

Pacific Voices

**Integrating Multimedia, Technology,
and Culture Into Education**

A Curriculum Resource

By
James R. Skouge

In partnership with:

**Martha Guinan
Malia Nobrega
Rosie O'Brien-Sauni
Kavita Rao
Lillian Segal**

The *Pacific Voices* project is a partnership between Pacific Resources for Education and Learning (PREL) and the University of Hawai'i at Mānoa. PREL's Pacific Regional Technology in Education Consortium (PR*TEC) has provided support to implement this project in PREL's service region. The University of Hawai'i Center on Disability Studies has developed, managed, and implemented the project.

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PREFACE

To compose these words, I sit with my laptop computer on the beach behind the Matafao Elementary School on Tutuila, American Samoa. It is Flag Day, the 4th of July, 2003. There is a stiff breeze. Palm trees laden with coconuts frame a nearly cloudless blue sky. The sea, frothy white, breaks on the rocks in front of me, breathing and churning like a washtub. An energetic day. I look out at the entrance to the Pago Harbor. A tiny double-hulled fishing boat makes its way to the horizon. I am far from home, and have been so for more than a month. Homesickness – not a new emotion – is beginning to settle in.

I have been teaching here, connecting with 18 Samoan teachers – most of them young – to explore the multimedia ideas shared in this book. I am living with a Samoan family, writing in coffee shops in the mornings and teaching and filming in the afternoons and evenings.

I am a romantic; I wouldn't be here if I weren't. My writing is a mix of personal and visionary experience. I believe that we become what we behold, and that we are limited only by our imaginations and values.

In a couple of hours, when the battery in my laptop dies, Motuga will arrive to read and share stories for my camera. She is one of the most gifted persons I have ever met. In voice and song and laughter that erupts from her depths, she paints pictures and weaves tales that evoke exhilaration. She was a student in my class until Saturday; now she returns just because it is the thing to do.

On the last day of class, Motuga went to our video recording station to express in Samoan her reflections on the coursework and experience. She said (so my Samoan interpreters tell me) that the class awakened talents that she had forgotten she had. She thanked me from the bottom of her heart.

A huge purse seine is now entering the harbor, laden with tuna to be off-loaded at the Starkist canneries. A tugboat is chugging out to greet it. Somewhere beyond the horizon is home.

My dream is that teacher preparation programs will identify gifted individuals like Motuga and empower them to find their wings and soar. There is plenty of room in the sky for birds.

Fa'afetai tele lava. Tofa soi fua. Goodbye for now.

James R. Skouge, EdD
University of Hawai'i at Mānoa

ACKNOWLEDGEMENTS

Projects are people. Nothing more or less. Our core team includes Martha Guinan, Malia Nobrega, and Lillian Segal, all with the University of Hawai'i Center on Disability Studies; Kavita Rao with Pacific Resources for Education and Learning (PREL); and myself, Jim Skouge, with the University of Hawai'i College of Education Department of Special Education.

Martha loves to figure out technology. She will not be defeated by a piece of software or a finicky computer. She is dedicated to children with disabilities and their families. She has won the hearts of teachers and families in Majuro and Ebeye in the Republic of the Marshall Islands.

Malia is a Hawaiian "immersion" teacher, raised on Kaua'i and living on O'ahu. She is bilingual in Hawaiian and English and is a gentle but strong voice for the Hawaiian community and Pacific Islanders beyond. She is a musician and avid technology user and trainer.

Kavita is a gifted technology educator. She values community empowerment and the role that technology plays in community building. She is a tireless traveler, a positive spirit, and a resource for many child-centered technology interventions. She appreciates the beauty of the Pacific both in its people and its natural majesty.

Lillian was raised in Pohnpei but spent many happy childhood vacations in Kosrae with her grandmother. Lillian's goal is to create a multimedia curriculum of Kosraean stories to give back to the children of Kosrae. Lillian's father is Harvey Segal, a professor who has dedicated his life to education in the Pacific. His legacy lives in her.

