- ✓ 1. Book sales and use--Nancy Mower and Cecilia Lindo
- ✓ 2. Feedback from teachers on the guide and books--Nancy Mower and Cecilia Lindo
- 3. Field trips to canoe--Gordon Pi'ianaia
- ✓ 4. Speakers (Schools and Community)--Nani Lyman
- ✓ 5. Creation and Duplication of slides and tapes to be used in schools--Fred Cachola
- 6. Duplication and dissemination of voyage documents and logs--

INTERMEDIATE AND FUTURE

1. Creation and duplication of instructional materials related to segments of Polynesian voyaging (Food, sails, astronomy, charts, etc.)

Nani Lyman and Fred Cachola

2. Workshops--2

1. Oahu-Kualoa--Nani Lyman
2. Outer islands

3. Research and Development--Maka'ala Yates and Gordon Pi'ianaia

1. Test the Ke ala i ka hiki route
2. Determine the most efficient angle to sail into the wind

4. More books to be published

5. Catalog and inventory

Fred Cachola suggested that perhaps we can finish some of the educational objectives for Kamehameha Schools by June, 1977, instead of February, 1977. He will find out.

OTHER NAMES SUGGESTED TO WORK ON THE EDUCATION COMMITTEE

Barbara Clem

Rowena Keaka

Milton Kanehe

Daryl Jean Pescaia

The meeting ended at 5:00 p. m.

Respectfully submitted,

Cecilia Lindo

POLYNESIAN VOYAGING SOCIETY

BOX 6037 / HONOLULU / HAWAII 96818

MINUTES

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BEN R. FINNEY, PH.D.

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AUGUST YEE

BENJAMIN B.C.
YOUNG, M.D.

Education Committee meeting
December 2, 1976
4:20 p.m.
Kamehameha Schools Conference Room

ATTENDANCE

CACHOLA, Fred
KEAKA, Rowena
LINDO, Cecilia
LYMAN, Nani
MOWER, Nancy

PESCALA, Daryl Jean
RAMLER, Siegfried
TOGERSON, Carolyn
YATES, Maka'ala

I. APPROVAL OF MINUTES

Moved and seconded that the minutes for the meeting of 11-18-76 be accepted.

Approved by consensus.

II. PROPOSAL FOR D. O. E. ARTMOBILE EXHIBIT

A. Design, install dismantle an exhibit on Polynesian Voyaging. March - June - 4 months on Oahu.

1. models ~~of~~ canoes
2. Enlarged 24 X 36 paintings and pictures
3. Articles taken on the journey, objects etc.
4. Actual hale on pola in artmobile
5. Plants

B. Develop a brochure for classroom use - done primarily by Rowena Keaka, use her funds.

1. Contains information and suggested activities for use in the classroom
2. Ask National Geographic Society for reprints of Polynesia map showing different kinds of canoes and Polynesia,
3. Human aspects involved on the trip.

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BICENTENNIAL VOYAGE OF REDISCOVERY
HOE AKU I KA WA'A

C. Slide - tape presentation

This would be approximately 3 - 4 minutes in length. Slides would be taken from the P. V. S. slides. The presentation would be used for motivation, enrichment, follow-up or orientation. Rowena Keaka will do this.

Mikilani Ching, interior designer, has offered to design the exhibit for the nominal fee of \$120.00. (This is to satisfy her employer, J. Richards Interiors.) Committee approved this for Board action.

Manpower for project: Gordon Piianaia to edit
Rowena Keaka, write the script

Target group: Grades 4 - 6th, rural areas on Oahu

Cost: \$2500.00

Contract: P .V. S., Pres. Ben Young, official signer.

III. Slide-Tape Presentation - Nani Bowman Lyman

Doug Char of MEPS will help \$400.00 cost for his assistance. Siegfried Ramler suggested an itemized cost list. Committee and Nani Lyman to work out more details. The finished product will be presented to Encyclopaedia Britannica for national production. Workbook containing activities, puzzles etc. to go along with the slide tape. Teacher's Guide might accompany the slide-tape with samples of suggested activities.

IV. TAPE GLOSSARY TO ACCOMPANY BOOKS

1. Include the songs
2. Announce the availability
3. Fred Cahola to follow up.

V. BOOK COMMITTEE

Liberty House has purchased 250 sets of the Children's books at \$6.00 plus tax to retail at \$9.95. They will be holding an autograph party Saturday December 4th from 12:00 - 2:00 for the illustrators and authors. On Sunday, December 12th, KCCN radio will interview authors and illustrators from 7:30 - 9:00 p.m. December 9th, Willis Moore of the Hawaii Geographic Society will host an autograph party at Mid-Pac from 7:30 9:30.

VI. COMMUNICATION - Siegfried Ramler

1. With D. O. E. teachers and others about our activities
 - a. schedule of Hokule'a
 - b. up-coming artmobile
 - c. program and status of committee's work
2. Cahola and Piianaia working on a field trip format with information about:
 - a. when

VI. COMMUNICATION (continued)

2. Cachola and Piianaia working on field trip format with information about:

- a. when
- b. who
- c. how many
- d. what can be seen

A draft will be prepared for the next meeting

VII. SPECIFIC TIME FRAME FOR P. V. S.

1. Artmobile ready by March
2. Come up with specific time and due dates of each activity.

Meeting was adjourned at 5:35 p.m. Next meeting to be at 4:00 p.m. on Thursday, December 16, 1976, at the Kamehameha Schools Conference Room.

POLYNESIAN VOYAGING SOCIETY

BOX 6037 / HONOLULU / HAWAII 96818

MINUTES

December 16, 1976

4:00 p.m.

Kamehameha Schools Conference Room

PRESIDENT

BEN R. FINNEY, PH.D.

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FRANK WANDELL

R. LES WARREN, C.P.A.

AUGUST YEE

BENJAMIN B.C.
YOUNG, M.D.

ATTENDANCE

CACHOLA, Fred
KEAKA, Rowena
LINDO, Cecilia

MOWER, Nancy
TORGERSON, Carolyn

I. PROPOSALS FROM GORDON PI'ANAIA

A. Proposed Kealaikahiki Trip

After some discussion concerning whether or not this type of trip could be justified as an educational venture (it can), the committee decided to ask the Board to approve the trip.

B. Recommendation for Captain of Hokule'a/ Crew training

Nainoa Thompson was recommended for the position of captain of the Hokule'a - he would serve on a volunteer basis. Possibility was raised of having a course in crew/navigation etc. Curriculum would have to be devised for the various positions (navigator; steersman) and a fee would be charged to cover cost of materials. Certain number of hours would have to be put in by each participant. Proposal was agreed to in principle and was to be referred to the Board.

II. NANI LYMAN'S HANDOUT

Nani Lyman submitted a handout to the educational committee and Board, clarifying the situation regarding the lei hulu, which are now being held in safekeeping for the PVS by Sam Ka'ai.

Fred Cachola then showed the committee the kind of time-table formula he would like to have from the various sub-committees,

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II. NANI LYMAN'S HANDOUT (con't)

showing the amount of time estimated that is needed for completing the tasks assigned, and the amount of money needed. The Speaker's Bureau headed by Nani Lyman, has come up with a time-table for theirs, but no budget.

III. LETTER FROM THE BOY SCOUTS

Ben Young has forwarded a letter to Fred Cachola from the Boy Scouts requesting that Fred follow through with it. The letter is basically one of support for the PVS and an offer of help.

IV. NANCY MOWER'S REPORT

Nancy Mower gave a report of the status of the Children's books. Almost half of the books have been sold, and new outlets in businesses have been open. A major publicity push is needed. (For complete report, copies will be available at the next meeting.)

V. NEXT MEETING

The next meeting will be held at 4:00 p.m. at Kamehameha Schools conference rooms on January 6, 1976.

Proposed agenda:

- I. Sub-committees goal/objectives; time frame
- II. Budget

MINUTES OF THE EDUCATION COMMITTEE MEETING - NOVEMBER 18, 1976.

PRESENT: Gordon Piianaia	Rowena Keaka
Nani Lyman	Marilyn Kahalewai
Carolyn Torgerson	Keli'i Taua
Maka'ala Yates	Daryl Jean Pescaia
Siegfried Rambler	
Nancy Mower	
Cecilia Lindo	

The meeting was called to order by Gordon Piianaia at 4:15 p.m. in the Heritage Room at the Kamehameha Schools on November 18, 1976.

REPORTS:

Speaker's Bureau - Nani Lyman reported that she has organized the Speaker's Bureau. We now have a monthly calendar with hours and dates when people are available. All people who want to speak should now go through Elinor in the P.V.S. office. She must know everything - place, time, date, etc. Little cards have been put together that have all pertinent spaces needed for maintaining a record of speaking engagements for the P.V.S. These should be filled in. Elinor will be coordinating with speakers and all efforts should go to the office to avoid further confusion.

Book Committee - Nancy Mower reported that the Book Committee met and has hired Carolyn Torgerson on a part-time basis. She will be paid thru funds from this committee.

Nancy also reported that the Book Committee has filled previous commitments and is busy with commercial outlets for distribution - Liberty House in particular. They would like an exclusive on P.V.S. books from now until the 5th of December. If sales go good, they would like to extend the exclusive period.

Educationally the Book Committee has sent letters to 4th and 7th grade teachers in the D.O.E. telling of the books. Previously, letters were sent out to all principals.

Sig commented that priority of books should go first to all schools and students and then be used in a commercial sense.

Nancy will be keeping a record of who is purchasing the guide books so that we can later inquire as to how these books were utilized within the classroom and what effect they had.

Research and Development - Maka'ala Yates reported that Hokule'a should be tested in a number of ways. Tests would include 1) sail efficiency and angles, 2) the lauhala sails, 3) lauhala vs. canvas sails, and 4) survival off the sea in the future. It was suggested that Maka'ala come up with research goals and lay these out according to some time schedule (ie, immediate and long-range).

PROPOSALS:

Slide/Tape Presentation - Nani Lyman proposed that the Education Committee hire a person to work on a slide/tape presentation for about 2-3 weeks. Because of busy schedules, it has been difficult for people to work on slide/tape presentations individually or cooperatively.

Discussion on the proposal was held and advantages outweighed disadvantages. It was agreed that Nani's proposal was valid and it should be presented to the Board of Directors as it involves hiring and monies. Nani will make recommendations as to who should be hired and perhaps what aspects, or area of information, will be covered by this slide/tape presentation.

✓ Artmobile - Rowena Keaka attended the meeting because she has been thinking about preparing for a second Artmobile exhibition which would begin to be installed in February. The Artmobile people were thinking that if the P.V.S. could work up an exhibit for the Artmobile, the Artmobile would carry this exhibit out to the D.O.E. children as a learning experience.

The exhibit should not only be pictures but would include things that can be seen, handled or touched. Handling and touching is encouraged by the Artmobile.

A slide/tape presentation can be used as an aid prior to visitations by schools. The slide/tape would be sent out ahead of time so students and teachers would know what to expect when visiting the Artmobile.

The aim of the Artmobile is to bring out the artistic aspects of objects. Emphasis will not be solely placed on the voyage or the ancient - but that the canoe is an artistic and functional piece of work. Materials used in sails, different lashings and types of canoes would fall into this category. Coordination by the P.V.S. would include design and installation of the exhibit. The P.V.S. books would also be carried so schools that have not purchased them will know that they are available. A brochure would also have to be worked on so teachers will have a working tool or material after their visitation.

Installation should take place in February thru the first two-weeks of March so there is almost a month for installation. The Artmobile will go out on the road the 30th of March until the end of June. Dismantling will take place in June. Items placed in the exhibit will be covered by their insurance and things we do not want to be handled can be placed under plexiglas cases. The exhibit is limited by the dimensions of the Artmobile and should be checked out.

The Artmobile contracts people to do this (exhibits) and Rowena has budgeted \$2,500.00 for the proposed exhibit. This money would go to the P.V.S.

The proposal will be submitted to the Board of Directors to see if the P.V.S. wishes to pursue and undertake such a proposal.

- 3 to 4 min. for enrichment, orientation or after catalyst.

Brochure
Rowena will
do it -

Art thing

1. Canoes
model

2. Pictures

3. Articles

4. Plants

Things become property of DOE

Mikilani Chun - designer

4.56 - instructional

Musical Release - Keli'i Taua reported on his musical work with Jack DeMello. An album will soon be released with songs related or dealing with the Hokule'a. Keli'i suggested that perhaps someone from the Board should contact Mr. DeMello to see what benefits the P.V.S can derive or obtain from this album. Perhaps the only benefit would be a discount on his albums for P.V.S members.

Tape Glossary - Siegfried Rambler suggested that a tape glossary to accompany the P.V.S. books be made. Tapes will cover Hawaiian words in terms of pronunciation, diction, etc. This would be a good project for a Hawaiian language class (Lurline Salvador).

GUESTS:

Nani Lyman introduced Marilyn Kahalewai and we were enlightened by what she has done and is capable of doing. Nani invited Marilyn to the meeting so that we can be aware that there is a graphic artist who can work on a workbook. Perhaps she can be hired in the future to work on a booklet. It was suggested that Fred and Nani work with Marilyn.

Daryl Jean Pescaia presented her slide/tape show on canoes and Hokule'a which lasted about 20 minutes. It was a good presentation and will be used within the classroom.

The meeting ended at 5:30 p.m.

Respectfully submitted,
Gordon Piianaia

THE CRAFTSMEN'S CLUB
45-716 Kealahala Road
Kaneohe, Hawaii 96744

Voyaging Society
Bishop Museum
P. O. Box 1637
Honolulu, Hawaii
Attention: Sandy Maile

DETACH AND MAIL WITH YOUR CHECK. YOUR CANCELLED CHECK IS YOUR RECEIPT.

Paddles for Workshop at Kualoa : \$60.00

Materials: \$30.00

Labor : \$30.00

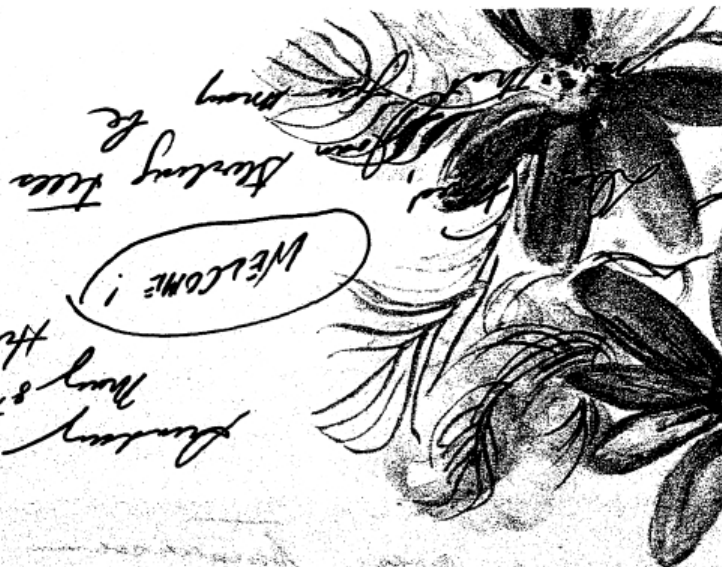
*Pl 11/15
\$105
Sea from
Kualoa workshop
per Jimmy*

PAID BY CHECK NO.

8K 884 Rediform

Coming over tomorrow!
Wish you'd call me. See
L at Keaukaha - from about
9 till 12.
After 12 - I'm interviewing
new parents so wouldn't be
free until 1.30 or so -
My school or

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Handing over
the
Welcome!
Handing over
the

parish center is [REDACTED]
Should love to see you
even if only briefly... or
second best... talk over the
phone. Aloha nui loa —
St. Marie (Ready)

DOCUMENTS CAPTURED AS RECEIVED

Pred Cachola
% John Krue
Jean ~ Sterling / Manila
Swif

March 8 - 1976

Cause launching -

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in of 6 senior saddle - charter -
Kausens Hanting - film.

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maint. - Related to Sm. Premium -

the median relay schedule -

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- Gene Phy. working ~~to~~ based on
Extraction - 2 flock - most
cases to delirium

Staff - Chuck Shipman - Bennett (George) -
half shown on cause

⑤ Discipline - Team work

⑥ Havin. know on land - ocean

" afraid of ocean - ignorance - action
based on respect & knowledge rather than
ignorance.

⑦ Prop. Development. Cord. - *Dianna*
- 6 senior loop - performers



- Frames - gun stocks -

⑧ Integration of water work with cultural

- water formula, natural environment & history

eg. Time length of same voyages.

⑨ Less. brush - environmental studies
cultural
security capabilities -

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FRANK WANDELL

R. LES WARREN, C.P.A.

AUGUST YEE

BENJAMIN B.C.
YOUNG, M.D.

8 October, 1976

Dear Nancy,

Mahalo a nui loa for your kokua at our PVS booth during the recent Sand Island Carnival.

It is good to know that people like you can be counted on as dependable support at PVS activities. Too often, people become enthused about specific kinds of projects but fail to follow up when the real work begins.

Because of your contribution of personal time we were able to make a few dollars to help the cause.

Looking forward to your kokua in the future!

Aloha,

Fred Cachola/eah

Fred Cachola
Chairman, PVS Booth
Sand Island

FC/eah

cc: PVS
Ben Young

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BICENTENNIAL VOYAGE OF REDISCOVERY
HOE AKU I KA WA'A

POLYNESIAN VOYAGING SOCIETY

BOX 6037 / HONOLULU / HAWAII 96818 / (808) 841-3966

*education
(1976?)*

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DAVID B. K. LYMAN

SIEGFRIED RAMLER

ALFRED K. WONG

AUGUST YEE

Friends:

The conclusion of the first voyage of the Hokule'a to and from Tahiti is only the beginning of a vital educational enterprise. Our task is to harness the interest and excitement generated by the Hokule'a to bring to our young people in public and private schools a deeper understanding of our Hawaiian heritage.

This letter brings you news of educational programs and materials available to you through the efforts of the Polynesian Voyaging Society. Available now are:

CLASS VISITS TO THE HOKULE'A

Class visits to the Hokule'a can be arranged by calling the Polynesian Voyaging Society office at 841-3966. A tour of the Hokule'a will usually run from 30 to 60 minutes, depending on the size of the group. A classroom orientation prior to the visit would enhance the learning experience of the class. A slide/lecture presentation will show living situations aboard Hokule'a during her historic voyage.

Learning activities will vary to accommodate age level and group size. Learning experience may include observing-noting different parts of the canoe and how they function; discussion of Polynesian ocean voyaging-navigation techniques, food types, plants, and animals associated with voyaging; looking at charts and maps; handling paddles and steering sweep; observing other Polynesian artifacts related to voyaging (sennit, sails, etc.)

SPEAKERS BUREAU

The Polynesian Voyaging Society's volunteer speaker's bureau consists of four to six crew members who provide a talk/slide presentation about both legs of the voyage. Arrangements for these talks may be made by calling the Polynesian Voyaging Society's office at 841-3966. The number of engagements is limited.

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BICENTENNIAL VOYAGE OF REDISCOVERY
HOE AKU I KA WA'A

BOOKS FOR CHILDREN ON SEA VOYAGING AND A RESOURCE CURRICULUM

A set of four books of illustrated fiction for grades 4 through 7 focusing on ancient Polynesian voyaging. The first three, based on the Mo'ikeha legend, form a continuous story following a double-hulled canoe from the time it is conceived, through every step of building, and on to the actual voyage to Tahiti. The fourth book brings us back to modern times and discusses Hokule'a and the Polynesian Voyaging Society. The set of books can be used in teaching many aspects of Hawaiian history and culture, as well as serving as a jumping-off point for numerous other subjects such as legend, mythology, religion, canoe building and sailing, astronomy and navigation, geography, migration, environmental studies, economics, mathematics, and science.

A Resource Curriculum Guide on Polynesian Voyaging is available to aid teachers in using the books in the classroom. The guide contains a wealth of information on Hawaiian culture, with voyaging as its central theme.