Thank you to my wife, Sharon, for being there for me, even in my absence.

We would like to thank Jerry Smith at the College of the Northern Marianas in Saipan. Jerry is a wonderful technology educator and has been a good friend to our work in Saipan, Palau, and Yap. The same goes to Sylvia Henry from the College of Micronesia-FSM. Sylvia has assisted both in Pohnpei and Chuuk. We have appreciated her energy and commitment.

We owe a warm expression of gratitude to Rosie O'Brien-Sauni and Rudy Steffany in American Samoa. Both are special education teachers who have gone far beyond the call of duty to assist in our teaching and our work with children with disabilities. Rosie is a strong spirit who one day will be a technology leader in the Pacific. Rudy is quadriplegic and a wonderful role model for us all.

A word of thanks is also owed to PREL staff members Masa-Aki Emesiochl and Andy Kerr who provide leadership to the PR*TEC, of which this *Pacific Voices* project is a part. You have encouraged us and believed in us. Thanks for your patience, encouragement, and sage counsel.

Finally, we extend our appreciation to the *Pacific Voices* educators and community members who have invited us into their schools and classrooms, villages and homes, during these past three years. Thank you for allowing us to learn from you and with you. We appreciate your love and commitment to the children you serve and the islands you call home. We hope that this book honors our relationships with you.

SECTION I

DEVELOPING MULTIMEDIA IN THE PACIFIC CLASSROOM

In September 2000 the *Pacific Voices* project, a partnership between Pacific Resources for Education and Learning (PREL) and the University of Hawai'i at Mānoa, initiated a quest to identify technology supports that give voice to teachers and children of Micronesia and Polynesia. Although this quest was carried out in the U.S.-affiliated Pacific, the results are applicable to cultural groups worldwide.

This book tells the story of our adventure. It has been a journey of collective effort including service, field research, teaching, and curriculum development. It is a journey that continues. The process of documenting this experience gives us a chance to take a breath, reflect, and share.

***Pacific Voices* Network**

Pacific Voices is a cooperative effort among educators in American Samoa, the Commonwealth of the Northern Mariana Islands (CNMI), the Federated States of Micronesia (FSM: Chuuk, Kosrae, Pohnpei, and Yap), Guam, Hawai'i, the Republic of Palau, and the Republic of the Marshall Islands (RMI). We gathered teams (including teachers, administrators, librarians, curriculum specialists, college instructors, and parents), identified technology integration projects, provided training and support, and documented projects.

Each participating team received a *Pacific Voices* technology kit. The kits included a DV iMac computer, a Sony digital video camera with tripod and microphone, a printer and scanner, art supplies, and multimedia and educational software. In some cases, the kits were expanded to include Sony Mavica digital still cameras, DVD players, VCRs, boom boxes, laminators, and various assistive technologies to support children with disabilities.

The following schools and communities are part of the *Pacific Voices* network:

Anuenue School
O'ahu, Hawai'i

Ebeye Elementary School
Ebeye, RMI

'Ele'ele School
Kaua'i, Hawai'i

Fern Elementary School
O'ahu, Hawai'i

Harris Elementary School
Palau

Leatele Elementary School
American Samoa

Maap Elementary School
Yap, FSM

Matafao Elementary School
American Samoa

Ohmine Elementary School
Pohnpei, FSM

Olomoana Elementary School
American Samoa

Price Elementary School Guam	Sansrik Elementary School Kosrae, FSM
Rita Elementary School Majuro, RMI	Sapuk Elementary School Chuuk, FSM
San Antonio School Saipan, CNMI	Xavier High School Chuuk, FSM
San Vicente School Saipan, CNMI	

In most cases, projects focused on students in grades 4 to 8. In Chuuk, seniors at Xavier High School also became involved.