This project has been approved by the DOE curriculum directors in social studies in all districts of the State.

The books retail for \$9.95 per set, but are available at a special discount to schools and libraries for \$6.00 plus 4% tax. They will be mailed if 50¢ per set is included to cover postage and handling. The Teacher's Guide retails for \$2.95 -- school and library discount on this is \$1.50, plus 4% tax. Books and guide can be ordered directly through our office.

- | | |
|---|---|
| Book 1: THE VISION OF MO'IKEHA | Written by Nancy Alpert Mower
Illustrated by Sharon Kumm |
| Book 2: A CANOE FOR UNCLE KILA | Written by Stanley Kapepa
Illustrated by John Lennon |
| Book 3: VOYAGE TO TAHITI | Written by Nancy Alpert Mower
Illustrated by Allen Akina |
| Book 4: HOKULE'A | Written by Maralyn Blackman
Illustrated by Joseph Namakaeha Momoa
Photographs by Peter Anderson |
| A RESOURCE CURRICULUM GUIDE
ON POLYNESIAN VOYAGING | Written by Cecilia Kapua Lindo
Edited by Nancy Alpert Mower
Cover Design by Allen Akina |

Program and materials pending are:

PVS SLIDE-TAPE PRESENTATION

The Polynesian Voyaging Society 30-minute slide-tape presentation will be

available sometime in April for school use. The presentation will be tested by classroom teachers wanting to participate in our efforts to provide high quality educational materials. It will provide factual information on 1) the Polynesian Voyaging Society, 2) Hokule'a's voyaging to Tahiti, 3) highlights in Tahiti, and 4) Hokule'a's return to Hawaii. The slide-tape will be our prototype for a filmstrip.

TEACHER'S WORKBOOK

To accompany the slide-tape presentation and the children's books, a Teacher's Workbook is being developed. The 60-page workbook will consist of elementary and secondary materials that may be reproduced for classroom activities. The materials cover a large range of activities from specific and general map work of the Pacific and Polynesia to word-find puzzles. Completion date is June.

CASSETTE TAPE

A cassette tape with songs based on the Hokule'a's voyages and Hawaiian terminology and pronunciation relating to canoes and voyaging will be ready for loan or copying by March 15. Ahahui Olelo Hawaii, an association of Hawaiian language teachers, is working on this project. Portions of the tape can help teachers in pronouncing all of the Hawaiian terminology used in the set of children's books.

ARTMOBILE

A Polynesian Voyaging Society exhibit will be taken to Oahu public schools during March through June as part of the Art Education-Artmobile program in the DOE. Recommendations for taking the Artmobile to neighbor islands during June and July will be presented to the DOE administrators as soon as the mobile unit begins to service Oahu schools.

Future projects include the publication of additional books and materials relating to Polynesian voyaging. We welcome your ideas and suggestions on resources needed for your classes.

Sincerely,

THE EDUCATION COMMITTEE

Nani Lyman

Nani Lyman

Rowena K. Keaka

Rowena K. Keaka

Nancy Albert Mower

Nancy Albert Mower

Sig Ramler

Gordon Pi'iania

Gordon Pi'iania

Cecilia Kapua Lindo

Cecilia Kapua Lindo

Fred Cachola

Fred Cachola

FIELD TRIP EVALUATION

In order to gain some insight as to how classroom visitations and field trips to Hokule'a have been working out, the following information was worked out with this one particular group of teachers and students in the 4th grade.

1. The field trip to Hokule'a, at Koko Marina, was a follow-up to work being done in the classroom and visits by myself to this one selected school. Teachers will be using "A Resource Curriculum Guide On Polynesian Voyaging" during the year in their Hawaiian Studies area and will provide an evaluation of its use in the classroom later in the school year.
2. I believe that a classroom orientation prior to a visit to Hokule'a would better enhance the learning situation during the canoe visit. Though I have visited classrooms after a canoe visit, general knowledge beforehand reduces the amount of time lecturing about the canoe at the canoe site. Time is better utilized and more student participation is realized.
3. Teacher feedback reveals that their visit to Hokule'a was most enjoyable and informative. A great deal of learning took place and the teachers are sure that the field trip is one that students and teachers will not forget. One student reported that she and her mother went that very evening to look at the Hokule'a again.
4. Both teachers and I were curious as to further feedback from the students and these comments were stated:
 - "I felt excited about seeing such a famous ship."
 - "I was scared."
 - "It was the first time I ever saw a canoe."
 - "I was happy."
5. The teachers will be doing more work in regards to the canoe and the attached information are some of the things they have worked out. Again, it would be more appropriate to evaluate some of the areas on the attached enclosure later in the school year.

School: Waiālae, grade 4.
Subject: Hokule'a field trip.
Date: December 10, a.m.
Size: 60 students/teachers & adult supervision.

Translate

Bring questions and problems which may arise or may posed.

1. Canoe-building

- a. What kind of wood was used? Where did it come from?
- b. What tools did the Hawaiians have?
- c. How did they hold the parts together?
- d. What did they use to build the hull?
- e. Did the Hawaiians use only double-hulled canoes?
- f. How did they get the finished canoe into the water?
- g. What did they use for bailing water out?
- h. What part did religion play in canoe-building?
- i. Why were canoes so important to them?

2. Food

- a. What was the food stored in?
- b. How was water stored?
- c. How is poi made?
- d. Why was the fish and fruit dried?
- e. Why were a pig and a dog taken on the Hokualea's voyage to Tahiti? Also chickens?
- f. How could they build a fire on the canoe without burning the canoe?
- g. What parts of the coconut tree were used?
- h. How is poi they have used the ti plant?
- i. How did the early Hawaiians catch their fish?
- j. How did the early Hawaiians have caught? Did they use spears? Could they catch enough to live on long trips?

3. Clothing

- a. What clothing did the Hawaiians have?
- b. What did they use to protect themselves from the sun?
- c. What about high heels and jewelry on the beach?
- d. When it was cold, what did they do to stay warm?

4. Recreation

- a. What games could they have played on their voyages?
- b. What could they have done to pass the time?
- c. What games could they have played on the beach?

ENCLOSURE: ACTIVITIES

1. Make a model of an adze.
2. Make sennit.
3. Learn a paddling chant.
4. Try some coconut weaving.
5. Find the major compass directions by using your shadow.
Compare it with a compass.
6. Find the direction North by using the sun or stars.
7. Make an ipu for storing food or clothing.
8. Make poi.
9. Dry some fish or fruit.
10. Taste coconut, coconut water, coconut milk.
11. Learn the Hawaiian names for some common foods.
12. Make imitation tapa.
13. Test ti leaves to see if they repel water.
14. Play konane.
15. Make and use a pala'ie.
16. Read some Hawaiian legends.
17. Tell a legend to a group.
18. Painting, drawing, mural making.
19. Dramatization.
20. Creative writing.
21. Making reports.

Ideas for Creative Thinking -

1. Your parents tell you that the family is moving to a strange land over 2,000 miles away. You will travel by canoe. The canoe has no electricity or gas. There are no modern instruments or machines. What do you think, and how do you feel, about going on this trip?
2. You are on the way. It is day, but the sky is dark. Black rainclouds are moving closer and closer. The wind is blowing hard. The waves are getting bigger and steeper. How do you feel? What do you do?
3. Everyone has just finished supper. They are sitting around, watching the sunset. What are the grownups talking about? What are the children doing?

REPORT BY: Gordon P. 'Ianaia'a

I. Relationship with Department of Education.

Since the month of October, my work with the PVS has been ~~oriented~~^{focused} towards the 4th grade level and high school ~~courses~~ that relate to the study of things Hawaiian or Polynesian. There is a tremendous demand for speakers to share their experiences gained on Hokule'a this past summer and about the canoe and trip in general. Though this type of presentation is more informative in nature, the educational aspects of answering these types of requests are valid as classroom teachers have been following the trials and successes of Hokule'a since it was a dream of Herb Kane. The PVS, it seems, has an obligation to the people of Hawai'i and I feel very strongly that I am fulfilling part of this obligation by working with teachers and students.

Generally, I do not work with intermediate grades for a number of reasons. Also, time permitting, I do work with non-DOE schools as one of the goals of the PVS which has been stated is :..... ".....after returning from Tahiti the canoe will be dedicated to the people of Hawai'i for educational purposes."

Scheduling of schools is either done by myself or via the Speaker's Bureau. Usually those schools or audiences that are scheduled by myself have made direct contact or communication with me. In other cases, requests are passed on to me by the PVS office and these requests are scheduled if possible. I have worked with Dave Lyman mainly with adult audiences and worked solo with teachers and students.

Basically, I limit my talk to life aboard a sailing vessel (in this case the Hokule'a) and prefer to talk about the return trip only. When working with Dave Lyman, he talks about the trip to Tahiti and I talk about the return trip. Both of us stress the educational role being taken by the PVS and the availability of membership in the PVS. We do inform our audiences (or teachers) about the books and guide on Polynesian voyaging. In my work or consulting with teachers I also stress the use of "Resource Units in Hawaiian Culture" by Don Mitchell. Unit 12 covers 'Constructing and Navigating Hawaiian Canoes' and Unit 2 covers 'Origins and Migrations'. This Kamehameha Schools publication can be found in every school library and in just about every classroom that studies Hawaiian culture or other related subject areas. In some high school classes it is also used as a course text.

DOCUMENTS CAPTURED AS RECEIVED

The work being done is more of a supplemental nature. I try to enrich and encourage and do not impose any curriculum upon the classroom teacher. When materials or help is requested, I try to assist the teacher. However, I do not replace the teacher but try to influence the use of the canoe as a focal point of studying things Hawaiian. Consultation is geared to whatever content area is being used within the classroom or already existing in the school. As an example, in lecturing before a Health class, the importance of mental, physical, and social health aboard a canoe like Hokule'a are stressed.

During the past 4 months I have had much flexibility in working with the DOE and other target audiences. The work is enjoyable and important to me, but I have the feeling that I am a one-man representative of the PVS. There is no way I can handle the number of requests coming in from the DOE and I am grateful that Dave Lyman has been handling many of these requests thru the Speaker's Bureau. Another problem area has been created in the handling of field trips or excursions to the canoe while out at Koko Marina. There was no problem out at Pokai Bay as Buffalo Keaulana had a crew aboard the canoe all the time and visiting groups could be handled. However, we do not have a permanent crew or person on the canoe out at the Hawai'i Kai area and all field trips have to be arranged either thru me or the PVS office. This is a problem as I cannot afford the time and do not want to become a tour guide.

In going back on earlier correspondence, Herb Kane expressed his views on bringing Hokule'a to the people of Hawai'i as an educational experience. His correspondence (9 Nov 74) stated the desire to take this vessel to all ports throughout the Hawaiian Islands, and make it available to groups and individuals as an educational experience. No doubt some of these desires were accomplished prior to Hokule'a's voyage to Tahiti. To a lesser degree, some of these desires have been accomplished since the return of Hokule'a back to Hawai'i.

Herb also states the desire to have a permanent crew of at least 2 instructors (later he mentions 3 permanent instructors and a permanent Executive Secretary to coordinate the program) who will stay with the vessel. Perhaps these statements and desires expressed 3 years ago may not have been of major concern then, but the validity and worth of them have certainly increased in value with age and should be considered by the PVS. Our objectives and goals are sound but the mechanics and feasibility of attaining these goals are far from being seaworthy.

Resource Materials, Instructional Aids, Etc.

I have collected and gathered a number materials which were developed during the Kualoa workshop and have found that they are very instructional aids when working with a unit on canoes. In addition, a number of other visual aids have been produced by the Kamehameha Schools AV people and have been classroom tested. Some pertain to the Hokule'a and others pertain to non-instrumental navigation and foods carried on long canoe voyages.

I have developed a slide/tape presentation on the return trip of Hokule'a from Tahiti. It pertains primarily to life aboard the Hokule'a and does not deal with the trip to Tahiti. It runs for 23 minutes and is presently operated by a cassette/slide synchronizer. This can be set up to be operated by a classroom teacher so that the PVS does not have to send speakers out constantly. Dave Lyman is working on his presentation of the trip to Tahiti and Nani Lyman is working on a 15 minute presentation for the PVS.

I have enough slides to put together a short presentation on non-instrumental navigation. Working with Dave Lyman, we hope to include some of the things learned on Hokule'a's trip to Tahiti.

I have put together the log of the Hokule'a on her trip from Tahiti to Hawai'i. Weather information contained within the log has been useful in researching information on canoe performance in regards to sailing into the wind. Students have learned how to convert magnetic courses to true courses and apparent wind direction and speed to true wind direction and true wind speed. Though we can derive how high into the wind Hokule'a was sailing on her trip back to Hawai'i, we must remember that we were not trying to see how high we could sail the canoe into the wind.

I have put together a complete navigational log of Hokule'a on her return trip back to Hawai'i. The possibilities of using this information in a navigational or math class is endless. I should point out that information contained in this log is that actually used by the Hokule'a. Whereas Ben Finney is using information from Leonard Puputauki and the Meo Tai, all course changes or navigational recommendations and positions are contained in this log.

I was able to obtain a copy of "The Coming of the Polynesians" from George Tahara. This 11 minute film is a good introduction to Hokule'a's trip. It has been used in a number of settings and has received good feedback.

Hokule'a itself has been used as an instructional aid for visiting school groups and other non-school groups.

■. Workshops.

I have been asked and have held three workshops for school teachers who deal in some way ^{with} the teaching of things Hawaiian. I have utilized what resource materials and aids we have and have pushed the use of "A Resource Curriculum Guide On Polynesian Voyaging". The stressing of the use of the Hokule'a or the Hawaiian canoe as a unit of study has been very positive. We all seem to understand the importance of the canoe in Hawai'i or Polynesia but there is a definite lack of materials or information to help teachers in the classroom. This is one area where the PVS can continue to be helpful to teaches - provide more materials. I don't think we should go too far into the area of developing aids that the classroom teacher can produce independently however.

There was mention of another ^{large} workshop out at Kualoa in 1977 and teachers are anxious awaiting more information on this workshop. Nani Lyman is in charge. No doubt the public would be as interested too.

Paige -

Please send the grantors information about the
kinds of workshops we've had. Glad I had the 1974 &
1975 programs. Look them over and make your
choice.

We'd certainly make a smashing impression
if we sent The 4 children's books + Teacher's guide
for them to see.

Too, please include the 3 Nat'l. Geographic
Magazines. Perhaps you can get them at The P. & S.
office.

If I think of other things I'll give you a jingle.

Kagwa

Enclosed information
History of Project
Objectives
Needs
Education Committee

The Education Committee of the Polynesian Society proposes a curriculum that will:

1. Provide a dynamic learning experience through the use of Hokule'a as a floating classroom.
2. Document, duplicate and provide information from photos, slides, songs, books, case studies, graphs, maps, films, reports and other materials gathered on Hokule'a's voyage to Tahiti and back.
3. Formulate and execute plans which exemplify more opportunities in canoe building, maritime opportunities, and experiences about Polynesian Voyaging and settlement (Pre-1778 to 1976). *The impoverished areas of*
4. Define and classify data made on the trip to Tahiti and back and list from these experiments and findings the advantages and problems encountered on the voyage.
5. Develop an archives with the collection of the artifacts, documents, photographs, and other materials used on the Hokule'a.
6. Plan workshops and speakers bureau so that teachers and students will hear first hand from crew persons who made the historic voyage on the Hokule'a.
7. Increase cultural pride respect and interest in the Polynesian heritage which will enhance a child's self-concept. *(persons)*

HISTORY OF THE PROJECT

Hawai'i's most outstanding project in the U. S. Bicentennial Celebration was the re-creation of an ancient Polynesian double-hulled canoe called the Hokule'a. The idea developed as some people started to recognize the awesome immensity of the Pacific Ocean, where families sailed away from familiar shores, survived on the ocean, and discovered new land. These enthusiasts, started doing research work about the ancient Polynesian mariners who built double hulled canoes, filled them with families, livestock, food and plants, and sailed 2,000 miles or more to find new homes. What was hard for them to comprehend was the fact that these mariners sailed with no navigational instruments, charts, or a written language to record their journeys. The ancient Polynesians used their knowledge of the stars, currents, winds, birds, and faith in their gods and themselves, as guides.

With dedication to fulfill the dream of Hokule'a, and Polynesian migration, interested persons formed the Polynesian Voyaging Society. The Hokule'a was to reassure believers that the skills, courage and intelligence of the Polynesian mariners led them to sail the open sea, and settle on other islands with intention. The journey of Hokule'a was to discount belief that Polynesian settlement was accidental.

The National Geographic Society was so fascinated by the project that they asked and were given permission to document the voyage and help finance it. With immense toil and local and national support, the dream of Hokule'a became a reality.

On May 1, to July 26, 1976, the Hokule'a sailed from Hawai'i to Tahiti and back, traveling about 6,000 miles. It sailed in the style of the ancient Polynesian mariners, with a crew of 17 men who sailed from Hawai'i to Tahiti, and 11 men and 2 women who made the return trip from Tahiti, to Hawai'i.

Now that the journey has been accomplished, the rich and rare experiences of these modern mariners who used the ancient methods of survival and sailing should be shared through education. The development of slides, tapes, films, photography, books, songs, and other media are needed.

One of the major goals of the Polynesian Voyaging Society is to turn Hokule'a into a floating classroom and have workshops to teach teachers and in-persons about Polynesian voyaging. Crew members who took the trip can teach students how the ancient craft was built, what food and shelter were used on sea voyages, which livestock were taken, and also get a chance to sail on the ancient 60 foot double-hulled canoe.

The success of the project has caught the imagination of multi-cultural Hawai'i and has created an increasing admiration for Polynesian culture and its achievements, past and potential. Hokule'a has helped to enlighten the impoverishment of the general public about Polynesian migration and settlement.

The native Hawaiians needed this rekindling of ethnic pride for statistically, they are an oppressed group, lacking power, economic stability, education, sociological well-being, lacking a positive self image and are like strangers in their own land. Hokule'a has brought renewed hope and a spirit that has inspired the Hawaiian people to search out their roots and surge ahead with confidence, like their ancestors did.

EDUCATION COMMITTEE

Chairman- Fred Cachola--Director, Extension Education Division (Filipino/Hawn.)

Siegfrid Ramler--Curriculum Specialist, Punahou School (Caucasian)

Rowena Keska--Art Mobile Specialist (DOE) (Hawaiian/Caucasian)

Gordon Pi'ianaia--Mobile Unit Specialist--Hawn. Studies (Hawaiian/Chinese)

Nancy Mower--Freelance writer and author of many books (Caucasian)

Cecilia Lindo--Vice Principal/Teacher--Hongwanji Elementary School-(Chi./Hawn.)

Carolyn Torgenson--Teacher--DOE (Caucasian)

Keli'i Tau'a--Teacher--DOE (Tahitian/Hawaiian)

Daryl Jean Pescaia--Teacher--DOE (Filipino/Hawaiian)

Nani Bowman Lyman--Teacher--Kamehameha Schools (Chinese/Hawaiian/Caucasian)

Amy Takayama--Teacher--DOE (Japanese)

Maka'ala Yates--Student, U. of H. (Hawaiian/Caucasian)

Consultants

Dr. Ben Young--Asst. Dean, Medical School, U. of H. (Chinese/Hawaiian)

Dr. Ben Finney--Associate Professor of Anthropology, U. of H. (Caucasian)

Dr. Denneth Emory--Senior Anthropologist, Bishop Museum (Caucasian)

Herb Kane--Artist-designer, architectural-designer (Hawaiian/Chinese)

Cecil

POLYNESIAN VOYAGING SOCIETY
PRESENTS
A THREE-DAY SEMINAR/WORKSHOP, CAMP-OUT
IN POLYNESIAN VOYAGING

PLACE

Kualoa Regional Park

DATE

Okakopa(October) 10,11,12,13, 1975

PURPOSE

Experiences will be provided on how the Polynesians prepared for, and took their long, rugged sea voyages which enabled them to successfully establish settlements.