A team of educational technology trainers from the University of Hawai'i Center on Disability Studies and PREL provided ongoing support to the *Pacific Voices* network. Technology trainers from the College of Micronesia, FSM, and the College of the Northern Marianas, CNMI, also provided technical assistance. Support included a mix of on-island training and telecommunication using email and video conferencing.

Using a PC Platform

Although the *Pacific Voices* network used Macintosh-based equipment, similar activities can be undertaken using a PC platform. The table below illustrates this cross-compatibility by listing categories of software and the comparable Macintosh and PC applications. While all features may not be identical, software in the same category performs similar functions.

The projects included in this book illustrate how computer technology can be used as a tool to capture, synthesize, present, and produce media. It doesn't matter what kind of computer is used. What is important is the integration of technology into the curriculum.

Category of Software	Macintosh	Windows PC
Video editing	<i>iMovie</i>	<i>Microsoft Movie Maker</i>
Music player/converter	<i>iTunes</i>	<i>WinAmp</i>
Multimedia authoring	<i>HyperStudio</i> <i>PowerPoint</i>	<i>HyperStudio for PC</i> <i>PowerPoint</i>
Multimedia authoring for younger children	<i>KidPix Studio Deluxe</i>	<i>KidPix Studio Deluxe</i>
Multimedia authoring with assistive capabilities	<i>IntelliPics Studio</i>	<i>IntelliPics Studio</i>
Video compression and playback	<i>QuickTime</i>	<i>QuickTime for Windows</i> <i>Windows Media Player</i> <i>Real Player</i>

Organization of This Book

The aim of *Pacific Voices* is to identify and explore technology integration projects to enhance language arts, cultural studies, literacy, and environmental science within the school curricula. The goals and standards related to these projects are outlined in the Appendix.

The outcomes of this effort are documented both in an extensive multimedia collection of CD-ROMs and this book. The CD-ROMs, which will be available in August 2004, include *Pacific Voices* projects expressed in stories and legends, songs and chants, photographs and movies. For more information, contact Jim Skouge at jskouge@hawaii.edu.

This book is divided into three sections: narrative chapters, instructional units, and competency lists.

Narrative chapters provide background on different technologies. They include tips on how we used various media in the classroom and describe many of the activities we carried out. Their aim is to provide examples that will inspire teachers to try these technologies themselves.

Instructional units are similar to lesson plans; teachers can use them to engage students in *Pacific Voices* activities. These units give step-by-step instructions on how to do particular projects and include anecdotes about how to customize them to be useful for different classrooms.

Competency lists detail specific skills that can be mastered with each multimedia tool or software application described in this book. These lists can be useful for teacher trainers or for teachers who need a checklist of skills that their students may be expected to learn while completing a project. Competency lists can also be useful for putting together assessment rubrics.

VALUES AND CONCEPTUAL FRAMEWORK

Pacific Voices focuses on multimedia technologies that give voice to children and teachers in the Pacific, celebrating vernacular languages as well as English. The curriculum celebrates language arts in all of its richness, including listening, speaking, reading, writing, the visual and performing arts, and critical thinking.

The *Pacific Voices* teams are passionately interested in technology applications that value cross-cultural communication, traditional knowledge and village wisdom, and the synergy that comes from the intersection of traditional and Western values of science, technology, and literacy.

Core Values

The core values of *Pacific Voices* are explicit. We are committed to exploring multimedia technologies that give voice to Pacific Islanders. There is a synergy in the Pacific that is all its own, an “island style.” This synergy occurs when traditional, sustainable island traditions mix with the energies that come from both West and East.

This book presents an in-depth discussion of the values we promote, the tools we use, the activities we have undertaken, the lessons we have learned, and the skills we have identified in our fieldwork. It represents our commitment to life-long learning, recognizing that our technology tools and skills must constantly change and that the values outlined below must be examined and re-examined in light of our work, every day.

Authenticity of experience

Pacific Voices values, skills, and activities have been explored, hands-on, with educators, parents, and children across the Pacific. Each island situation is unique in terms of the composition of teams and the activities undertaken. What we share represents the best that we have discovered and observed.