PROGRAM AND DESCRIPTION

Pō'alima, Okakopa 10, 1975

3:30 P.M. - 7:00 P.M. Set up camp, check in, provide your own dinner.

7:00 P.M. - 9:30 P.M. Pihana Kanaka (Assembly). Orientations and introductions.

Pō'aono, Okakopa 11, 1975

9:00 A.M. - 12:00 P.M. Concurrent day sessions:

- Session 1 - "Polynesian Canoes"
- Session 2 - "Rigging, Lashing, and Sailing a Polynesian Canoe"
- Session 3 - "Lauhala and Coconut Weaving, Sennit Making"
- Session 4 - "Foods and Plants for Sea Voyaging"

12:00 P.M. - 1:30 P.M. Lunch break. Book display; Polynesian Cultural Center imu and weaving demonstrations.

1:30 P.M. - 4:30 P.M. Continue concurrent sessions.

4:30 P.M. - 6:00 P.M. Dinner break. Book display.

6:00 P.M. - 7:00 P.M. Ha'i a'o (Lecture): "Celestial Navigation" by Homer Hayes.

7:00 P.M. - 8:00 P.M. Ha'i a'o: "Polynesian Voyaging Canoes: Symbolisms and Ceremonies" by Dr. Kenneth P. Emory, Sam Kaai

8:00 P.M. - 9:45 P.M. Ki'i 'Oni 'Oni (Film): "Kula Trade Ring"

Sabati, Okakopa 12, 1975

9:00 A.M. - 12:00 P.M. Concurrent days sessions continue.
12:00 P.M. - 1:30 P.M. Lunch break. Book display.
1:30 P.M. - 4:30 P.M. Concurrent sessions end.
4:30 P.M. - 6:00 P.M. Dinner break. Book display.
6:00 P.M. - 7:15 P.M. Kūkākūkā (Discussion): "Physical and Psychological Readiness for a Long Sea Voyage" by Dr. Frank Tabrah, Dr. Ben Finney, Capt. David Lyman.
7:30 P.M. - 8:00 P.M. Identification of star constellations related to Polynesian navigation by Tai Crouch
8:15 P.M. - 9:00 P.M. "E Himeni a e Hula Kākou" by Steering Committee

Po'akahi, Okakopa 13, 1975

9:00 A.M. - 11:00 A.M. Turn in evaluation forms.
11:15 A.M. - 5:00 P.M. Optional sailing and paddling. Book display.

STEERING COMMITTEE

Nani Bowman
Cecilia Kapua Lindo
Sandy Maile
Jean Mahealani McClellan

POLYNESIAN VOYAGING SOCIETY
October 10-13, 1975 Workshop Evaluation

Circle the number which best satisfies your opinion of the day sessions. Additional comments will be appreciated.

1 2 3 4 5
Poor Fair Good Excellent Superior

Session 1: <u>Polynesian Canoes</u>					
1. Adequate written materials	1	2	3	4	5
2. Instructors knowledge	1	2	3	4	5
3. Adequate time for instruction	1	2	3	4	5
4. Sessions location	1	2	3	4	5
Session 2: <u>Rigging, Lashing and Sailing a Polynesian Canoe</u>					
1. Adequate written materials	1	2	3	4	5
2. Instructors knowledge	1	2	3	4	5
3. Adequate time for instruction	1	2	3	4	5
4. Sessions location	1	2	3	4	5
Session 3: <u>Lauhala and Coconut Weaving, Sennit Making</u>					
1. Adequate written materials	1	2	3	4	5
2. Instructors knowledge	1	2	3	4	5
3. Adequate time for instruction	1	2	3	4	5
4. Sessions location	1	2	3	4	5
Session 4: <u>Food and Plants for Sea Voyaging</u>					
1. Adequate written materials	1	2	3	4	5
2. Instructors knowledge	1	2	3	4	5
3. Adequate time for instruction	1	2	3	4	5
4. Sessions location	1	2	3	4	5

Comments for sessions 1-4: _____

Your criticisms and comments on the evening sessions will be most helpful.

Friday Evening Orientation: _____

Saturday Evening lectures and films: _____

Sunday Evening panel discussion and Hō'ike: _____

General questions:

1. Was the location and camp facilities adequate for this type of workshop?

2. Are there additional related areas of instruction or discussion that you would have liked us to cover?

3. If you are a student or teacher how will you use the information gained at this workshop? (Even if you are not a student or teacher, how will you use the information gained?)

- 1) Evaluation ⁱⁿ Book Project Illustrations
- 2) Com. House ^{yellow chair}
- 3) Sarah Cordero - phone daughter ^{Sarah Cordero}
- 4) Book display
- A) Trobrian Islanders
Oceanic lantern sails

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SUBJECT--NEED FOR EDUCATION GRANT

The Hokule'a, a double hulled canoe, emulates the succesful round trip journey from Hawai'i to Tahiti, navigated only by wind, wave, star and bird. Hokule'a was designed to answer the question of whether the ancient Polynesians regularly navigated the 3,000 mile course between Hawai'i and Tahiti. The conclusion of Hokule'a's journey, is the beginning of tremendous educational opportunities.

The Education Committee of the Polynesian Society proposes a follow-up curriculum that will continue to use Hokule'a as the focal point of interest. A major goal of the committee is to utilize the canoe as a floating classroom. The canoe will sail to different areas of the eight islands and conduct workshops that can benefit the educational experiences of school children, teachers and community audiences. Crew members who already navigated the canoe over an ocean area of about 6,000 miles will help with the floating classroom. A canoe committee has already been formed to work out a blueprint and itinerary for the Hokule'a. Students and teachers will be able to board the canoe and see first hand how the Hokule'a was lashed and rigged together, what kind of materials were used to build the canoe, see the sails, foods, plants, shelter and clothes that were used on the exploration. They will also see the carved gods and feathered weather vane that was so vital on sea voyages. The participants will have a chance to sail, and perhaps steer the double hulled canoe. Regular crew members on the floating classroom need to be compensated for their efforts and time.

The Polynesian Voyaging Society has sponsored two teacher workshops in its three year history. The coordinators of the workshops asked for, and received multi-agency cooperation for supportive services and program implementation (Parks and Recreation, U. Of H., Museum etc.) Some of the lecturers were given monetary compensations. The program that was offered at the workshops commensurate with the topic areas mentioned for the floating classroom. The comments about the workshop that was recently held were very encouraging. Appended to this proposal is the description, program and time allotments for the workshops that were held. Teacher evaluations are also enclosed. They will serve as guides for future workshops. Two major work shops are planned for 1977.

Crew members and members of the Education Committee plan to document, duplicate and disseminate materials and information gathered on Hokule'a's historic voyage. They plan to define and classify data made on the trip and list the advantages and problems encountered on the journey. Instructional units, composed of print and non-print materials will be developed from the actual sailing venture. The collection of artifacts, documents, photographs and other materials gathered on the Hokule'a will eventually be reproduced for public use.

The Hokule'a has stirred up so much interest that many educators and others have asked for materials and speakers to share Hokule'a's remarkable feat. Already the art specialist for the Dept. of Ed., has approached us and asked if we could develop materials that can be displayed on their art mobile. The art mobile travels only to public schools on all the eight islands. The art specialist has proposed that the exhibit not only include pictures and posters but objects that can be seen, handled, or touched by children.

When the Hokule'a made her journey, many Tahitians composed at least 58 songs about the canoe. Too, about 20 songs and chants were composed by Hawaiian artists. The Education Committee hopes to record, tape and translate these songs for educational use.

Since the conception of the Hokule'a, four children's books were written for children between the ages of 8 to 15, about Polynesian Voyaging. A teacher's guide was also written to accompany the 4 books. Some Hawaiian words are used in the books so a taped glossary is needed so teachers can listen to the tapes and say the words correctly. Slides, tapes, workbooks, maps and ditto sheets are also needed to re-enforce concepts brought out in the books and guides. Whenever feasible and practical, all forms of instruction will be related to content areas already existing in our teacher's guide and goals.

The State Department of Education has used the ^{teachers} guide
as an example ^{to follow their} for curriculum writers.

The Education Committee of the Polynesian Society proposes a curriculum that will:

1. Provide a dynamic learning experience through the use of Hokule'a as a floating classroom.
2. Document, duplicate and provide information from photos, slides, songs, books, case studies, graphs, maps, films, reports and other materials gathered on Hokule'a's voyage to Tahiti and back.
3. Formulate and execute plans which exemplify more opportunities in ^{the impoverished areas of} canoe building, maritime opportunities, and experiences about Polynesian Voyaging and settlement (Pre-1778 to 1976).
4. Define and classify data made on the trip to Tahiti and back and list from these experiments and findings the advantages and problems encountered on the voyage.
5. Develop an archives with the collection of the artifacts, documents, photographs, and other materials used on the Hokule'a.
6. Plan workshops and speakers bureau so that teachers and students will hear first hand from crew persons who made the historic voyage on the Hokule'a.
7. Increase cultural pride, respect and interest in the Polynesian heritage which will enhance a child's self-concept. (person's)

POLYNESIAN VOYAGING SOCIETY

BOX 8037 / HONOLULU / HAWAII 96818 / (808) 841-3966

May 26, 1976

To: Herb Kane, Vice President
From: Education Committee
Subject: Education Grant

The Education Committee was successful in securing a grant of \$10,000 from the Kanehameha Schools/Bernice P. Bishop Estate (K/S-B.E.).

The conditions of the grant were as follows:

1. That the P.V.S. submit to K/S-B.E. an educational program by Feb. 1, 1977 which will incorporate all of the potential human and material resources of P.V.S. that can benefit the educational experiences of school-age children and other community target audiences.
2. Such a program shall include but not be limited to:
 - a. Instructional units composed of appropriate material objects; print, non-print, or actual objects that have been designed, developed and tested in actual sailing ventures.
 - c. Audio-visual aids for classroom use and adult audiences; i.e. films, slides, tape recordings, charts, posters, etc.
 - d. Periodic workshops for teachers and community audiences conducted by members of P.V.S. who have acquired the skills, talents and experiences related to Polynesian voyaging.
3. Whenever feasible and practical, all forms of instruction should be related to appropriate content areas already existing within the schools, such as science, math, language, Polynesian crafts, astronomy, geography,

Education Committee
Page two

economics, marine biology, anthropology, Polynesian culture and history, etc.

4. Whenever possible the program shall include ways and means which can allow for multi-agency cooperation for supportive services and/or actual program implementation. There should be a high level of community participation in the development and testing of the program.

5. The program shall be developed in close cooperation with the D.O.E. and K/S-B.E., to assure compliance with their existing policy and procedural constraints.

6. Instructional units and experiences developed for the classroom or with Hokule'a shall be field-tested in schools and communities that have a high population density of Part-Hawaiians.

7. The program will give K/S-B.E. the right to use, publish, reproduce and distribute all appropriate print and non-print material objects developed by the P.V.S. which have not been secured or encumbered by previous contractual agreements.

The \$10,000 grant from K/S-B.E. allows the P.V.S. to organize and finance one of its stated purposes ----- " - - - after returning from Tahiti the canoe will be dedicated to the people of Hawai'i for educational purposes."

The K/S-B.E. commends this worthy educational endeavor and has provided the initial catalyst to make it a reality. In this regard, the K/S-B.E. and the P.V.S. have a shared responsibility and a common mission in influencing the destiny of Hawai'i.

page three

Fred Kachola

Prof. Kazimierz Konec vice president, chairman

POLYNESIAN VOYAGING
(ENRICHMENT ACTIVITIES)

1. Principal Hawaiian Islands--Routes of Hokule'a's journey and Place Names(Nani).
2. Pacific Currents and winds--Islands include Hawai'i, Marquesas, Society Island(Tahiti), Tuamotu, New Zealand, Easter, Tonga and Samoa(Nani).
3. Map with Hawaiian Islands(dots and no names) and Continents(with names).
4. Maps with news articles tracing positions of Hokule'a(Nani).
5. Star Maps(Nani).
6. Map of Society, Tuamotu and Marquesas Islands(Nani) with names(Nani) and the route of Mataiva included.
7. Map of Tahiti(Papaeete) (Nani).
8. Modify illustrations and explanations that depict 8 versions of steering by stars and seas(from the National Geographic Magazine--Herb's drawings) (Cecilia).
9. Outrigger(Simple illustrations and explanations) (Rowena).
10. Double Hulled canoe(Simple illustrations and explanations) (Rowena).
11. Hokule'a and parts of canoe(See teacher's guide). (Cecilia).
12. Tools to build canoe (Rowena).
13. Equipment used on canoe
14. Sennit Making (Rowena).
15. List of Plants brought to Hawai'i to include illustrations and explanations (Rowena and Cecilia)
16. Preparation of dried foods for voyaging (Cecilia - use Paige's article)
17. Ancient Hawaiian Navigation by Homer Hayes (Cecilia--Check with Homer and modify if necessary).
18. Polynesian and Western Sailing with drawings and simplified explanations (Dave and Nani Lyman).
19. Photographs of canoes, etc. (Nani)
20. Songs of Hokule'a (Cecilia)
21. History of Hokule'a (Cecilia)

- 22. Creative Activities--Questions, Wordfinds, Timeline, etc. (Cecilia)
- 23. Forward(Dr. Emory)
- 24. Roots(Geneology sheet) (Cecilia)
- 25. Exercises for Children's Books(Nancy Mower)
- 26. Pacific Ocean(Cecilia)

Draft

Part IV. 5. Goals and Objectives

MISSION STATEMENT: To develop an expanding ~~adxx~~ cadre of persons with native an ability to teach the ethnic history of the/Hawaiians in the schools, the community and the social service agencies and to develop curriculum materials for use by these persons.

I. Goal - ~~To Develop Training Materials~~ To train teachers and others in the ethnic history of native Hawaiians.

The Polynesian Voyaging Society proposes that the Hokule'a be used as a floating classroom, visiting various islands to enable children, teachers and the community-at-large to have access to the canoe. ~~Where it is feasible, the canoe will be close to, or at a county park site. Should this arrangement not prove ideal, appropriate harbors will be available.~~ Training sessions are designed to develop the ~~not necessary~~ skills in the areas of 1) Polynesian Canoes; 2) Rigging, Lashing and sailing a Polynesian canoe 3) Lauhala and Coconut weaving, Sennet Making 4) Foods & Plants for Sea Voyaging;

MARINE CURRICULUM

The following is a Marine Curriculum designed to attract and guide the students toward the area of Marine careers. As basic as it might appear, it is a physically and mentally demanding course that also includes many recreational aquatic opportunities which we hope will provide a healthy balance for the academic demands that will be placed on the student. All students will be required to follow the course sequence.

COURSE SEQUENCECOURSE LENGTH1. SENIOR LIFESAVING PREP

Refinement of basic swimming strokes and body conditioning

One Week

2. SENIOR LIFESAVING

Red Cross Lifesaving Certificate awarded upon completion

Three Weeks

3. WATER SAFETY INSTRUCTION

Red Cross Water Safety Instructors Certificate awarded upon completion

Three Weeks

4. OUTRIGGER CANOE

History of the Outrigger Canoe, rigging, lashing, paddling and terminology

Two Weeks

5. INTRODUCTION TO SAILING

Basic sailing course utilizing 12 ft. Sunfish fleet. Develop knowledge of sailing terminology and small craft handling

Three Weeks

6. SCUBA DIVING

Swimming pool and ocean exercises. Use of equipment, safety, spear fishing, and exploration of coastal sea-life.

Eight Weeks

MARINE CURRICULUM (CONT.)

COURSE SEQUENCE

COURSE LENGTH

7. INTERMEDIATE SAILING

Utilizing Hobie Cat 16's - More detailed sailing instruction and theory

Four Weeks

8. VOYAGING CANOE SAILING

Utilizing the Academy's 44 ft. Voyaging Canoe - Advanced sailing techniques and seamanship are emphasized. Includes comparative study of Polynesian vs. Western sailing craft, racing, shallow draft maneuvering (over reefs), construction, rigging, lashing, and star navigation. The climax of this course will be an Inter-Island cruise to develop deep-water seamanship

Twelve Weeks

9. UNIVERSITY OF HAWAII BLUEWATER LABORATORY

A Marine Lab program conducted by the University of Hawaii on the 65 ft. schooner, "Machias". Study areas include geology, plankton, navigation, water quality, and benthos

To Be Announced



STATE OF HAWAII

DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF INSTRUCTIONAL SERVICES

MEMORANDUM

PLEASE POST

March 13, 1975

TO: Oahu District Superintendents, Curriculum Specialists,
Principals and Teachers

FROM: *PKI* Philip K. Ige, Assistant Superintendent, OIS

SUBJECT: Visitation to See Hokule'a

As part of Hawaii's Bicentennial Celebration, the Polynesian Voyaging Society will replicate the early Hawaiians' voyage from the South Seas to Hawaii.

Hokule'a, the 60 by 15 foot canoe made especially for the 2,500 mile trip, is available for viewing by the public. School students are especially welcome.

John Eveland, director of Kualoa Regional Park, where the canoe is maintained and Herb Kawainui Kane, who will sail the canoe from Hawaii to Tahiti and back beginning in May, 1976, have issued this invitation in the hopes that Hawaii students will become more knowledgeable about the early Hawaiians.

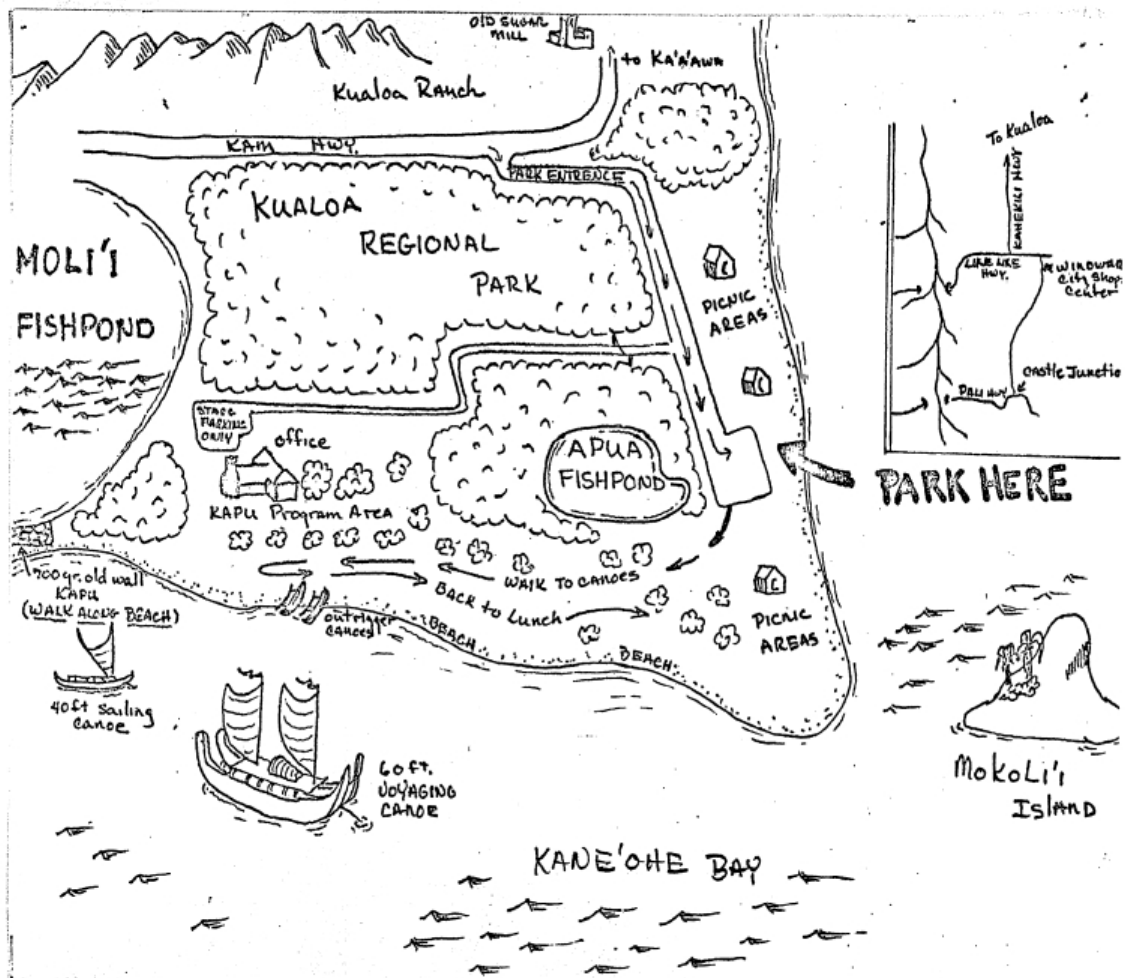
*George Tahara, noted producer, is developing, together with Dr. Kenneth T. Emory of Bishop Museum, a series of films related to this voyage. Students will be able to view the series in conjunction with the Bicentennial voyage.

Information on Kualoa Regional Park and a brief lesson plan are attached for your convenience. Please call Kualoa, phone 237-8289 or 237-8319, from 8:00 a.m. to 4:00 p.m. to let the Park know when you wish to visit.

PKI:PSS:ma
Attachment

cc: Dr. Albert H. Miyasato
Mrs. Margaret Oda
Mr. George Tahara
Mr. John Eveland
Mr. Herb K. Kane
Dr. Ben Finney
Dr. Patsy S. Saiki

DOCUMENTS CAPTURED AS RECEIVED



Aloha mai e nā hoa

"Kaulana kou inoa, Kualoa e, o nā 'oli'oli o nā ali'i i hala"

"Kualoa your name is well known for the joys of past chiefs"

(Hawaiian Mele)

Kualoa is listed in the National Register of Historic Places and is adjacent to Moli'i Fishpond, one of the best examples of an operational fishpond also listed in the National Register and designated of National Significance.

Kualoa literally means "long back (ridge)". The land division of Kualoa was called Pali-ku in the old days and mentioned in some of the geneology chants as the birth place of the first Hawaiian, Hāloa, leading to the name of the ridge-line being called "Mo'okapu 'o Hāloa". It is said that this land was well-liked by Kane (one of the Hawaiian gods) and that he would often rest here with a friend. The highest rise above Kualoa is called Kanehoalani (heavenly companion of Kane).

Kualoa was considered one of the most sacred places in ancient times, and was a place to train the keiki ali'i (children of the chiefs). When ali'i or the mo'i (supreme sovereignty) were in residence, the sails of the canoes passing Kualoa would be lowered in respect of the mana (divine power) and of the courage of Kaha'i, the Polynesian navigator and adventurer who once lived in the neighboring valley of Hakipu'u.

Legends tell us a mo'onui (large lizard) named Mōkōli'i lived near the sandy beach and calm waters of Kualoa. When the sister of Pele, Hi'iaka, passed this way on a journey to Kaua'i, she was forced to call in an oli (chant) to Pele asking for the mana to destroy the mo'onui. In shame of being beaten by this young girl, Mōkōli'i put his head in the water and up came the end of his tail which Hi'iaka chopped off and turned to rock.

Other legends tell us many stories, such as the ones of Kāmapua'a, the pig child making holes in the mountain while running away from Pele, and of U Hīho Kahi, the one-toothed shark who in turn for friendship and food would nibble the heels of swimmers to warn them of the coming of mano 'ai kanaka (sharks that eat people).

The people who cultivated the land for the mea 'ai (foods), the ones who read the clouds and knew what each wind would bring, these were the ones who gave life to our life style now and who believed Kualoa was an aina 'ihiihi (sacred land). Though the physical monuments left by the po'e kahiko (ancient people) are gone, their mana is still alive and felt when seeing the beauty of this land with the mountains and the sea and hearing an ancient mele (song) sharing the spirit of Aloha.

Oka mea maika'i malama, a o ka mea maika'i 'ole kapae 'ia

POSSIBLE LESSON PLAN

Goal: To learn about the early Polynesians through the medium of the canoe.

Objective: To learn about the canoe Hokule'a, which will be used during the Bicentennial Celebration.

Possible Questions to be Explored:

1. What designs do you think the Polynesians used on canoes that were used to travel long distances? Why? Try designing a canoe, and explain what each part of the canoe would be used for.
2. What type of food do you think the early Polynesians brought with them? How were they preserved for the long journey?
3. How long do you think such a journey would take? How did the Polynesians know in which direction to go? How could they have recorded the journey?
4. What type of person would want to go on such a journey? What do you think the composition of the crew was? What would happen if someone shirked his responsibilities? What if someone became ill?
5. Would you go on a journey such as this to a place you did not know much about, and knowing your chance of returning home was very slim? Under what circumstances would you leave Hawaii and go to live on an as yet unexplored island?

Activities: Visit the Hokule'a at Kualoa Regional Park.

Listen to ocean specialists explain about the Hokule'a.

Discuss the above questions and possible answers or conjectures.

Read about the early Polynesians in National Geographic, Dec. 1974 issue. Your school has copies.

Call the Bicentennial Celebration Committee to see what other activities are going to take place. Call the Polynesian Voyaging Society to see how you can help with the Hokule'a or to learn more about the actual voyage from Hawaii to Tahiti in 1976.

See films on the early Polynesians.

HAWAII'S WA'A KAULUA

INTRODUCTION

1976 will herald the 200th anniversary of the signing of the Declaration of Independence. An official part of the United States Bicentennial Celebration will be Hawaii's voyage into the past. On March 8, 1975, a large double-hulled canoe (wa'a kaulua) was launched at Kualoa, Koolau Poko, Oahu, into the northern sector of Kaneohe Bay. The wa'a kaulua, a sixty-foot long replica of an ancient Polynesian voyaging craft, represents a year of construction and a tradition which has its roots, not in the contemporary recorded historical past, but in the antiquity of three to four millenium ago.

POLYNESIAN
VOYAGING
SOCIETY

The organization behind the canoe's construction is the Polynesian Voyaging Society, a non-profit community group dedicated to the research of and education concerning Polynesian voyaging canoes, navigation systems, and arts and artifacts.

RESEARCH

The project is based on scientific research. The Renaissance gave man the scientific inquiry approach in which a question is posed, a hypothesis formulated, and research done to produce and gather new data. The new data either refines or generates more hypotheses.

QUESTION OF
ORIGIN OF FIRST
HAWAIIANS

The central question of Polynesian history is: how were the islands of Polynesia first discovered and settled? How did the Polynesians, who lacked the tools, ships, and navigational instruments which made European exploration possible, spread over the expansive triangle formed by Hawaii, Easter Island, and New Zealand?

ONE VIEW

The dominant view was that Polynesian settlement resulted from intentional voyages of exploration and colonization. Since 1957, however, internationally known anthropologists, geographers, historians, and other social scientists have been polarized. In that year, one anthropologist declared that the discovery and settlement of Polynesia was an accidental process that occurred through a series of unintentional drift voyages and randomly directed group exile voyages.

Technological deficiencies in the way of navigational instruments, lack of keels or centerboards, and the use of vegetable fiber rope in place of metal fasteners convinced the scientist that long range and intentional two-way voyaging, involving exploratory probes followed by colonizing expeditions, was out of the question so far as the early Polynesians were concerned.

ANOTHER
VIEW

It soon became apparent from the heated controversy that there was very little technical knowledge. In the mid-60's, a number of researchers looked to experimental methods which would yield new data. Experiments utilizing and testing the Polynesian star navigation system, sailing, and paddling were conducted. The results indicate that: 1) drifting canoes were an unlikely explanation for settling Polynesia; 2) the Polynesian double-hulled canoe was well adapted for deep-sea voyaging under sail; and 3) the Polynesian navigation system was accurate enough for long-distance intentional voyaging. It would seem that while drift voyaging may have accounted for some island discoveries, the majority of Polynesian islands were discovered and settled through intentional sailing expeditions. This is especially true in Hawaii's case. A canoe drifting up from the Marquesas or Tahiti would have been pushed too far west by the prevailing easterly tradewinds.

NEED FOR
RESEARCH

There are traditional evidences of two-way voyaging between Tahiti and Hawaii, but they are challenged by scientists who require more extensive and realistic canoe sailing and navigational experiments. Only then can a general statement be made about Polynesian voyaging. The Polynesian Voyaging Society is attempting to gather the required data through vigorous testing by sailing its 60-foot long canoe from Hawaii to Tahiti and back, using only ancient and traditional navigation methods.

The sea trials before the voyage and the voyage itself should yield realistic data on the performance characteristics of a large double-hulled voyaging canoe. Pre-voyage trials will concentrate on how well the canoe sails to the windward, as such knowledge is essential for the two-way trip.

OBJECTIVES FOR RESEARCH

Research will be concentrated on four main areas:
1) Canoe performance, handling and seaworthiness;
2) Non-instrument navigation; 3) Diet and physiology;
4) Transportation of plants and animals.

CANOE PERFORMANCE AND HANDLING

During the sea trials, the canoe will be instrumented to compute the speed and direction of canoe travel relative to the true wind's speed and direction. Other performance notations will be made on varying steering, paddle angles, varying sail angle, and hull movement. These and other questions regarding the stability and seaworthiness of the canoe will constitute the most precise and comprehensive data on a Polynesian canoe's sailing performance.

CANOE DESIGN

The canoe's design represents the type of canoe that Polynesians would have used for long voyages in Eastern Polynesia some 800 years ago. The Polynesians favored a double-hulled vessel over the single-hulled outrigger canoe for long distance voyaging because of its stability and extra carrying capacity. The canoe is 60 feet long overall, with a beam of 15 feet. Each hull is 3.5 feet wide and 5 feet deep; the hulls are held together by ten cross-pieces. The canoe weighs 5 tons and has a carrying capacity of 7.5 tons. There are two masts, each with a Polynesian sprit sail, for sailing large steering paddles and sweeps are used for steering, and smaller paddles for auxiliary power. Although modern methods were used in the construction, much attention is given to duplicating traditional components and materials of the canoe.

NON-INSTRUMENT NAVIGATIONAL TECHNIQUES

Non-instrument navigation will mean extensive training for crew members, who will learn the traditional methods of Polynesian navigators such as the non-instrument sighting of stars for night steering and latitude determination; observation of sun, wind, and sea swells for day steering; and observation of swell-pattern interruption, flight patterns of island-based birds and other phenomena for detecting proximity of islands before they are directly visible. No charts or instruments of any kind will be carried aboard the canoe; but a comprehensive account of how these methods are combined and what degree of accuracy they allow in long range voyages will be recorded.

DIET AND PHYSIOLOGY

Physiological tests designed to record metabolic rates and water consumption will be calculated daily under a variety of sailing conditions. From this data, estimates can be made to provision the canoe accordingly. Fresh foods like bananas, sweet potatoes, fish, and coconuts make up a small part of the voyager's diet. The bulk of food consumed will be specially prepared to keep for months at sea: dried fish, partially dehydrated and fermented pastes made from taro or breadfruit, and pandana flour.

TRANSPORTATION OF PLANTS AND ANIMALS

Transporting plants and animals was an important function of Polynesian colonists. Potential home-sites generally abounded in protein sources like fish, seabirds, and seabird eggs. To supplement protein sources, the Polynesian carried pigs, dogs, and chickens on the voyages. Cultivated staples such as taro, sweet potatoes, yams and breadfruit were carried for future propagation; also carried were plants such as the kukui, hala, hau and koa. Methods of keeping animals healthy and plants viable are being studied.

LOGISTICS

Departure for Tahiti is scheduled for April, 1976. Although each leg of about 3,000 nautical miles should take about 25 to 40 days, six months will be allowed for the round trip to compensate for the waiting of favorable winds at each departure point. The canoe should return by August. At that time, it would be appropriate for us to remember Kamahualele's address at Hilo Bay when he arrived from Tahiti in Mo'ikeha's canoe:

Behold Hawai'i, an island, a people,
The people of Hawai'i.
The people of Hawai'i
Are the offspring of Tahiti.

DOCUMENTS CAPTURED AS RECEIVED

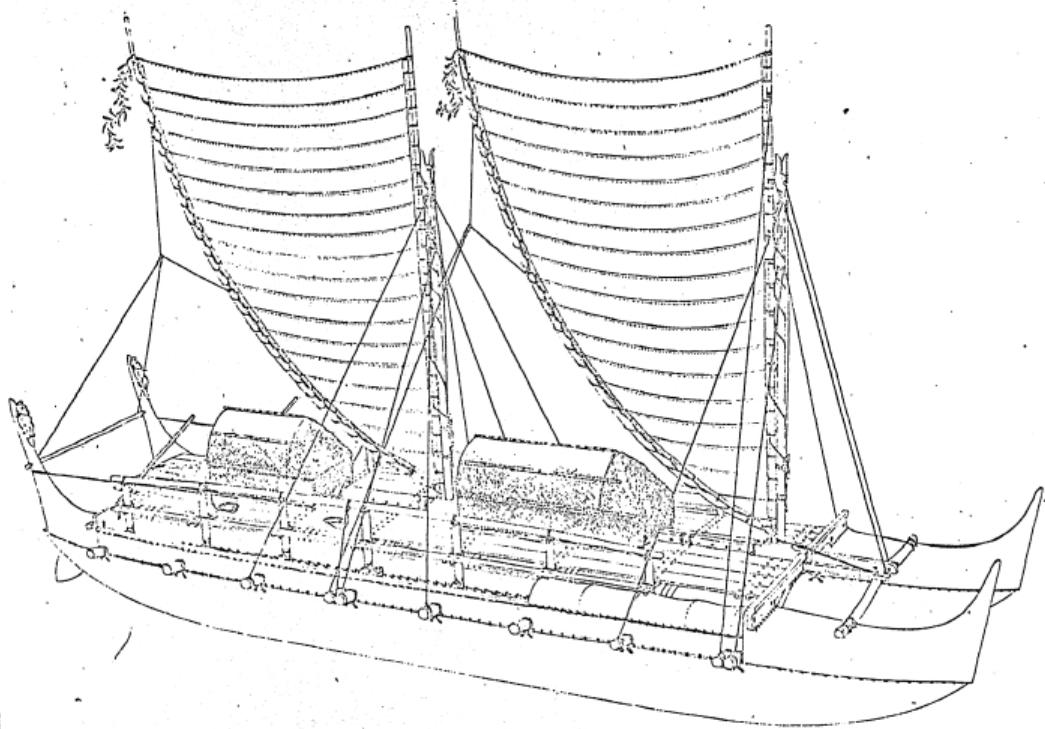


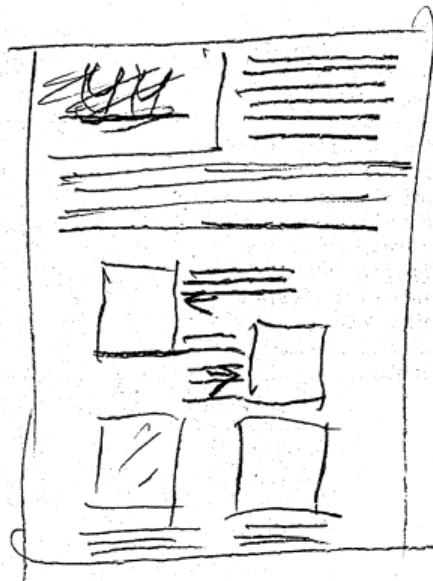
Chart II

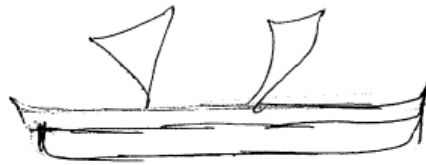
The Pol Voy 'Soc
PRESENTS

NA PUKE KAMALI'S
CHILDREN'S BOOKS

after following the
stairs to ~~the~~
for 3,000 miles

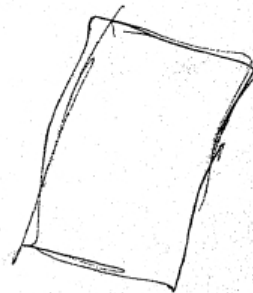
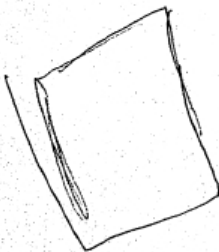
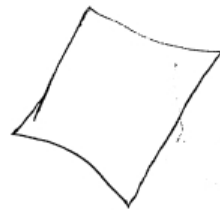
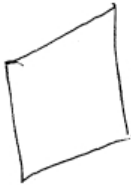
4 new
books





Hawaii's Bi-centennial 3,000
mile non-instrumental voyage
to Tahiti

Hawaii



Tahiti

PART V

SOCIAL AND CULTURAL DATA

A. Cultural Characteristics

Hawaiian Language.

Speaking. Of the 2,366 persons interviewed, 1,859 or 78.6% said they speak some Hawaiian.

As expected, higher percentage of the more than 50% Hawaiian ancestry group are able to speak Hawaiian. Most of those who speak Hawaiian had their parents as their source for learning. The next most acknowledged source was grandparents, with school being the least helpful. (See Tables 1 and 2.)

Understanding. For one to be able to understand a language does not pre-suppose that that person speaks the language. There are more who understand than speak Hawaiian, 82.0% versus 78.6%. Again, the more than 50% Hawaiian ancestry group has higher percent who understand (see Table 5). Table 6 shows that the parents and grandparents were the sources from which understanding of the language was learned. The data suggest that Hawaiian was probably spoken by the parents and grandparents in the home, but the children were neither encouraged nor expected to speak the language. As a result, the children acquired a passive knowledge. That is, they understood, but could not respond in Hawaiian.

Reading. This is a learned, trained skill, so it is not surprising that there is a lower percentage (61.4%) who can read than those who speak and understand Hawaiian. Table 7 shows that, here also, those with 50% or more Hawaiian ancestry have higher percent who can read Hawaiian.

It also is not surprising that the number of people who learned to read Hawaiian in school is higher than those who learned speaking and understanding of Hawaiian in school (see Table 8).

Hawaiian Skills/Arts.

Table 9 shows the ability and interest of the sample in each of the 17 Hawaiian skills/arts listed in the Need Survey questionnaire. Ability is scaled ordinally. Interest is separated into those who want to learn and those who are willing to teach, and those not interested. In general, there are slightly higher percentages who are interested in learning than not.

Taro growing - The ratio of those who are willing to teach to those who would like to learn is approximately 1:6. The teaching of this art can be readily implemented. Canoe building - The ratio of those who are willing to teach to those who would like to learn is 1:44. It would be less feasible to offer classes to teach this art, since there are not enough people to teach and it is a highly skilled art. Lei-making - The interest to learn lei-making does not seem to be as great as taro growing or canoe building. But the proportion of people willing to teach to those who would like to learn is greater than for the other two arts. Dancing - There is approximately one teacher to nine students. Hawaiian clubs, and community centers should be able to find ample number of teachers to offer classes on a regular basis. Woodcarving - The ratio of teachers to learners is 1:24 and about half the respondents are interested in learning. Weaving-netmaking - The second highest percentage of respondents want to learn this art. The ratio of teachers to students is 1:14. Food preservation - The interest to learn this skill far exceeds the other arts. The ratio of teachers to those interested in learning is 1:8. Musical instruments - There

are few who are willing to teach this skill (ratio of 1:45) but the percentage wanting to learn is the third highest. Feather work - The ratio of those who are willing to teach to those who are interested in learning is 1:52; over half the respondents wish to learn. Quilting - The ratio of those willing to teach this art to those who want to learn is 1:28, with a high 45% of the respondents not interested in learning. Poi pounding - The interest in learning poi pounding is moderate, yet the willingness to teach it is relatively high: a ratio of 1:5. Chanting - The ratio of teacher to pupils is 1:38. The interest in this art is not as great as for most others. Lua/lima lama - There are only a few persons who are willing to teach this art: a ratio of 1:98. Games/ulumaika - The interest here ranks high along with weaving, food, music and feather work. The ratio of teacher to learners is 1:14. Singing - There are eight persons wanting to learn to each person willing to teach. The relatively large number of people wanting to learn singing, dance and musical instruments reflects the Hawaiians' basic love for music. Surfing - Of all 17 skills, the smallest number of respondents want to learn this one (18.9%) This small number could probably be serviced by the existing classes provided by the State Department of Parks and Recreation. Canoe paddling - The second smallest number of persons wish to learn this skill (30.3%); however, the number of those who are willing to teach is relatively high.