Skills are not taught in the abstract. Teachers come to us with projects in mind – projects that will be valued by the community. No matter what the topic, the beauty of the Pacific can be celebrated through photography, painting, drawing, singing, chanting, and dancing.

Oral and visual communications

Pacific Voices values oral and visual communications – celebrating village wisdom through storytelling, songs and chants, cultural protocols and rituals, and plays and drama. We assist teachers and students to use cameras and recorders to interview elders and document community events. We use computers and multimedia software to showcase, interpret, and disseminate village wisdom through text, pictures, videos, and sounds.

Honoring stories and digital storytelling

We believe in the power of stories, wanting them to be told and interpreted in writing, illustration, and theater. Stories should be anchored in the wisdom of village and family. We encourage students and teachers to take note pads, tape recorders, and cameras to homes and community gathering places, to sharpen our eyes and ears to the knowledge and beauty that exists around us.

This represents a departure from typical educational technology workshops and courses. We are not teaching technology skills or concepts in the abstract, but applying a set of values that empower communities to honor their voices.

Telecommunication

Pacific Voices values telecommunication, building partnerships of teachers and students who enjoy and teach one another via video conferencing, video letters, and email. Children share songs and stories, cultural practices, and arts and crafts. They talk about their lives, islands, and environments. Pacific Islanders have much in common to discover and share. We build bridges with technology to overcome Pacific isolation.

Community involvement in education

Pacific Voices values community involvement in education. We employ multimedia technologies to document and celebrate community wisdom and give back to the community by publishing, disseminating, and broadcasting this work. We publish stories, produce audio- and videotapes, and share them in villages. We broadcast on community radio and television so that families can celebrate their children's achievements and support their schools as voices for communities.

Career connections

The Western world values employment, what Pacific Islanders call "working for money." Many Pacific Islanders are now dependent upon money economies. On the main islands, people get up early to go to work and return home tired, having coped with rush hours not unlike those in the continental U.S. This phenomenon is putting pressures on the village schools. Parents have less time and energy to teach traditional values and practices to their children. Teachers are asked to teach not only the Western curriculum but the indigenous curriculum as well.

The technologies we promote demand skills and competencies that are competitive in the Western workforce and valued in island economies. This is clearly delineated in everything we do: writing, illustrating, and publishing; video and audio production; and creation of interactive CD-ROMs. Soon we will be adding Web design. This is the stuff of the information age. These are the roles that we want Pacific children to assume when they become contributing members of the global workforce.

Assistive Technology and the Culture of Disability

We embrace disability within a paradigm of diversity. We believe that the disability movement is part of a worldwide recognition of the value and importance of diversity within human communities. We are all stronger in diversity. This is relatively new thinking, as the disability movement still carries baggage of deficit and medical models.

Within the disability community there is now a field of specialization called assistive technology. Universities worldwide offer graduate degrees (including doctorates) in this relatively new profession. It is a complex and diverse specialization, encompassing the broad range of independent living, lifelong learning, and employment for people who are challenged in many ways.

A core value within the assistive technology field is universal design. Universal design is more a guiding principle than a reality, as nothing in this world is accessible to everyone. Many assistive technologies are now becoming mainstream, for accommodations benefit many people in unexpected ways. We all appreciate curb cuts, including families pushing the baby in a stroller. Many of us who are not deaf enjoy and appreciate captioning on television. Voice synthesizers on computers are now utilized by many people who have trouble comprehending printed text. And voice recognition technologies are increasing in popularity; we would all like our computers to take dictation. All of these technologies were once called assistive technologies; now they are mainstream.

VIDEOS – CREATING AND FILMING

If the heart and soul of the Pacific is expressed in cultures that are oral and visual, then the first technology for us to honor and explore is the video camera. This tool can empower teachers and their students to document, celebrate, and integrate village wisdom and Western knowledge within village schools.