Hawaiian History.

<u>Scale of Knowledge</u>	<u>Number</u>	<u>Percent</u>
Not at all	131	5.5
Not too well	1,332	56.3
Fairly well	798	33.7
Very well	105	4.4

A great majority (94.5%) of the sample said they have some knowledge of Hawaiian history even though over half does not know it well. Regardless of whether a great deal or just some Hawaiian history was learned, the fact that it was even learned is significant, considering the fact that it was not taught widely in the school systems.

Ho'oponopono.

<u>Practice</u>	<u>Number</u>	<u>Percent</u>
No, not at all	1,475	62.3
Yes, sometimes	568	24.0
Yes, regularly	323	13.7

Learning Source

Did not learn	1,348	57.0
Parents	475	20.1
Grandparents	219	9.3
Workshop	17	0.7
Other	307	13.0

Of the sample, 43.0% have learned Ho'oponopono (a unique Hawaiian family council), but only 37.7% are practicing it regularly or occasionally. Of the 57.0% who did not learn, it is unfortunate that this survey did not find out how many were interested in learning to practice Ho'oponopono.

B. Socio-Cultural Relationships

Chart 1 shows the positive and negative significant associations between the socio-cultural variables in the Needs Survey. This type of analysis does not show a cause and effect relationship, but only indicates which variables are found together more often than would be expected by chance alone. If there is no significant relationship or association, then there are just as many persons having both variables as there are persons only having one of the variables. It is important to know that all these associations, although significant, are weak. This means that no one variable is always associated with another, but that there are patterns of variables that must be examined.

There are some interesting relationships in these data that should be investigated through further analyses. For example, there is a significant amount of people who are not satisfied with neighborhood services and facilities and who think there are many big problems in their neighborhoods who are also very interested in a few or more of the following Hawaiian community programs: regular newspaper for Hawaiians, regular radio and TV specials on Hawaiian cultures, area and community meetings, learning to organize community action, and classes in Hawaiian skills/arts (see Table 10). Furthermore, a significant number of these people, interested in community efforts, have professional and white-collar jobs indicating there are skilled individuals who are motivated towards improving the Hawaiian condition.

Another interesting relationship refers to those who want to live off the land and/or sea. The sample is divided by the criteria of

Number-in-household and household income into three groups: welfare eligible, gap group, and middle-upper. There are a significant number in the gap group who want to live off the land and/or sea and who are doing so now. Significant also is that many who want this life style are from the ranks of the skilled and semi-skilled and not from the professional and white-collar jobs.

The following Hawaiian abilities were counted for each individual: taro growing, canoe building, lei-making, dancing, wood carving, weaving-net making, food preservation, making musical instruments, featherwork, quilt-Kapa making, poi pounding, chanting, art of lua or lima lama, games, singing, surfing, and canoe paddling. The more of these a person knows then he or she is more likely to want to learn more of them. Furthermore, there is a significant group of these people, wanting to learn, who tend to be younger and have less amount of Hawaiian ancestry. They tend to have high aspirations also, in that they already have higher educations, are currently attending some form of class or workshop, are employed, more likely in the visitor industry, but would like to work in white-collar and professional jobs. It seems that these people see having traditional Hawaiian skills as one other method for self-improvement. On the other hand, those people who want their children to learn Hawaiian skills tend to be older and have more Hawaiian ancestry.

C. Inter-relatedness of Socio-Cultural Data

A component analysis was conducted using 57 variables related to social and cultural matters as well as family economic situation and geographic information. This analysis showed that about 63.7% of the variance in the data was being accounted for. This percent of variance was spread over a large number of factors. In the unrotated solution using a 1.0 eigenvalue cut-off point, 20 factors accounted for 63.7% of the total variance. The first factor, which normally represents the strongest pattern in the data, accounted for only 8.2% of the variance. This result indicated that there are a number of distinct patterns of traits among the sample group.

In order to clarify these patterns as much as possible, a varimax rotation solution was used. This reduced the number of important factors to 12, which accounted for 80% of the original 63.7% of variance. In this solution the following patterns were defined by the first six factors.

Factor 1 (14.9% of variance) Family Situation

<u>Variable</u>	<u>Loading</u>
now married	.71
desire to learn Hawaiian skills	.69
number in nuclear family	.61
number of living children	.47
age	.26
never married	-.87
dependent status	-.69

At one end of the dimension are those persons who are now married, have a desire to learn Hawaiian skills, have a large nuclear family and

a large number of living children and tend to be older.

At the other end are persons who have never been married, are dependents in a family and are younger.

Factor 2 (11.2% of variance) Geographic Location

<u>Variable</u>	<u>Loading</u>
place lived most	.84
place of birth	.66
Hawaii (Big Isle)	.61
Kauai	.25
Oahu	-.87

At one end are persons who were born on the outer islands and who have lived there most of their lives. This is especially true of persons on the Big Island and on Kauai.

At the other end are the persons who live on Oahu, were born here and have lived most of their lives on Oahu.

Factor 3 (9.7% of variance) Services and Problems

<u>Variable</u>	<u>Loading</u>
not satisfied with neighborhood services	.93
feels there are big problems	.21
Molokai	.14
satisfied with neighborhood services	-.85

At one end are persons who are not satisfied with their neighborhood services and who feel that they have a number of big problems in their community. This tendency is highest on Molokai.

At the other end are persons who are satisfied with the services available to them.

Factor 4 (9.0% of variance) The Elderly

<u>Variable</u>	<u>Loading</u>
age	.80
number of living children	.51
ethnicity	.42
Hawaiian ancestry	.40
drop outs	.35
highest grade completed	-.51
desire to learn Hawaiian skills	-.41

At one end are persons who are older, have a large number of living children, tend to identify with the Hawaiian ethnic group and are more Hawaiian by ancestry. They also tend to have children who have dropped out of school.

At the other end are younger persons not of Hawaiian ancestry*who have completed a higher number of grades in school, but who also want to learn Hawaiian skills.

Factor 5 (6.3% of variance) Outer Isle Division

<u>Variable</u>	<u>Loading</u>
Kauai	.86
area type	.27
Hawaii	-.54

At one end are persons from Kauai who tend to live in a rather rural setting.

At the other end are the persons from the Big Island who are less rural.

* There are 83 persons with no Hawaiian ancestry in this sample who belong to families with Hawaiian ancestry and were on the Alu Like Registry.

Factor 6 (5.2% of variance) Hawaiian Cultural Traits

<u>Variable</u>	<u>Loading</u>
interest in having Hawaiian culture provided through media	.46
have abilities in Hawaiian skills	.40
gather food	.39
want to return to living off the land & sea	.39
want to learn Hawaiian skills	.37
practice Ho'oponopono	.24

This is a factor that identifies persons who have or are interested in elements of the Hawaiian culture. These are persons who have an interest in having information about the Hawaiian community transmitted through the media (see Table 11), have abilities in a variety of Hawaiian skills, tend to gather their food by non-commercial means, would like to return to living off the land and the sea, who want to learn more Hawaiian skills and who practice Ho'oponopono.

Based on this analysis, the following implications are indicated:

(1) First, the relatively large number of factors found in the analysis points to a rather heterogeneous sample group. This suggests that programs will either have to be focused specifically on special groups and needs or will have to be broad in content covering a variety of interests and needs.

(2) There are a number of patterns that point to the more traditional aspects of Hawaiian culture. This suggests that the more traditional elements of the Hawaiian population may have to be dealt with separately in terms of programs designed to fulfill their needs.

(3) Another major pattern found in these data indicates that persons on the neighbor islands, especially on Hawaii and Kauai, tend to be born there and continue to live there. It seems that in this sample there does

not appear to be much inter-island movement that is permanent. This suggests that future program implementation may be more successful if they are island-specific.

(4) There appears to be greater dissatisfaction with neighborhood services and facilities together with greater awareness of significant problems among the people on Molokai than people on the other islands. This suggests that special efforts -- tailored specifically to needs on Molokai -- may be of high priority.

Table 1. Ability to Speak Hawaiian by Ancestry

Scale	50% and More		Ancestry Less Than 50%		Other	
	No.	Pct.	No.	Pct.	No.	Pct.
Only Basic	872	46.9	619	33.3	35	1.9
Fairly Well	189	10.2	50	2.7	2	0.1
Very Well	86	4.6	6	0.3	0	0.0
Total	1,147	61.7	675	36.3	37	2.0

Table 2. Sources from Which Speaking Hawaiian Was Learned by Ancestry

Sources	50% and More		Ancestry Less Than 50%		Other		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
From parents	598	31.6	279	14.7	8	0.4	885	46.7
In School	81	4.3	93	4.9	3	0.2	117	9.4
Other, relatives	483	25.5	319	16.9	28	1.5	830	43.9

Table 3. Hawaiian Spoken in the Past by Ancestry

Hawaiian Spoken in Past	50% and More		Ancestry Less than 50%		Other	
	No.	Pct.	No.	Pct.	No.	Pct.
No Response	3	0.1	1	0.0	0	0.0
Never	315	13.3	480	20.3	42	1.8
Sometimes-Rarely	504	21.3	267	11.3	7	0.3
Often	553	23.4	170	7.2	4	0.2
Other	13	0.5	7	0.3	0	0.0

Table 4. Hawaiian Spoken at Present by Ancestry

Hawaiian Spoken at Present	50% and More		Ancestry Less than 50%		Other	
	No.	Pct.	No.	Pct.	No.	Pct.
No Response	3	0.1	1	0.0	0	0.0
Never	941	39.8	766	32.4	45	1.9
Sometimes-Rarely	371	15.7	142	6.0	7	0.3
Often	69	2.9	14	0.6	1	0.0
Other	4	0.2	2	0.1	0	0.0

Table 5. Ability to Understand Hawaiian by Ancestry

Scale	50% and More		Ancestry Less than 50%		Other	
	No.	Pct.	No.	Pct.	No.	Pct.
Only Basic	699	36.0	576	29.7	29	1.5
Fairly Well	326	16.8	93	4.8	4	0.2
Very Well	188	9.7	24	1.2	1	0.1
Total	1,213	62.5	693	35.7	34	1.8

Table 6. Sources from Which Understanding Hawaiian Was Learned by Ancestry

Source	50% and More		Ancestry Less than 50%		Other		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
From parents	631	32.2	279	14.2	8	0.4	918	46.8
In School	76	3.9	85	4.3	1	0.0	162	8.2
Other, relatives	514	26.2	341	17.4	28	1.4	883	45.0

Table 7. Ability to Read Hawaiian by Ancestry

Scale	50% and More		Ancestry Less Than 50%		Other	
	No.	Pct.	No.	Pct.	No.	Pct.
Only Basic	568	39.1	376	25.9	24	1.7
Fairly Well	255	17.6	81	5.6	2	0.1
Very Well	128	8.8	17	1.2	1	0.0
Total	951	65.5	474	32.7	27	1.8

Table 8. Sources From Which Reading Hawaiian Was Learned by Ancestry

Sources	50% and More		Ancestry Less Than 50%		Other		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
From parent	419	27.6	160	10.5	4	0.3	583	38.4
In School	114	7.5	107	7.1	5	0.3	162	14.9
Other, relative	450	29.7	237	15.6	21	1.4	883	46.7

Table 9. Ability and Interest of the Sample in Hawaiian Skills or Arts

Skills or Arts	Ability						Interest							
	Lots		Some		None		Like to Learn		Able to Teach		Willing to Teach		No Interest/Time	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Taro growing	511	21.6%	911	38.5%	944	39.9%	1,007	42.6%	212	9.0%	181	7.7%	966	40.8%
Canoe building	62	2.6	271	11.5	2,033	85.9	1,091	46.1	33	1.4	25	1.1	1,217	51.4
Lei making	689	29.1	1,328	56.1	349	14.8	981	41.5	316	13.4	280	11.8	789	33.3
Dancing	313	13.2	932	39.4	1,121	47.4	1,057	44.7	130	5.5	113	4.8	1,066	45.1
Wood carving	109	4.6	460	19.4	1,797	76.0	1,167	49.3	39	1.6	50	2.1	1,110	46.9
Weaving-net making	239	10.1	699	29.5	1,428	60.4	1,398	59.1	116	4.9	96	4.1	756	32.0
Food preservation	443	18.7	1,057	44.7	866	36.6	1,431	60.5	235	9.9	175	7.4	525	22.2
Musical Instruments	67	2.8	337	14.2	1,962	82.9	1,343	56.8	45	1.9	30	1.3	948	40.1
Feather work	85	3.6	373	15.8	1,908	80.6	1,365	57.7	52	2.2	30	1.3	919	38.8
Quilting	138	5.8	530	22.4	1,698	71.8	1,193	50.4	59	2.5	43	1.8	1,071	45.3
Poi pounding	442	18.7	749	31.7	1,175	49.7	954	40.3	206	8.7	175	7.4	1,031	43.6
Chanting	59	2.5	331	14.0	1,976	83.5	976	41.3	25	1.1	26	1.1	1,339	56.6
Lua/lima lama	33	1.4	169	7.1	2,164	91.5	1,072	45.3	14	0.6	11	0.5	1,269	53.6
Games/ulumaika	158	6.7	759	32.1	1,449	61.2	1,310	55.4	89	3.8	84	3.6	883	37.3
Singing	691	29.2	1,191	50.3	484	20.5	1,356	57.3	201	8.5	175	7.4	634	26.8
Surfing	294	12.4	585	24.7	1,487	62.8	446	18.9	145	6.1	109	4.6	1,666	70.4
Canoe paddling	335	14.2	563	23.8	1,468	62.0	716	30.3	143	6.0	125	5.3	1,382	58.4

Chart 1. Positive and Negative Associations Between Selected Cultural Variables

	Has Ability To Speak Hawaiian	Has Abilities In Hawaiian Skills	Practices Ho'oponopono	Is Member Of Hawaiian Club	Wants To Live Off Land Or Sea	Obtains Food Now From Land Or Sea	Would Use Land For Agriculture	Wants to Learn Hawaiian Abilities	Has Interest In Hawaiian Community Efforts	Wants Children To Learn Hawaiian Abilities
Has ability to speak Hawaiian	na	+	+	+		+		-	+	
Has abilities in Hawaiian Skills	+	na	+	+	+	+		+	+	
Practices ho'oponopono	+	+	na	+	+	+			+	
Is member of Hawaiian Club	+	+	+	na						+
Wants to live off land or sea		+	+		na	+	+	+	+	
Obtains food now from land or sea	+	+	+		+	na	+	+	+	
Would use land for agriculture					+	+	na	+	+	
Wants to learn Hawaiian abilities	-	+			+	+	+	na	+	
Has interest in Hawaiian community efforts	+	+	+		+	+	+	+	na	
Wants children to learn Hawaiian abilities				+						na
Sex (high=female)						-		+		+
Age	+			+		-		-		+
Amount of Hawaiian Ancestry	+	+	+	+	+	+		-	+	+
Number of living children	+			+						+
Residence:										
Hawaii			+			+				
Kauai						+		-		
Lanai				+		+		+		
Maui			-							
Molokai	+			+		+				
Oahu				-		-				
Education level	-	+			-			+		-
Attended private school		+		+		-				
Attending classes, workshops, now		+						+		
Welfare Status Group										
welfare eligible					+					
gap					+	+				+
middle-upper					-					
Is employed	-							+		+
Occupation										
visitor industry, farm laborer								+		
professional, white collar	-				-	-			+	
skilled and semi-skilled					+					
personal services, police, fire, laborer										
Job Wanted										
visitor industry, farm laborer								-		
professional, white collar		+				+		+		
skilled and semi-skilled										
personal services, police, fire, laborer										
Not satisfied w/neighborhood services and facilities		+	+			+		+	+	
Thinks neighborhood has big problems		+	+		+			+	+	

Note: "+" indicates a positive and "-" indicates a negative significant Pearson correlation coefficient. Blanks indicate that there is not a significant correlation between the two variables. For more clarification, see text. na = not applicable

Table 10. Number and Percent of Sample Who Are Interested in Various Hawaiian Programs if Available

Programs	Not At All		Some		Great Deal	
	No.	Pct.	No.	Pct.	No.	Pct.
Regular newspaper for Hawaiians	160	6.7	683	28.9	1,523	64.4
Regular radio & TV specials on Hawaiian culture	80	3.4	540	22.8	1,746	73.8
Area/community meetings	431	18.3	1,153	48.7	782	33.1
Learning to organize for community action	612	25.9	987	41.7	767	32.4
Classes in Hawaiian language, culture, etc.	195	8.3	541	22.9	1,630	68.9

Table 11. Number and Percent of Sample Who Learned from Various Media Sources

Sources of Learning	Not At All		Some		Great Deal	
	No.	Pct.	No.	Pct.	No.	Pct.
Radio	483	20.4	1,326	56.0	557	23.5
Television	326	13.8	1,247	52.7	793	33.5
Newspaper	216	9.1	1,021	43.2	1,129	47.7
School	706	29.9	798	33.7	862	36.4
Reading on own	184	7.8	937	39.6	1,245	52.6

PART IV

EDUCATIONAL AND SOCIO-ECONOMIC DATA

A. Education and Economic Development

Education

Twenty items on the Needs Assessment Survey that dealt with education were tabulated and six items on which open-ended responses were made were identified by case and 25% of the cases pulled and read. The picture that emerges of current educational achievement levels, current educational involvement, satisfaction with the educational system, educational goals for the children of the respondent, and specific curricular and other changes is presented.

The pattern of educational achievement of the respondents is quite steeply clustered around the 12th grade. Thirty-five percent of the respondents indicated it as their highest year of formal schooling. The next highest category was 14th year (community college) with 12%. The number who attended more than the 16th year is 11% with 17% being the figure for the general population in Hawaii. After that point the separate category numbers become insignificantly small. However, the total of 108 who went beyond four years of college could represent a depository of resources. These 108 are well distributed among the islands with Oahu claiming only 60 of them and the Big Island, 22.

The educational base of the community, while possibly lower in overall attainment than the community at large, is by no means weak. It compares very favorably with other native American populations on the mainland and in Alaska and even with many inner-city minority groups. Finding 71.3% of the adult population to have high school attendance or beyond

would not be expected in many urban and rural mainland communities.

The question inquiring about current participation in an educational activity yielded some very interesting results, especially as they provide an indirect clue to the degree of commitment to the educational goals.

The 12% rate for current attendance at an institution of formal education and 30% for current involvement in a non-formal learning activity is of significance for program design. Clearly this statistic, especially as backed up by the numerous studies on the discrepancy between Hawaiian learning styles and typical formal teaching methodologies, points to an opportunity for the development of non-formal learning situations to serve the Hawaiian community.

Oahu runs above average in its involvement in these learning activities. Oahu also runs slightly higher in the percentage reporting continuing attendance at an institution of formal learning. This reflects the greater availability on Oahu and matches the general coincidence of urbanism and continuing education. Molokai and Lanai run the highest in the percentage of respondents currently involved in non-formal learning situations.

The question about what kind of education the respondent would like to have had is very revealing about the aspirations of the group. Although we must not take the actual measures as indicating the levels that would have been achieved by this group were the barriers cited removed, it is legitimate to take the response as an indication of the respondents' goals and how highly they value education. Of particular note are the three gaps between actual and desired education

and desired education for their children (see Chart 1). These are the gaps to be filled if the assessed needs are to be satisfied.

In terms of ideals, the respondents projected a college attendance rate well above their actual achievement, setting 26% as an ideal against 7% as the actual. It would be difficult to argue that this group suffers from any lack of high goals or expectations. The data point out a massive gap between expectation for self and actual achievement.

In answer to this same question of ideal education, many respondents by-pass the 10 choices offered (see Table A-1) and enter their own statements (13%). A hand analysis of 30% of these comments yielded the following: 29 of the remarks were "one of a kind" responses. 14 were inappropriate to the question asked. Of the remainder, the groupings were:

Law, Medicine, Veterinary, CPA, and other Professional Schools	18
Hawaiiana	18
Vocational	8
Nursing	5
	<hr/>
	49

If we assume that volunteered statements represent only a portion of the responses that would have occurred had the category been provided, there is some evidence here of an interest in the professions and in Hawaiiana

at least as great as that in the three lowest ranking of the provided categories.

The island of Molokai consistently out-ranks all others in the percentage of interest expressed in the non-university educational areas. Its figures are above the percentages for all islands on the items of Community College, Business School and Technical Schools. Only Lanai outranks it by a few points on Apprentice Programs.

When asked for the main reason why the respondent did not get the education he would like, the largest single reason given is "no money", accounting for 31% of the replies. Oahu scores lower than all of Hawaii on this need for finances (25%), possibly reflecting either the economic status of the respondents residing there or the greater access to publicly subsidized education available there, or both. Molokai, a community that has shown up previously as a likely target for educational projects, runs highest (44%).

The second largest category is again "other". This total "other" sample of 519 was analyzed by randomly selecting and reading the responses on 131 questionnaires (25% of the total). The most interesting finding was that 32 indicated as the reason for not pursuing their studies that the subject in which they were interested was not available to them. Again, the significance of this finding is especially apparent with a community like Molokai where the total number of participants in any educational program might be quite small. Other findings from the reading of a sample of the "other" items were the indication of "family and personal problems" as the reason for not completing and, again, the problem of money.

Interpreting the question "What kind of education would you want for your children?", depends somewhat on the degree to which one reads it as being a source of data about the educational needs of the children: and thus information for the future planning, or as the projections of the parents: and thus a guide to the parents' felt needs more than a picture of the children's future demands. The single most glaring statistic is the score for "same as self". Only 4.6% of the group would wish upon their children the same education as they themselves received. This figure is a good counter-balance to the 26% figure for "same as I had" on the inquiry about the respondent's ideal education for self. Clearly, the great majority of those interviewed see a better education for their children than the one they themselves received as a very important goal.

Another portrayal of the generational leap that is hoped for appears when the figure for hoped for college attendance by their children is plotted against the respondents' actual and desired college attendance for self (see Chart 1). If we assume that college attending is a behavior that is relatively closely predicted by the pattern of college attending of the parents than it is obvious that massive and extremely effective programs would be needed to close the gap.

The category "anything they want" is very curious. At 20% it is the second largest category. Of particular interest is not only the high response to this choice, but the concentration of that response in Hawaii and on Oahu.

One-quarter of the 355 responses that indicated "other" were pulled and read. Reading the actual comments makes it clear that two rather different thoughts may be being expressed when "anything they want" is checked off. One group of respondents may mean "anything" in the emphatic sense; in the sense of "give them everything they need." This is supported by the fact that another 21% of those who volunteered a comment stated simply "the best or "the most."

The public schools receive a relatively poor evaluation with 15.8% of the respondents rating them "very good" and 38.1% "fairly good". More than one in five finds them either "not very good" or "not good at all." Generally, the low scores and high dis-interest (11% gave "don't know" as their response) suggest shying away from program strategies that look like more-of-the-same.

There is a series of questions to establish where the school children are: in public schools, in private schools, or not in any school at all. From a program strategy design point probably the most significant finding in this series is the 11.7% of the children being sent to private schools. As expected, this runs higher on Oahu (16.9%) where more private schools are located but is significant on all islands when interpreted in light of the availability of private schooling on those islands. The percentages become even more dramatic when those who have no school-age children are

held out of the sample. The 278 who attend private school represent 15% of the school age children. This is a relatively high rate of private school attendance, especially in light of the economic circumstances of the families sending some of these children. We can venture a guess that as a percentage of the total number of private school attendees from a given economic strata at or below the median income for the state, the Hawaiian children are represented well above their general distribution within that economic group.

The two questions aimed at determining the drop-out rate for Hawaiian children confirm each other's findings in that the 6.9% reported drop-out rate in one question complements the 92.8% "no children dropped out" in the other question. Previous experience has shown, however, that questions like this often yield incomplete results. The definition of "drop out" varies greatly. For some it connotes any churlish youngster, even one who is technically still in school. Some lump children who leave one school to attend another, who leave a traditional school to attend an off-campus non-traditional program, or who take a reduced school day to work in the afternoons, as "drop-outs".

The problem of drop-outs is serious no matter what the official or unofficial rate simply because it represents the antithesis of these parents' desires for their children. The phenomenon of drop-outs is of significance to a community in a direct relationship to how much that community values education. The data cited earlier and many other indicators point to the need for other-than-usual learning approaches for the

Hawaiian community.

Since the drop-out threshold congregates at the 11th grade, all program strategies targeted on achieving levels of completion beyond the 11th grade and all program strategies focusing on drop-outs must aim their efforts at affecting children below the age of 16, preferably well below.

Of the 185 drop-outs, 78% of their parents felt that nothing could have been done to prevent them from dropping out. Fifty percent of these "YES" responses were pulled and analyzed for comments. The comments fell into four distinct groups: lack of discipline; school showed no interest in child; comments indicating a possible special education problem were the three predominant reasons.

There is evidence of strong and broadly shared desires for educational achievement for the school-age children of the respondents.

How important is it that your children finish high school?

Most Important	88.3%)	
)	96.7%
Important	8.4%)	
Not Important	1.6%		
Undecided	1.5%		

Almost all the parents with school-age children hold the completion of high school as an important goal/expectation for their child. When asked the same in terms of college attendance, the figures show 78% favoring college attendance. Here the split around the word "most" is more even with 44.6% rating college "most important" and 33.4% rating it simply "important". The 44% who find it "most important" probably are the same sub-group who make up the 48% who picked college as the educational ideal for their children.

When respondents with children were asked if they would like their children to learn the following subjects, very high percentages answered affirmatively.

<u>Subject</u>	<u>Percent</u>
Hawaiian Language	97
Hawaiian History	98
Hawaiian Crafts	96
Hawaiian Music	98
Hawaiian Dance	93
Hawaiian Sports	93

All of these percentages are so high and close together that there is little need to differentiate among them. Respondents were asked to go back and rank the six. A quick analysis of the ranking, accounting for both the number who rated an activity high on the scale and discounting it by the relative weight of its low ranking reveals the following priorities.

- First: History
- Second: Music
- Third: Language
- Fourth: Crafts
- Fifth: Sports
- Sixth: Dance

Summary

Educational needs cluster around four major headings: 1) Drop-outs and low attainment, 2) the need for new and different courses and programs, 3) the need for continuing education and re-training, and 4) the gap between the current cost of these educational services and

the present ability to pay of the respondents. The picture that emerges is one of a people with a profound respect for the importance of education, a culture supportive of learning (especially in non-Western subjects and delivery styles) and frustration in attempting to have these needs met by the available education system.

The two major findings are (1) the educational goals of the population are high, and (2) the lack of accomplishment of these goals has been due mostly to the fact that the existing state services have not been oriented toward them.

Economic Development

Although there were no economic development questions as such on the survey instrument, 12 items were chosen for analysis to arrive at information on the economic development issue. Analysis of these responses generally revealed a pattern in which, with the exception of the Molokai respondents, concern with economic development in the business sense is overshadowed by other issues including the desire for rural lifestyles and values. While the analysis of the 12 economic-related items of the survey cannot be expected to show the total picture for potential economic development, it does provide some indication of the ways in which Hawaiians hope to influence their individual economic status through increased employment levels. It is notable that the overall preferred employment of the respondents focuses on middle level jobs in the public sector (e.g., teachers, social workers, police and fire, nurses) while comparatively fewer selected private sector occupations. Of the 99 preferred occupation classifications, those receiving a 1% or more of the responses are:

<u>Rank</u>	<u>Occupation</u>	<u>Percent</u>
1	Teachers, except College and University	6.0
2	Secretaries, Stenographers and Typists	4.7
3	Social and Recreational Workers	4.0
4	Other Professional, Technical and Kindred	3.2
5	Registered Nurses, Dieticians and Therapists	2.7
6	Protective (Police and Fire)	2.7
7	Self-employed	2.5
8	Excavating, Grading and Machine Operators	2.4
9	Food Service Workers	2.4
10	Airline	2.3
11	Managers and Administrators (Except Farm)	2.2
12	Carpenters and Electricians	2.0
13	Writers, Artists and Entertainers	1.8
14	Farmers and Fishermen	1.5
15	Personal Service Workers	1.5
16	Other Service Workers	1.3
17	Mechanics and Repairmen	1.3
18	Accountants	1.2
19	Tour Company	1.1
20	Physicians, Dentists and Related Practitioners	1.0
	Sub-total	<u>47.8</u>
	79 Other Classifications	24.7
	No Response	27.5
		<u>100.0</u>

Two and one-half percent indicated that they preferred self-employment.

Molokai ranks proportionally higher on this item.

With the exception of these 2.5% who indicate they preferred self-employment, the evidence leads to the conclusion that there is either a lack of interest in or lack of understanding of the concept of economic development. This is most clearly demonstrated by the answers to questions basic to many economic development plans: (1) preferences for the use of newly acquired land and (2) the creation of new jobs.

Fifty-two percent gave no response to the question about the kind of job that they would like to see in their community. This may reflect an unfamiliarity with the concept of "creating" jobs in a community. Most

people who are not involved in either government or business tend to think of the occurrence of jobs as a natural phenomenon, not realizing that business and government actions can attempt to bring jobs to communities. Of those who did answer, their preferences rank as follows:

<u>Rank</u>	<u>Category</u>	<u>Percent</u>
1	Service Work - Community Action	18.2
2	Professional-Management	9.5
3	Visitor Industry	5.7
4	Farm Workers	5.7
5	Laborers	3.0
6	Crafts-Process	2.7
7	Clerical	1.6
8	Operatives-Transportation	.9

On the question which asked "If you were given some lands because you are a Native Hawaiian, what personal use would you make of these lands?", two responses dominate. The overwhelming first choice is to build a house and live in it. The equally dominant second choice is to grow food for the owner's family. The various profit-oriented choices drew almost no responses at all.

Chart 2 lists the 20 preferred occupations specified by the respondents. Only five can be entered without some form of study or training beyond high school. Eight of the 20 require training of the type usually provided by non-degree and apprenticeship programs of community colleges or through special, usually proprietary, trade schools. Three require advanced professional post-graduate work.

Fifty-seven percent of those desiring another job indicate that they would need retraining in order to enter into that job classification. Seventy-two percent indicate that they would utilize educational and employment counseling if it were available in their neighborhood. As

might be expected, this runs higher outside of Oahu and Hawaii where some counseling is available from state and private agencies. Molokai shows the strongest interest.

More Hawaiians feel that their being Hawaiian has helped them than feel that it has hurt them in employment. Thirty-five percent indicated that it "helped" and 26% indicate that it has "not helped", and 28% indicated "neither".

Of the 1,367 respondents who live on the neighbor islands, the percentage of those who would prefer to remain on a neighbor island rather than move to Oahu for a job is 92.8%. Of the 999 respondents who live on Oahu, 51.8% responded that they would be willing to relocate off of Oahu to one of the other islands for a job.

Fifty-one percent of the respondents own their own homes. This is a favorable statistic, especially in light of the generally low incidence of home ownership in Hawaii and the lower rates for mainland non-white groups.

Summary

Although there are the 2.5% who indicate self-employment as their preferred occupation and the desire for upward economic mobility is apparent in the job classifications chosen, the usual concept of economic development is not supported by the data. The high-response desired jobs such as teachers, secretaries, social and recreational workers, professionals, nurses, police and fire, etc. are not the types of occupations that most economic development strategies foster. It is more accurate to say that, rather than supporting a strong understanding of

and desire to participate in economic development efforts, the respondents express a strong desire to become better off and aspire to middle-income, high-status occupations. This is not to say that an interest in economic development does not exist, rather, it indicates an ambiguity between the modern and the traditional thinking on economic development. This is substantiated by the 73.4% of the sample who would like to live off the land and sea and 82.4% who think that Hawaiians in general should do so. Also, about half of the sample indicate that they do lots or some of each of the following to obtain food: gardening, fishing, hunting, gathering, sharing (see Tables A-2 and A-3). As mentioned earlier, no specific economic development questions as such were asked of the respondents. Further needs assessment targeted on this area is necessary.

The next section presents the inter-relatedness of the education and economic development data with the social data in the Needs Survey.

B. Educational, Economic, and Social Patterns

Respondents in the Needs Assessment Survey were asked, among other things, for information about their age, families, place of residence, ancestry, jobs, income, the education of themselves and their children, housing, and their knowledge of traditional arts and skills. Data from 62 variables on these topics are correlated to seek patterns of inter-relatedness. A pattern is found when the correlations cluster in such a way that those within the cluster are more correlated to each other than with any other. The important thing to remember in thinking about them is that they represent kinds of information that tend to go together. Technically, what is reported herein is a component analysis, and each component is referred to here as a pattern.

The analysis reveals that there are ten patterns for the men interviewed in the study, and eight for women. In the case of men, the patterns account for about 46% of the variability and for women, about 44%. That is, there is a great deal of variability reflected in this information, slightly more in the case of men than in the case of women. On the other hand, it is not unusual in social and economic data that as many patterns as these are necessary in order to account for about the same amount of variation.

What can we learn from the description of each pattern and all of the patterns put together? One thing is a rough idea of the relative importance of these patterns according to where they rank in the list of patterns (see Summary of Patterns). Those that rank high account for more of the variation than those that rank low.

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Part IV. ⁽¹⁾ (A Summary Statement)

The Hokule'a, a double-hulled canoe, was the main character in an experiment conceived by ~~a~~ ^a non-profit organization, the Polynesian Voyaging Society (PVS). Hokule'a was designed to test the controversial questions of ancient Polynesian navigation and whether these voyages ~~were~~ ^{were} ~~accomplished~~ between Tahiti and Hawaii, accomplished at will or by accident. The conclusion of the Hokule'a's journey is the beginning of tremendous educational opportunities for the people of Hawaii.

Hokule'a has stirred so much interest that many educators and community groups have asked for materials and speakers to share the experience of the 6,000 mile journey from Hawaii to Tahiti and back. Requests ^{continue to} pour into the office of the PVS from ~~throughout~~ the State of Hawaii, the mainland United States and from abroad, asking for resource people and materials on subjects ^{including such as} ~~including~~ canoe construction, non-instrument navigation, food preservation, herbal medicine, plants and cord-making, to name a few. Thus far, PVS remains as the only source of information in Hawaii on early Polynesian voyaging which is based on an actual experiment.

The Education Committee of the Polynesian Voyaging Society proposes a project which includes ^{developing} ~~developing~~ curriculum, using Hokule'a as the focal point of interest.

A major goal of the committee is to utilize the canoe as a floating classroom, sailing to different areas of the islands and conducting workshops that can enhance the educational and cultural experiences of school children with emphasis on training teachers and community leaders.

Summary page 2
Draft -

~~Experienced~~ Experienced crew members who already navigated the canoe will help with the floating classroom. Hawaiian culture experts will provide training of teachers and community people so that these skills will be continued.

During planned workshops, Hawaiian culture specialists will work in concert with crew members to provide training of teachers and community people so that these skills will be continued. The Hokule'a, being the main focal instrument, will provide the real-life emphasis, and with resource materials ~~will provide~~ ^{the} source of ^{cultural and exchange} enrichment ~~for all~~ ^{by} the people of Hawaii.

ROUGH DRAFT

Part IV. (2) History of the Project

This project ~~was~~ continues to be more than an adventure. It represents a well-planned experimental approach to one of the most intriguing and disputed questions in Polynesian history; how were the many islands of Polynesia first discovered and settled. ^{and} It became apparent from the controversy ^{that} critics claimed that the settlement of the Hawaiian Islands by early Polynesians was by chance, that there was very little precise information on how well Polynesian canoes sailed; ~~on~~ how seaworthy they were on long voyages; ~~on~~ exactly how the Polynesians used stars for navigation, and on many other technical points, such as, what ~~were~~ ^{were used} ~~the~~ practices ^{by} of these ancient mariners ^{that} ~~to~~ enabled them to survive hardships at sea, and what ^{food} rations did they take. Since voyaging canoes were no longer to be seen in Polynesian waters, and traditional navigational skills had all but disappeared, investigators were forced to search for records of canoes and voyaging in old legends, explorer's accounts and other documents. These searches failed to reap the information sought because of the lack of precise detail, leaving much of the information available subject to criticism from reasearchers and scientists.

The organization responsible for the construction of the 60-foot double-hulled canoe, the Hokule'a, is the Polynesian Voyaging Society, a new and unique non-profit community group dedicated to research and education concerning Polynesian voyaging canoes, navigation systems and all the other arts and artifacts that made the first, Polynesian discovery and settlement of these islands possible. The Polynesian Voyaging Society felt the need to fill those gaps of information by conducting the voyaging experiment, which would result in, if successful, educational experiences and materials of great interest to the people of Hawaii as well as ^{those} ~~as~~ throughout Polynesia.

~~Shortly after her launching~~ *The Hokule'a was launched* at the sacred place of Hawaiian ancients in Kualoa on Windward O'ahu. ~~This~~ *Shortly after her launching,* this place is considered so sacred that sailing canoes would tip their sails in passing out of respect. ~~the Hokule'a was used to~~ stimulate interest throughout the islands. Part of this stimulus was to begin attracting potential crew members. In addition, new knowledge and information (rather, old knowledge and information rediscovered) was shared with most of the islands through actual recruiting/educational trips made by the Hokule'a prior to her departure for Tahiti.

The Polynesian Voyaging Society has sponsored two teacher workshops in its three-year history. The coordinators of the workshop- asked for, and received multi-agency cooperation or supportive services and program implementation (Parks and Recreation, University of Hawaii, Bishop Museum, etc.)

The National Geographic Society was so fascinated by the project that they asked and were given permission to document the voyage and help finance it. With immense toil and local and national support, the dream of Hokule'a became a reality.

Workshops and demonstrations were held on Oahu, Maui, Molokai, Kauai and Hawaii, engaging teachers, students, and community members. Lectures and demonstrations were given in classrooms, at heiau (ancient Hawaiian temples), in community meeting halls, parks and in people's homes as a result of the many requests received.

and the children's book project.
Second to the canoe itself, was the interest in the food experiments. What did the Polynesian seafarers eat on their long voyages? In addition to fresh foods that could keep for months at sea; partially dehydrated taro mash, a similar preparation made from breadfruit; dried fish and dried bananas;

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coconuts, and sugar cane. *became sources of food supply for the voyage* Non-human passengers included pigs, fowl, dogs and plants which were used primarily for settlement purposes.

Major items mentioned above were key in the food preservation experiments. Once the experiments proved successful, recipes were developed by the Polynesian Voyaging Society to share with the community-at-large. Demonstrations proved to be a huge success, attracting islanders who sought ways of reducing wastage often occurring through food spoilage.