Pacific Voices has placed digital video cameras in schools across Micronesia, Hawai‘i, and American Samoa. We have supported curriculum specialists, college faculty, teachers, parents, and children to explore this exciting medium. Video cameras are the ideal tools to honor village wisdom by bringing community voices into the schools, including stories, cultural practices, and environmental wisdom for sustainable living. In return, our schools bring the gifts and tools of literacy and empirical science to this cultural wisdom, giving back to the community a celebration of knowing that respects both old and new.

The video camera is a tool to capture the voices and faces of the community. For many teachers and students, the camera is first perceived as something mystical and magical. We too feel the magic: the camera is both a mirror of the moment and an opportunity for reflection and creation, providing contexts of place and voice for critical thinking, story writing, storytelling, and expository prose.

The cameras are received with a mix of joy and trepidation, many people having never before seen their faces or heard their voices on televisions or boom boxes. The camera stares, unashamed and wide-eyed, in contexts where cultures may teach an averted gaze. The cameras isolate the individual from the group, filling the screen with the face of but one. The cameras magnify sound, giving even the smallest child the voice of authority. It can be exhilarating, hilarious, and on occasions, embarrassing.

Introducing the Classroom Studio

Typically, when we first arrive on an island and bring the camera out of its case, we introduce it as an interview tool for a classroom studio (see Unit 1). We clear away the furniture and roll out a mat in the center of a circle. On this mat we attach the camera to its tripod and run a live feed to a television monitor on a cart or table several feet away and visible to all. We use extension cables to distance the camera from the monitor, covering the cables with yet another mat.

In front of the camera we build a set consisting of three chairs, one next to the other, and a mat or patterned cloth for a backdrop. We adorn the set with flowers or leis. In a semi-circle behind and around the camera we create a space for the audience to sit on mats or chairs.

What results, then, is a studio, with an open center, a set or stage at the front, an audience behind and around, and a camera on tripod in the center sending a video signal to a television monitor. A handheld microphone with an extension cable extends from the camera to the host's chair. Earphones plug into the camera and rest on the mat beside the tripod. A chair sits beside the camera, in the center of the circle, waiting to accommodate a camera operator. It is a sacred space ready to make magic – created in just half an hour at a school where most of the people have never seen themselves on television, much less made a show of their own.

Everyone is assigned a role: hosts, guests, camera operators, sound technicians, floor managers, and audience. Yes, even the audience has a role – to pay attention, ask questions, and applaud on cue. Interview questions (usually of the “getting to know you” type) are briefly discussed and outlined on a sheet of poster paper. Then the show begins with interviews conducted in the vernacular language of the group.

At some point, when 6 to 8 people have had their turns, the process is reversed. The tape is rewound and the show is replayed. No one ever chooses to go home. There is always great laughter, shock, and disbelief. The people are making television in their own voices. It is all their own. From that moment on, the fear is gone. The technology has come home.

Video Cameras as Empowerment Tools

We have explored many video applications for Pacific island classrooms. Because the video camera plugs directly into the computer, the potential for creative application seems limited only by our imaginations:

- The video camera is a digital still camera, collecting 30 frames per second, any one of which can become a photograph for a book, website, slideshow, or report (see Unit 2). We film a child for 10 seconds, asking him or her to make faces. In that brief interval, we have 300 frames from which to choose, expressing every emotion a face can make. Our school yearbook pictures are beyond comparison.
- The video camera is a magnifying glass and a microscope. We film flies on the wall, the snouts of pigs grunting in their stalls, the glassy eyes of reef fish chilling on ice in the marketplace, the bright expectant eyes of children, and the red eyes of old men, wizened by years of sun and wind.
- The video camera transforms a classroom into a studio where children produce interviews and show-and-tell, poster presentations and oral reports (see Unit 5), “how to” lessons (see Unit 6), songfests and book readings, storytelling and plays (see Unit 10). The camera, when mounted on a tripod and attached by a live feed to a television monitor, becomes a compelling, shared experience in which everyone becomes audience, talent, or technician.