A major contributor to the food experiments was the large corporation, AMFAC, Inc. Construction materials and food costs were made available to the project and the society reached out to the community for volunteers to build drying boxes as well as assist in the actual preservation of foods. The response from the people of Hawaii was tremendous. Volunteers arrived according to predetermined schedules to eventually preserve 3,000 pounds of raw bananas, and 2,000 pounds of sweet potato. The Kona Billfish Tournament donated 4,000 pounds of raw fish for drying and volunteers in Kona preserved the fish there, using 15 drying boxes shipped from Oahu. Coconuts, sugar cane and fresh fruit and vegetables were added to the food supply, with fresh fish being caught on the actual voyage which offset an otherwise monotonous diet.

Since the conception of the Hokule'a, four books were written for children between the ages of 8 to 15, about Polynesian Voyaging. A teacher's guide was also written to accompany these books. The State Department of Education (DOE) has used the teacher's guide as an example for their own curriculum writers *SP* to follow. The art specialist from the DOE has approached the Polynesian Voyaging Society to develop materials that can be displayed in their art mobile which travels to public schools on all the islands. Included in the exhibit would be pictures, posters, and objects that can be seen, handled and touched by children. *In another section we discuss the proposal for a follow-up development of a ~~follow-up~~ curriculum in greater detail.*

With the financial support of the Hawaii Bicentennial Commission, the Bishop Museum, the East-West Center of the University of Hawaii, the National Science Foundation, and private contributions, more than \$100,000 was raised to construct and sail the Hokule'a in Hawaii's most outstanding project in the United States Bicentennial Celebration. With dedication to fill the need for cultural and scientific information about early Polynesian migration and settlement, interested persons formed an advisory group to develop ideas for possible resources, funding which would enable the development of curricula to be realized and the training of teachers and community people to occur. Members of the advisory group represent the ethnic fabric of the Hawaiian islands and were acutely aware at the onset of the wealth of learning available and the tremendous impact it would have on multi-cultural Hawaii.

Now that the journey has been accomplished, the rich and rare experiences of these modern mariners who used the ancient methods of survival and sailing should be shared through education. The development of slides, tapes, films photography, books, songs, and other media are needed.

The success of the project has caught the imagination of multi-cultural Hawaii and has created an increasing admiration for Polynesian culture and its achievements, past and potential. Hokule'a has helped to enlighten the impoverishment of the general public about Polynesian migration and settlement.

On May 1, to July 26, 1976, the Hokule'a sailed from Hawai'i to Tahiti and back, traveling about 6,000 miles. It sailed in the style of the ancient Polynesian mariners, with a crew of 17 men who sailed from Hawai'i to Tahiti, and 11 men and 2 women who made the return trip from Tahiti, to Hawai'i.

ROUGH DRAFT

Part IV ³(4) Area of Focus

This proposal will have the following focus:

1. Training of teachers and community people.
2. Development of curriculum materials.

Since the conception of the Hokule'a, four books were written for children between the ages of 8 to 15, about Polynesian Voyaging. A teacher's guide was also written to accompany these books.

Hawaiian words used in the books will need a taped glossary so teachers can listen to the tapes and pronounce these words correctly. Slides, tapes, workbooks, maps and ditto sheets are needed to re-enforce concepts brought about in the books and guides. Whenever feasible and practical, all forms of instruction will be related to content areas already existing in our teacher's guide and goals.

The ~~following~~ curriculum mentioned earlier will do the following:

1. Provide a dynamic learning experience through the use of Hokule'a as a floating classroom.
2. Document, duplicate and provide information from photos, slides, songs, books, case studies, graphs, maps, films, reports and other materials gathered on the Hokule'a voyage to Tahiti and back.
3. Formulate and execute plans which exemplify more opportunities in the impoverished areas of canoe building, maritime opportunities, and experiences about Polynesian Voyaging and settlement (pre-1778 to 1976).
4. Define and classify data made on the trip to Tahiti and back and list from these experiments and findings the advantages and problems encountered on the voyage.

ROUGH DRAFT

Part IV ³(4) Area of Focus - pg 2

5. Develop an archives with the collection of the artifacts, documents, photographs, and other materials used on the Hokule'a.
6. Plan workshops and speakers bureau so that teachers and students will hear first-hand from crew persons who made the historic voyage on the Hokule'a.
7. Increase cultural pride, respect and interest in the Polynesian heritage which will enhance a child's (person's) self-concept.

The second focus deals with training of teachers and community people, using the Hokule'a as a floating classroom. Hawaiian culture ~~specialists~~ ^{specialists} ~~experts~~ will work closely with experienced crew members in actual teaching workshops, dealing with the following:

- a. celestial navigation
- b. canoe construction
- c. canoe sailing and navigation techniques
- d. food preparation
3. related arts and crafts dealing specifically with voyaging and settlement
- f. community and family life in ancient Hawaii
- g. language music and dance of the Polynesian people

These topics have drawn considerable interest and attention in Hawaii. Teachers have expressed ignorance in many of the areas, with a sore lack of relevant materials from which to teach. In many instances, they have bemoaned the fact that while the Hokule'a has gained national attention as a Bicentennial project, the PVS is unable to respond adequately to teacher and community needs due to insufficient funds. The PVS is unable to send resource teachers or provide materials as the demand mounts.

ROUGH DRAFT

Part IV (A) Area of Focus - pg 3

Since the late 1960's, there has been an increased awareness of the lack of information available to teachers on the subject of the Hawaiian culture which could be used in classrooms. Teachers themselves were hardpressed to find knowledgeable people available to share cultural information and knowledge which was fast disappearing due to the deaths of the Hawaiian elders. Some of the elders who remain today have found their way to demonstrations and workshops conducted by the PVS, observed and offered their expertise in specific instances. For example, they were able to provide knowledge on old practices, such as making a taro substance called pa'i'ai, a longer lasting food source ideal for long voyages. They recounted personal experiences on wrapping and transporting food items from district to district. They told of stories handed down from their grandparents on sailing, currents and other vital aspects of tradition. They were valuable in clarifying research for the project in many ways. *these experiences*

Those who have benefited from these experiments and learned from *these experiences* will in turn train others. In this way, the culture will be continued and fostered throughout the state.

Students, teachers and community people will be able to board the canoe, and see first-hand how the Hokule'a was lashed and rigged together, what kind of materials were used in her building; see the sails, foods, plants, shelter, clothes, carved gods and feathered weather vane that was so vital on sea voyages. Some participants will have a chance to sail and perhaps steer the double-hulled canoe.

The Polynesian Voyaging Society has secured the support of Hawaiian culture specialists who will be teaching different workshop sessions. They will show actual materials used in various Hawaiian arts and crafts, and demonstrate how these materials are used. Students will learn where these materials are gathered, which places on their island they might be gathered from, and the preparation of these materials for use. Experienced crew members have also given their support to this proposal.

A curricula specialist will be assigned to assist the project from the Extension Program of the Kamehameha Schools. (How much assistance - what types)

The approach being used by the Polynesian Voyaging Society supports the need documented by the non-profit organization, Alu Like Inc., in proposing that non-traditional settings/be considered as viable alternatives not readily available in the educational system. It becomes apparent that the ~~many~~ desire to learn traditional cultural methods ~~and~~ deeply hampered by the ~~constant~~ confines of typical classroom settings.

~~Expand on concept that is accepted by modern educators that there is a need to reinforce abstract knowledge with concrete experiences.~~

The ~~xxx~~ workshop ~~xxxx~~ format proposed by PVS can be done for one, two or three days, depending on the instruction request. Usually, a workshop consists of three weekend days, beginning on Fridays and ending on Sundays. These sessions are designed to handle the various topics of voyaging and settlement, including night sessions for celestial navigation courses. Workshops are conducted at park sites made available by the Dept. of Parks and Recreation, continuing their support for cultural instruction to ~~the communityxxxxxxx~~ take place in a more natural setting. Provisions are available in the event the weather is uncooperative. ~~what?~~

What provisions for overnight?
Who handles group & exp. for arrangements?

show:

- ① Schedule (hour-to-hour) for 1 day, 2 day, & three day sessions -
- ② what will they do?
- ③ how will they learn?
- ④ why is this better than a classroom?

responsible for igniting the daring and imagination of all ethnic groups. She has rekindled mans interest in canoe voyaging and settlement. As of this writing, construction of double-hulled canoes is now taking shape in places such as Guam, Tahiti, Samoa and Fiji, not to mention several plans being drafted in Hawaii.

The enthusiasm and public response to the Hokule'a gives rise to the Polynesian Voyaging Society's approach to learning experiences and confirms local and national interest in past techniques used effectively by Polynesians. The use of the Hokule'a as a floating classroom is a unique treatment of a very old educational principle...that of learning by doing; of involvement in concrete experiences supplemented by abstract concepts.

Hawaiian culture specialists will ~~xxxx~~ ^{show} teachers, students and community ~~on~~ what kinds and how to persons/~~xxxxxx~~ gather ~~and~~ materials on their own, where these materials might be found on each island, /how to prepare them for use. Workshops will provide the instruction on how these materials are used with individual attention to specific details involving craft construction, food preservation, music, language, etc. ~~Experienced crew members~~ children, teachers and community

people will be ~~invited~~ on board to see first hand how the Hokule'a was lashed and rigged together, what kind of materials were used to build the canoe, see ~~the~~ and touch the sails, foods, plants, shelter and clothes that were used on the voyage. ^(see Appendix on Newsal. pp-15) They will also see ~~the carved gods and feathered weather vane that was so vital on sea voyages.~~ ~~and taught the significance of~~ The participants will have a chance to sail, and perhaps steer the double hulled canoe ~~and paddle across the smaller racing canoes~~ ^{and expand on cultural aspects} ~~and paddle across the smaller racing canoes~~ ^{and paddle across the smaller racing canoes}

While on board the Hokule'a, crew members who already navigated the the canoe over an ocean area of about 6,000 miles will help in describing the different parts of the Hokule'a, her sailing ability and will tell about their personal experiences during the voyage. In addition, crew members and members of the Advisory Committee plan to document, duplicate and disseminate materials and information gathered on Hokule'a's historic voyage. ~~They plan to define, and classify data made on the trip and list the advantages and problems encountered on the journey.~~ Instructional ~~xxxxxx~~ units, composed of print and non-print materials will be developed from the actual sailing venture and shared during workshops and demonstrations.

Handwritten note: I am planning to find out about the significance of the voyage and the importance of learning by doing. I will be doing this in the future.

George Warfil

Paige -

Please send the grantors information about the kinds of workshops we've had. Glad I had the 1974 + 1975 programs. Look them over and make your choice.

We'd certainly make a smashing impression if we sent The 4 children's books + Teacher's guide for them to see.

Too, please include the 3 Natl. Geographic Magazines. Perhaps you can get them at the P. & S. office.

If I think of other things I'll give you a jingle.
Kapua

Enclosed information
History of Project
Objectives
Needs
Education Committee

- ① Needs Statement — train teachers + comm. leaders
- ② Goals & Objective (outcome)
- ③ Approach — (why this way)
- ④ Activities — 10 stops
what at each stop
- ⑤ Evaluation
- ⑥ Budget

The author ^{can} ~~congratulate~~ ^{university} ~~national~~ ^{interest} ~~in~~ ^{to the PVS's approach} ~~learning~~

The Hawaiian system of learning and developing skills took into consideration observation and application. Experienced members of a village or family served as teachers, with the elders considered the ultimate source of knowledge and information. There were exceptions, as in all cultures, where young men or women progressed sufficiently to enable them to assume the role of teachers. The Polynesian Voyaging Society proposes to use Hawaiian cultural experts and experienced crew members as teachers to the adults and children attending workshops and demonstrations, individuals who have demonstrated competences in their own field of expertise. (The same Hawaiian system will be used in our approach.)

This approach to learning ~~includes~~ ~~is~~ ~~an~~ ~~especially~~ ~~unique~~ ~~one~~ is an especially unique one, using the Hokule'a as a floating classroom.

DOCUMENTS CAPTURED AS RECEIVED

ix In the area of education and culture, it was found that of the 2,300 individuals of native ancestry polled, 95% indicated education and traditional culture experiences as being a high priority. In turn, it was found that interest in canoes, Polynesian history, food preservation, etc. was fast becoming fragmented due to the heavy emphasis placed on American history and values, thereby neglecting the native culture.

Draft

~~The Approach~~

The Polynesian Voyaging Society's approach to cultural education is an especially unique one. It believes that children learn best by practical application. Because of this philosophy, it proposes that the Hokule'a be used as a floating classroom, sailing to ^{various} ~~parts of the~~ ^{with} ~~states bringing in resources to the community~~ islands to enable children to experience the canoe itself. Cooperation from the Dept. of Parks and REcreation, the Extention Program of the Kamehameha ^{schools} Schools, the Alu Like Program/and other community resources ~~xxx~~ will assit in the implementation of the projct, development of curricula and other materials and resxouces.

Crew members who already navigated the canoe over an ocean area of about 6,000 miles will help with the floating classroom. A canoe committee has already been formed to work out a blueprint and itinerary for the Hokule'a. Students and teachers will be able to board the canoe and see first hand how the Hokule'a was lashed and rigged together, what kind of materials were used to build the canoe, see the sails, foods, plants, shelter and clothes that were used on the exploration. They will also see the carved gods and feathered weather vane that was so vital on sea voyages. The participants will have a chance to sail, and perhaps steer the double hulled canoe. Regular crew members on the floating classroom need to be compensated for their efforts and time.

The Polynesian Voyaging Society has sponsored two teacher workshops in its three year history. The coordinators of the workshops asked for, and received multi-agency cooperation for supportive services and program implementation (Parks and Recreation, U. Of H., Museum etc.) Some of the lecturers were given monetary compensations. The program that was offered at the workshops commensurate with the topic areas mentioned for the floating classroom. The comments about the workshop that was recently held were very encouraging. Appended to this proposal is the description, program and time allotments for the workshops that were held. Teacher evaluations are also enclosed. They will serve as guides for future workshops. Two major work shops are planned for 1977.

Crew members and members of the Education Committee plan to document, duplicate and disseminate materials and information gathered on Hokule'a's historic voyage. They plan to define and classify data made on the trip and list the advantages and problems encountered on the journey. Instructional units, composed of print and non-print materials will be developed from the actual sailing venture. The collection of artifacts, documents, photographs and other materials gathered on the Hokule'a will eventually be reproduced for public use.

The Hokule'a has stirred up so much interest that many educators and others have asked for materials and speakers to share Hokule'a's remarkable feat. Already the art specialist for the Dept. of Ed., has approached us and asked if we could develop materials that can be displayed on their art mobile. The art mobile travels only to public schools on all the eight islands. The art specialist has proposed that the exhibit not only include pictures and posters but objects that can be seen, handled, or touched by children.

When the Hokule'a made her journey, many Tahitians composed at least 58 songs about the canoe. Too, about 20 songs and chants were composed by Hawaiian artists. The Education Committee hopes to record, tape and translate these songs for educational use.

Since the conception of the Hokule'a, four children's books were written for children between the ages of 8 to 15, about Polynesian Voyaging. A teacher's guide was also written to accompany the 4 books. Some Hawaiian words are used in the books so a taped glossary is needed so teachers can listen to the tapes and say the words correctly. Slides, tapes, workbooks, maps and ditto sheets are also needed to re-enforce concepts brought out in the books and guides. Whenever feasible and practical, all forms of instruction will be related to content areas already existing in our teacher's guide and goals.

The State Department of Education has used the ^{teacher's} guide
as an example ^{to follow this to} for curriculum writers.

DOCUMENTS CAPTURED AS RECEIVED

RD-PVS-Part IV(2) pg 3

coconuts, and sugar cane. *became sources of food supply for the voyage* Non-human passengers included pigs, fowl, dogs and plants which were used primarily for settlement purposes.

Major items mentioned above *key* were key in the food preservation experiments. Once the experiments proved successful, recipes were developed by the Polynesian Voyaging Society to share with the community-at-large. Demonstrations proved to be a huge success, attracting islanders who sought ways of reducing wastage often occurring through food spoilage.

Since the conception of the Hokule'a, four books were written for children between the ages of 8 to 15, about Polynesian Voyaging. A teacher's guide was also written to accompany these books. The State Department of Education (DOE) has used the teacher's guide as an example for their own curriculum writers to follow. The art specialist from the DOE has approached the Polynesian Voyaging Society to develop materials that can be displayed in their art mobile which travels to public schools on all the islands. Included in the exhibit will be pictures, posters, and objects that can be seen, handled and touched by children. ~~These materials will be used in the development of a follow-up curriculum.~~

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With the financial support of the Hawaii Bicentennial Commission, the Bishop Museum, the East-West Center of the University of Hawaii, the National Science Foundation, and private contributions, more than \$100,000 was raised to construct and sail the Hokule'a in Hawaii's most outstanding project in the United States Bicentennial Celebration. With dedication to fill the need for cultural and scientific information about early Polynesian migration and settlement, interested persons formed an advisory group to develop ideas for possible resources funding which would enable the development of curricula to be realized and the training of teachers and community people to occur. Members of the advisory group represent the ethnic fabric of the Hawaiian islands and were acutely aware at the onset of the wealth of learning available and the tremendous impact it would have on multi-cultural Hawaii.

History - p.3

On May 1, to July 26, 1976, the Hokule'a sailed from Hawai'i to Tahiti and back, traveling about 6,000 miles. It sailed in the style of the ancient Polynesian mariners, with a crew of 17 men who sailed from Hawai'i to Tahiti, and 11 men and 2 women who made the return trip from Tahiti, to Hawai'i.

Now that the journey has been accomplished, the rich and rare experiences of these modern mariners who used the ancient methods of survival and sailing should be shared through education. The development of slides, tapes, films photography, books, songs, and other media are needed, to help students

become more actively aware of their culture, especially those of Hawaiian ancestry. Resources materials and training will develop necessary skills of teachers and community people, thereby creating trained individuals for cultural activities.

Members of the community-at-large have joined together in developing a proposal so that learning about Polynesian voyaging and settlement can begin reaching children in elementary and intermediate levels. These individuals represent the ethnic fabric of Hawaii and includes broad professional disciplines. Their expertise and experiences have formulated the basis of this proposal in continuing the usefulness of the Hokule'a.

ROUGH DRAFTPart IV. ⁽¹⁾ (A Summary Statement)

The Hokule'a, a ~~double-hulled~~ canoe, was the main character in an experiment conceived by ~~the~~ ⁴⁶ non-profit organization, The Polynesian Voyaging Society (PVS). Hokule'a was designed to test the controversial questions of ancient Polynesian navigation and whether these voyages ~~were~~ ^{were} (and more specifically between Tahiti and Hawaii) accomplished at will or by accident. The conclusion of the Hokule'a journey is the beginning of tremendous educational opportunities for the people of Hawaii.

Hokule'a has stirred so much interest that many educators and community groups have asked for materials and speakers to share the experience of the 6,000 mile journey from Hawaii to Tahiti and back. Requests ^{continue to} pour into the office of the PVS from ~~throughout~~ the State of Hawaii, the mainland United States and from abroad, asking for resource people and materials on subjects ^{including} ~~ranging from~~ canoe construction, non-instrument navigation, food preservation, herbal medicine, plants and cord-making, to name a few. Thus far, PVS remains as the only source of information in Hawaii on early Polynesian voyaging which is based on an actual experiment.

The Education Committee of the Polynesian Voyaging Society proposes a project which includes a follow-up curriculum, using Hokule'a as the focal point of interest.

A major goal of the committee is to utilize the canoe as a floating classroom, sailing to different areas of the islands and conducting workshops that can enhance the educational and cultural experiences of school children with emphasis on training teachers and community leaders.

(1)
PVS-RD Experienced crew members who already navigated the canoe will help with the floating classroom. Hawaiian culture experts will provide training of teachers and community people so that these skills will be continued.

During planned workshops, Hawaiian culture specialists will work in concert with crew members to provide training of teachers and community people so that these skills will be continued. The Hokule'a, being the main focal instrument, will provide the real-life emphasis, and with resource materials ~~will~~ provide ^{the} source of ^{cultural and exchange} enrichment ~~for all~~ ^{by} the people of Hawaii.

ROUGH DRAFTPart IV. (2) History of the Project

This project ~~was and~~ continues to be more than an adventure. It represents a well-planned experimental approach to one of the most intriguing and disputed questions in Polynesian history; how were the many islands of Polynesia first discovered and settled. It became apparent from the controversy (critics claimed that the settlement of the Hawaiian Islands by early Polynesians was by chance), that there was very little precise information on how well Polynesian canoes sailed, on how seaworthy they were on long voyages; ~~on~~ exactly how the Polynesians used stars for navigation and on many other technical points such as ~~what were the~~ ^{what were} practices ^{of} these ancient mariners ^{that} ~~to~~ enabled them to survive hardships at sea, and what rations did they take. Since voyaging canoes were no longer to be seen in Polynesian waters, and traditional navigational skills had all but disappeared, investigators were forced to search for records of canoes and voyaging in old legends, explorer's accounts and other documents. These searches failed to reap the information sought because of the lack of precise detail, leaving much of the information available subject to criticism from reasearchers and scientists.

The organization responsible for the construction of the 60-foot double-hulled canoe, the Hokule'a, is the Polynesian Voyaging Society, a new and unique non-profit community group dedicated to research and education concerning Polynesian voyaging canoes, navigation systems and all the other arts and artifacts that made the first, Polynesian discovery and settlement of these islands possible. The Polynesian Voyaging Society felt the need to fill those gaps of information by conducting the voyaging experiment, which would result in, if successful, educational experiences and materials of great interest to the people of Hawaii as well as ^{those} throughout Polynesia.

~~Shortly after her launching~~ ^{The Hokule'a was launched} at the sacred place of Hawaiian ancients in Kualoa on Windward O'ahu. ~~This place is considered so sacred that sailing canoes would tip their sails in passing out of respect,~~ ^{Shortly after her launching,} the Hokule'a was used to stimulate interest throughout the islands. Part of this stimulus was to begin attracting potential crew members. In addition, new knowledge and information (rather, old knowledge and information rediscovered) was shared with most of the islands through actual recruiting/educational trips made by the Hokule'a prior to her departure for Tahiti.

The Polynesian Voyaging Society has sponsored two teacher workshops in its three-year history. The coordinators of the workshop- asked for, and received multi-agency cooperation or supportive services and program implementation (Parks and Recreation, University of Hawaii, Bishop Museum, etc.)

The National Geographic Society was so fascinated by the project that they asked and were given permission to document the voyage and help finance it. With immense toil and local and national support, the dream of Hokule'a became a reality.

Workshops and demonstrations were held on Oahu, Maui, Molokai, Kauai and Hawaii, engaging teachers, students, and community members. Lectures and demonstrations were given in classrooms, at heiau (ancient Hawaiian temples), in community meeting halls, ~~parks~~ and in people's homes as a result of the many requests received.

Second to the canoe itself, was the interest in the food experiments. What did the Polynesian seafarers eat on their long voyages? In addition to fresh foods that could keep for months at sea; partially dehydrated taro mash, a similar preparation made from breadfruit, dried fish and dried bananas,

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became sources of food supply for the voyage
coconuts, and sugar cane. Non-human passengers included pigs, fowl, dogs and plants which were used primarily for settlement purposes.

Major items mentioned above were key in the food preservation experiments. Once the experiments proved successful, recipes were developed by the Polynesian Voyaging Society to share with the community-at-large. Demonstrations proved to be a huge success, attracting islanders who sought ways of reducing wastage often occurring through food spoilage.

A major contributor to the food experiments was the large corporation, AMFAC, Inc. Construction materials and food costs were made available to the project and the society reached out to the community for volunteers to build drying boxes as well as assist in the actual preservation of foods. The response from the people of Hawaii was tremendous. Volunteers arrived according to predetermined schedules to eventually preserve 3,000 pounds of raw bananas, and 2,000 pounds of sweet potato. The Kona Billfish Tournament donated 4,000 pounds of raw fish for drying and volunteers in Kona preserved the fish there, using 15 drying boxes shipped from Oahu. Coconuts, sugar cane and fresh fruit and vegetables were added to the food supply, with fresh fish being caught on the actual voyage which offset an otherwise monotonous diet.

Since the conception of the Hokule'a, four books were written for children between the ages of 8 to 15, about Polynesian Voyaging. A teacher's guide was also written to accompany these books. The State Department of Education (DOE) has used the teacher's guide as an example for their own curriculum ~~writers~~ ^{SPC} to follow. The art specialist from the DOE has approached the Polynesian Voyaging Society to develop materials that can be displayed in their art mobile which travels to public schools on all the islands. Included in the exhibit would be pictures, posters, and objects that can be seen, handled and touched by children. *In another section we discuss the proposal for a follow-up development of a follow-up curriculum.*

With the financial support of the Hawaii Bicentennial Commission, the Bishop Museum, the East-West Center of the University of Hawaii, the National Science Foundation, and private contributions, more than \$100,000 was raised to construct and sail the Hokule'a in Hawaii's most outstanding project in the United States Bicentennial Celebration. With dedication to fill the need for cultural and scientific information about early Polynesian migration and settlement, interested persons formed an advisory group to develop ideas for possible resource funding which would enable the development of curricula to be realized and the training of teachers and community people to occur. Members of the advisory group represent the ethnic fabric of the Hawaiian islands and were acutely aware at the onset of the wealth of learning available and the tremendous impact it would have on multi-cultural Hawaii.

Now that the journey has been accomplished, the rich and rare experiences of these modern mariners who used the ancient methods of survival and sailing should be shared through education. The development of slides, tapes, films photography, books, songs, and other media are needed.

The success of the project has caught the imagination of multi-cultural Hawaii and has created an increasing admiration for Polynesian culture and its achievements, past and potential. Hokule'a has helped to enlighten the impoverishment of the general public about Polynesian migration and settlement.

On May 1, to July 26, 1976, the Hokule'a sailed from Hawai'i to Tahiti and back, traveling about 6,000 miles. It sailed in the style of the ancient Polynesian mariners, with a crew of 17 men who sailed from Hawai'i to Tahiti, and 11 men and 2 women who made the return trip from Tahiti, to Hawai'i.

ROUGH DRAFT

Part IV ³(X) Area of Focus

This proposal will have the following focus:

1. Training of teachers and community people.
2. Development of curriculum materials.

Since the conception of the Hokule'a, four books were written for children between the ages of 8 to 15, about Polynesian Voyaging. A teacher's guide was also written to accompany these books.

Hawaiian words used in the books will need a taped glossary so teachers can listen to the tapes and pronounce these words correctly. Slides, tapes, workbooks, maps and ditto sheets are needed to re-enforce concepts brought about in the books and guides. Whenever feasible and practical, all forms of instruction will be related to content areas already existing in our teacher's guide and goals.

The follow-up curriculum mentioned earlier will do the following:

1. Provide a dynamic learning experience through the use of Hokule'a as a floating classroom.
2. Document, duplicate and provide information from photos, slides, songs, books, case studies, graphs, maps, films, reports and other materials gathered on the Hokule'a voyage to Tahiti and back.
3. Formulate and execute plans which exemplify more opportunities in the impoverished areas of canoe building, maritime opportunities, and experiences about Polynesian Voyaging and settlement (pre-1778 to 1976).
4. Define and classify data made on the trip to Tahiti and back and list from these experiments and findings the advantages and problems encountered on the voyage.

ROUGH DRAFT

Part IV ⁵(4) Area of Focus - pg 2

5. Develop an archives with the collection of the artifacts, documents, photographs, and other materials used on the Hokule'a.
6. Plan workshops and speakers bureau so that teachers and students will hear first-hand from crew persons who made the historic voyage on the Hokule'a.
7. Increase cultural pride, respect and interest in the Polynesian heritage which will enhance a child's (person's) self-concept.

The second focus deals with training of teachers and community people, using the Hokule'a as a floating classroom. Hawaiian culture experts will work closely with experienced crew members in actual teaching workshops, dealing with the following:

- a. celestial navigation
- b. canoe construction
- c. canoe sailing and navigation techniques
- d. food preparation
3. related arts and crafts dealing specifically with voyaging and settlement
- f. community and family life in ancient Hawaii
- g. language music and dance of the Polynesian people

These topics have drawn considerable interest and attention in Hawaii. Teachers have expressed ignorance in many of the areas, with a sore lack of relevant materials from which to teach. In many instances, they have bemoaned the fact that while the Hokule'a has gained national attention as a Bicentennial project, the PVS is unable to respond adequately to teacher and community needs due to insufficient funds. The PVS is unable to send resource teachers or provide materials as the demand mounts.

ROUGH DRAFT

Part IV ³(A) Area of Focus - pg 3

Since the late 1960's, there has been an increased awareness of the lack of information available to teachers on the subject of the Hawaiian culture which could be used in classrooms. Teachers themselves were hardpressed to find knowledgeable people available to share cultural information and knowledge which was fast disappearing due to the deaths of the Hawaiian elders. Some of the elders who remain today have found their way to demonstrations and workshops conducted by the PVS, observed and offered their expertise in specific instances. For example, they were able to provide knowledge on old practices, such as making a taro substance called pa'i'ai, a longer lasting food source ideal for long voyages. They recounted personal experiences on wrapping and transporting food items from district to district. They told of stories handed down from their grandparents on sailing, currents and other vital aspects of tradition. They were valuable in clarifying research for the project in many ways.

Those who have benefited from these experiments and learned from will inturn train others. In this way, the culture will be continued and fostered throughout the state.

Students, teachers and community people will be able to board the canoe, and see first-hand how the Hokule'a was lashed and rigged together, what kind of materials were used in her building; see the sails, foods, plants, shelter, clothes, carved gods and feathered weather vane that was so vital on sea voyages. Some participants will have a chance to sail and perhaps steer the double-hulled canoe.

Part IV
 ④ Area of focus

This proposal will have the following focus:

- ① Training of teachers and community people
- ② Development of curriculum materials

Since the conception of the Hokule'a, four books were written for children between the ages of 8 to 15, about Polynesian Voyaging. A teachers guide was also written to accompany these books.

Hawaiian words used in the books will need a taped glossary so teachers can listen to the tapes and pronounce these words correctly. Slides, tapes, workbooks, maps and ditto sheets are needed to re-enforce concepts brought about in the books and guides. Whenever feasible and practical, all forms of instruction will be related to content areas already existing in our teacher's guide and goals.

The follow-up curriculum mentioned earlier will do the following:

1. Provide a dynamic learning experience through the use of Hokule'a as a floating classroom.
2. Document, duplicate and provide information from photos, slides, songs, books, case studies, graphs, maps, films, reports and other materials gathered on Hokule'a's voyage to Tahiti and back.
3. Formulate and execute plans which exemplify more opportunities in canoe building, maritime opportunities, and experiences about Polynesian Voyaging and settlement (Pre-1778 to 1976). *The impoverished areas of*
4. Define and classify data made on the trip to Tahiti and back and list from these experiments and findings the advantages and problems encountered on the voyage.
5. Develop an archives with the collection of the artifacts, documents, photographs, and other materials used on the Hokule'a.
6. Plan workshops and speakers bureau so that teachers and students will hear first hand from crew persons who made the historic voyage on the Hokule'a.
7. Increase cultural pride, respect and interest in the Polynesian heritage which will enhance a child's self-concept. *(person's)*

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Part IV. (Area of Focus) ④

*He second four
deals with*
~~As indicated earlier, the Education Committee of the Polynesian Voyaging Society would like to propose a project which would provide development of cultural skills for teachers and community people, using the Hōkule'a as a floating classroom. Hawaiian culture experts will work closely with experienced crew members in actual teaching workshops and programs, dealing with the following:~~

- a) celestial navigation
- b) canoe construction
- c) canoe sailing and navigation techniques
- d) food preparation
- e) related arts and crafts dealing specifically with voyaging and settlement
- f) community and family life in ancient Hawaii and dance
- g) language and music of the Polynesian people

h)

These topics have drawn considerable interest and attention in Hawaii. Teachers have expressed ignorance in many of the areas, with a sore lack of relevant materials from which to teach. In many instances, they have bemoaned the fact that while the Hōkule'a has gained national attention as a bicentennial project, the ability for the PVS to adequately respond to teacher and community needs have not been adequately met due to insufficient funds. The PVS is unable to send resource teachers or provide materials as the demand mounts.

Since the late 1960's, there has been an increased awareness of the lack of information available to teachers on the subject of the Hawaiian culture which could be used in classrooms. Teachers themselves were hardpressed to find knowledgeable people available to share cultural information and knowledge which was fast disappearing due to the deaths of the Hawaiian elders. Some of the elders who remain today have found their way to demonstrations and workshops conducted by the PVS, observed and offered their expertise in specific instances. For example, they were able

Part IV ④

②

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Those who have benefitted from these experiments and learned from will in turn,
train others. In this way, the culture will be continued and fostered throughout the
state.

Students, teachers and community people will be able to board the canoe,
and see first-hand how the Hokule'a was lashed and rigged together, what kind
of materials were used in her building; see the sails, foods, plants, shelter,
clothes, carved gods and feathered weather vane that was so vital on sea voyages.
Some participants will have a chance to sail and perhaps steer the double-hulled
canoe.

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Part IV. (2) History of the Project

was and continues to be

This project is more than an adventure. It represents a well planned experimental approach to one of the most intriguing and ~~and~~ disputed questions in Polynesian history; how were the many islands of Polynesia first discovered and settled. It became apparent from the controversy (critics claimed that the settlement of the Hawaiian islands by early Polynesians was by chance) that there was very little precise information on how well Polynesian canoes sailed, on how seaworthy they were on long voyages, on exactly how the Polynesians used stars for navigation and on many other technical points, such as, what were the practices of these ancient mariners to enable them to survive hardship at sea, and what rations did they take. Since Polynesian voyaging canoes were no longer to be seen in Polynesian waters, and traditional navigational skills had all but disappeared, investigators were forced to search for records of canoes and voyaging in old legends, explorers' accounts and other documents. These searches failed to reap the information sought because of the lack of precise detail, leaving much of the information available ~~subject~~ subject to criticism from researchers and scientists.

The organization responsible for the construction of the 80-foot double-hulled canoe, the Hokule'a, is the Polynesian Voyaging Society, a new and unique non-profit community group dedicated to research and education concerning Polynesian voyaging canoes, navigation systems and all the other arts and artifacts that made the first Polynesian discovery and settlement of these islands possible. The Polynesian Voyaging Society felt the need to fill those gaps of information by conducting the voyaging experiment, which would result in, if successful, ~~appreciable~~ educational experiences and materials of great interest to the people of Hawaii as well as throughout Polynesia.

Shortly after her launching at the sacred place of Hawaiian ancients in Kualoa on Windward Oahu (this place was considered so sacred that sailing canoes would tip their sails in passing out of respect), the Hokule'a was used to stimulate interest throughout the islands. Part of this stimulus was to begin attracting potential crew members. In addition, new knowledge and information (rather, old knowledge and information rediscovered) was shared with most of the islands through actual recruiting/educational trips made by the Hokule'a prior to her departure for Tahiti.

Workshops and demonstrations were held on Oahu, Maui, Molokai, Kauai and Hawaii, engaging teachers, students and community members. Lectures and demonstrations were given in classrooms, at heiaus (ancient Hawaiian temples), in community meeting halls, ~~and at many other places~~ parks and in peoples homes as a result of the many requests received.

Second to the canoe itself, was the interest in the food experiments. What did the Polynesian seafarers eat on their long voyages? In addition to fresh foods like bananas and sweet potatoes, they carried specially prepared foods that could keep for months at sea; partially dehydrated taro mash, a similar preparation made from breadfruit, dried fish and dried bananas, coconuts and sugar cane. Non-human passengers included pigs, fowl, dogs and plants which were used primarily for settlement purposes.

Major items mentioned above were key in the food preservation experiments. Once the experiments proved successful, recipes were developed by the Polynesian Voyaging Society to share with the community-at-large. Demonstrations proved to be a huge success, attracting islanders who sought ways of reducing wastage often occurring through food spoilage.

A major contributor to the food ~~experiments~~ experiments was the large corporation, AMFAC, Inc. Construction materials and food costs were made available to the project and the society reached out to the community for volunteers to build

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The Polynesian Voyaging Society has sponsored two teacher workshops in its three year history. The coordinators of the workshops asked for, and received multi-agency cooperation for supportive services and program implementation (Parks and Recreation, University of Hawaii, Bishop Museum, etc.) ~~Some of~~ Some.

The National Geographic Society was so fascinated by the project that they asked and were given permission to document the voyage and help finance it. With immense toil and local and national support, the dream of Hokule'a became a reality.

DRAFT

Part IV. (A Summary Statement)

The Hokule'a, a doubled-hulled canoe, was the main character in an experiment conceived by the non-profit organization, The Polynesian Voyaging Society (PVS). Hokule'a was designed to ^{test} ~~answer~~ ^{controversial} the question of whether the ancient Polynesians navigated ^{on and whether these voyages were} ~~throughout the Pacific~~ (and more specifically between Tahiti and Hawaii) ^{accomplished} at will or by accident. ~~Did they discover these islands of Hawaii and Tahiti by accident or by design? The answer is yes, they did. The journey was a 6,000 mile voyage from Hawaii to Tahiti and back. The conclusion of Hokule'a's journey, is the beginning of tremendous educational opportunities for the people of Hawaii.~~

Hokule'a has stirred so much interest that many educators and community groups have asked for materials and speakers to share the ~~experience~~ experience of the 6,000 mile journey from Hawaii to Tahiti and back. Requests pour into the office of the PVS from throughout the State of Hawaii, ~~and~~ the mainland United States and from abroad, asking for resource people and materials on subjects ranging from canoe construction, non-instrument navigation, food preservation, herbal medicine, ~~plants~~ plants and cord-making, to name a few. Thus far, PVS remains as the only source of information ~~in~~ in Hawaii on early Polynesian voyaging which is based on an actual experiment.

The Education Committee of the Polynesian Voyaging Society proposes a project, which includes a followup curriculum, using Hokule'a as the focal point of interest. ^{This follow-up curriculum will:} ~~(insert)~~ A major goal of the committee is to utilize the canoe as a floating classroom, sailing to different areas of the islands and conducting workshops that can ^{enhance} ~~benefit~~ the educational and cultural experiences of school children with ~~emphasis on training teachers and community leaders.~~

Students, teachers and community people will be able to board the canoe, and see first hand how the Hokule'a was lashed and rigged together, what kind of materials were used in her building; see the sails, foods, plants, shelter, clothes, carved gods and feathered weather vane that was so vital on sea voyages. Some participants will have a chance to sail and perhaps steer the double-hulled canoe. ~~Regular~~ ^{Regular} crew members who already navigated the canoe will help with the floating classroom. Hawaiian culture experts will provide training of teachers and community people so that these skills will be continued.

with crew members to provide training or ~~teaching~~ ^{teaching} so that these skills will be continued. The Hokule'a, being the main focal instrument, will provide the real-life emphasis, ^{with} ~~the~~ materials, ^{providing} ~~a~~ rounded-out source of enrichment ^{for the people of Hawaii.}

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~~XXXXXX with the help of the stars and the sun? 6,000 mile journey~~
~~XXXXXX the Hawaiian Islands and back? The conclusion of Hokule'a's~~
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~~For the follow-up curriculum,~~
 Crew members and members of the Education Committee plan to document, duplicate and disseminate materials and information gathered on Hokule'a's historic voyage. They plan to define and classify data made on the trip and list the advantages and problems encountered on the journey. Instructional units, composed of print and non-print materials will be developed from the actual sailing venture. The collection of artifacts, documents, photos and other materials gathered on the Hokule'a will eventually be reproduced for public use.

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