-
- The video camera becomes the eye of the community. We record elders telling stories and sharing wisdom, which we in turn replay in classrooms to make authentic connections between Western knowledge and village wisdom (see Units 7 and 8). We edit the videos and share them with the community, both to honor and thank the traditional teachers and to demonstrate how we are applying their wisdom to what we learn in books and from the Internet in school. Elders teach us about traditional plants and gardening and animal husbandry. We give back both what we have learned from them and the new knowledge we are gaining in school.
 - The video camera is a voice recorder. We collect the voices of musicians and storytellers to edit and organize and publish as audio CDs. We record story readers and singers, extracting their voices to produce read-along and sing-along books. Sometimes we record with the lens cap still on the camera, not wanting to intimidate by exposing anyone to the camera's eye. All we want is to hold the microphone close to voices and sources. The camera is our ear.
 - The video camera is a journalistic tool, collecting our voices informally every day as we do classroom work. We interview one another in our recording studio, sharing projects and learning. Every week we gather to watch our journal – the week in review.
 - The video camera is a classroom projector. We purchase extension cables so the camera, mounted on a tripod, can be 8 to 10 feet from the classroom television monitor. We project our videos, pausing them every minute or so to promote discussion and interaction (what we call critical viewing). We also project live feeds, focusing the camera on children's art or storybooks. We share the reading of big books on the television monitor. We darken the classroom, gathering around camera and monitor as ancestors before us gathered around kerosene lanterns and fires, to share the faces, places, and voices of the community.

Depending on the purpose, the video camera may be the most powerful tool we share. It is not kept in the teacher's cabinet to be brought out only on special occasions; rather, it is used as readily as notebooks and pencils. When attached to the computer, it becomes a tool for video editing, book making, report production, and voice and music recording.

Video Methods and Techniques

Digital video cameras are now selling for less than \$400 in Hawai'i. They cost far less than computers, with educational impacts just as far-reaching. Increasing numbers of video cameras and digital still cameras are already in Pacific villages. As people gain awareness and confidence that cameras can be used to promote teaching and learning, their cameras come out of the closets and into the hands of teachers and students.

We entrust our video cameras to teachers and students. Our equipment does not stay zipped in camera cases or locked in cabinets. It rarely breaks, even though we use it nearly every day on tropical islands where sun and heat, rain and ocean spray, are to be expected. We have made mistakes and learned from experience. We enthusiastically share our equipment, so long as certain ground rules are respected.

We have dropped our cameras in mud and water on field trips to the Salt Ponds on Kaua'i. We have tripped over tripods and microphone cords in crowded classrooms in Chuuk. We have experienced humidity build-ups on our cameras in Yap. We have left cameras overnight in the leaking trunks of cars battered by monsoons. We have driven over camera cases left in the mud. We have learned from and overcome these incidents. We carry backpacks and a sense of humor.

Our Sony cameras are very dependable, if they are kept dry and out of gravity's reach. Water, moisture, dust, and dirt are the enemies to avoid. Cameras are most vulnerable when their tape cassette doors are open. Only the camera manager inserts tapes, and then slowly and gently. This is not a task to be shared with others.

Camera operators wear a neck strap unless using a tripod. We check the neck strap periodically to make sure it stays well attached to the camera. If the camera is on the tripod, it too needs to be checked. If the screw in the shoe is coming loose, we tighten it with a coin.

We are very careful when setting a camera down in a classroom. A camera sitting on a desk is an invitation for a fall. We designate a place up high, outside of the traffic flow, to rest the camera.

When things do break or require maintenance, we make every effort to act quickly. People have a tendency to discard equipment that malfunctions; schools are littered with failed equipment. Our equipment is not discarded. We conduct most repairs in Hawai'i, which is just one airline commute from all the islands we serve.

Designating a camera manager

Video equipment needs to be managed. We designate someone at each school as the camera manager. This caretaker is assigned to look after the camera, case, tripod, microphone, headphones, cables, VCR, remote control, and videotapes, both to ensure their physical security and to ascertain that the people who use them know what they are doing and return them in working order. A tripod without its shoe, a missing microphone, an uncharged battery, a remote control with corroded batteries, or missing cables are frustrating setbacks when implementing a project.

Making the most of tripods

If the camera is used primarily in one location at the school, such as the library or a classroom, we store it on the tripod, plugged into the surge protector with the battery always charging. The tripod makes it easy and inviting for children to use the camera. The tripod also makes it safe for video playback through the VCR and television. We purchase RCA extension cables so the camera-on-tripod can be 8 or 10 feet away from the television set. Ace Hardware Stores or Radio Shacks are now all over the Pacific, and they carry extension cables for less than \$5.

If the camera is not on a tripod, we store it in its camera case. We keep the shoe with the tripod, not attached to the base of the camera. If the shoe is lost, the tripod is useless.

Coping with humidity: The dewdrop

If the camera has been chilled in an air-conditioned room and is then taken outdoors in the heat of the day, it may display a dewdrop in the viewfinder. The dewdrop indicates moisture inside the camera. The camera is very smart; it refuses to operate when there is moisture accumulation. To remedy this situation, we open the tape cassette compartment, remove the tape, and set the camera (with the tape compartment open) on the hood of a car in the sun to dry. After 15 minutes, the camera is usually operational again.

Using headphones and microphones

We keep a handheld microphone and headphones in the camera case to record children's voices. The microphone must be plugged in properly so that the audio can be clearly heard in the headphones.

Although it may be easier not to use the microphone and headphones, children with soft voices will go unrecorded and unheard. Microphones are essential for capturing children's voices in noisy school environments.

Inexpensive microphones are now widely available. Clip-on microphones with 10-foot extension cords cost less than \$50 at Radio Shack and handheld microphones cost about \$12. Both are worthwhile investments. Headphones are nothing special – just about any set will do.

Protecting the touch pad

When using the camera in playback mode, we are careful with the touch pad, using fingertips, not fingernails, to push the pause, stop, fast-forward, and rewind buttons. Fingernails can slice and damage the touch pad.

Camera-to-VCR editing and dubbing

Digital video cameras use tapes that are different from the familiar VHS tapes. We dub digital videotapes to VHS tapes as soon as possible, using camera-to-VCR editing, so work can be displayed at home and in classrooms. All video cameras come with RCA cables (yellow, red, and white)

that attach the camera to the VCR for dubbing and editing: These cables are plugged into the camera and into the corresponding color-coded plugs on the VCR.

With many VCRs, it is necessary to use the remote control to switch to the video input. Without it, the VCR will not be able to find the signal from the camera. This becomes an insurmountable problem if the remote control is lost or damaged, or the AA batteries are drained or corroded within the remote. The lesson is to protect the remote control.

If the camera's digital tape is to be further edited in *iMovie*, we keep the original digital footage; otherwise we reuse the tape once it has been copied to VHS. VHS tapes (\$3) are cheaper than digital tapes (\$8).

We label and lock our tapes, put them in Ziploc plastic bags, and store them in cool and dry places. Tupperware and RubberMaid are great because they seal. Tapes will not last forever, but it is worth taking precautions.

Unique Challenges of Classroom Videography

As much as we appreciate the knowledge and skills of professional filmmakers and film school videographers, we encounter very different media challenges in Pacific island schools. First, we typically do not have the luxury of engaging in long-term projects. Two or three weeks are about as much time as we have to spend on any thematic unit. The projects must be accomplished in short order.

Second, we do not have sophisticated acoustic equipment. We depend on the microphones built into the cameras and on the inexpensive microphones we hold by hand or clip to lapels.

Third, we make do with the natural lighting that shines through windows or sparkles in the ocean mist. There is a lot of light in the Pacific, but as often as not it is backlight, which requires creativity and thoughtful set design.

Fourth, we rarely polish our work in post-production; we are satisfied with rough cuts. Most of the videos are integrated with other forms of communication; they are not intended to stand alone. We present them interactively with the audience, combined with discussion and demonstration. Our purpose is learning and sharing and communicating.

We are interested in mediating learning, investing more in process than product – in effect, celebrating children's lives today. In this regard, our work is more journalistic – filmed in the morning, shown in the afternoon. Our work is rarely shown at film festivals, but it is certainly a hit at PTA meetings and village gatherings.

Nonetheless, we do whatever is possible to produce the very best media at hand, knowing that the digital video cameras and computers are perfectly

suited for digital storytelling of the highest order. We take technique seriously and produce, publish, and disseminate our work within communities. We want people to be proud and appreciative of it.

We make every effort to celebrate artists and musicians surrounded by the beauty of their place. Traditional wisdom is anchored in people and place and related to ancestors. We try to make this part of our everyday work.

Lighting and backlighting

One of the biggest challenges in media production is lighting. We teach children that the best cameras in our classrooms are our eyes. Wherever we look, our world is in focus, in frame, and in contrast. For the camera it is different – especially in the Pacific with such great expanses of blue ocean and sky.

At the beach or on the water, the camera finds light everywhere it looks – yellow and white sunlight and light blue water. When filming, all this yellow and blue light turns players into dark and faceless forms, mostly indistinguishable from one another – silhouettes on a beach. This is called backlight, the bugaboo of children’s videography. It causes the camera’s lenses to constrict and, in so doing, darkens the features of singers and dancers, actors and orators, fishermen and swimmers.

There is no easy remedy except to look for backdrops of greens and reds, yellows and browns. Green is the color of the mountains, breadfruit trees, and the vines that grow thick behind the house. Green is a walk in the forest by the giant ferns or where the bamboo trees rattle in the breeze.

When shooting in the classroom, we follow two rules of thumb:

- Shoot toward the front or the back of the classroom (*where the windows are not*).
- Shoot down at the mats where the children sit (*where the windows are not*).

In Chuuk, we hang woven mats from the chalkboard to produce a textured set. In Samoa we hang *lavalavas* with thumbtacks or duct tape. Backgrounds can happen in a moment, with a little forethought and preparation. We carry our backdrops folded in backpacks.

Much of our shooting involves talk, remembering that the purpose of our videos is to celebrate language (vocabulary and concepts) and learning. When we shoot faces, we want them to be bright, inviting, and easy to understand. If we are outside, the speaker sits in front of a flowering bush, water tank, or classroom wall. In Samoa, best of all is near a shady *fale* (traditional gathering place with a raised floor and pole supports for a thatched or tin roof) with greens or browns behind.

Quality audio

Pictures are worth a thousand words; our challenge as teachers is to bring those words to clarity. People will tolerate over-exposed pictures and shaky camera movements, but not audio that is hard to understand. We do everything possible to capture speakers' voices so that the audience will listen and pay attention. In a noisy classroom or on a boisterous playground, even the cheapest \$10 microphone in a child's hand beats the microphone built into the camera. If an external microphone is not an option, then we shoot close.

When using the built-in camera microphones, we maintain a wide-angle focus (zoom out) and stand just 2 to 3 feet from our subjects. Pacific island children warmly embrace and accept an intimate connection with a camera in their faces. They will talk and sing to the camera with great delight; they do not see it as intrusive. This intimate shooting style must be taught to Pacific Islander camera operators, however. Without direction, they will fall back to a safe distance of 8 or 10 feet, preferring to use the zoom at the expense of audio quality.

When we produce "how to" videos (see Unit 6) in which people are teaching skills with their hands, we often choose not to use an external microphone, preferring instead to shoot close to the hands, perhaps within 8 or 12 inches, to capture both the voice of the speaker and the sounds of the activity. If we do use an external microphone, we assign a child to hold it so that the speaker's hands are free to show and tell.

In Yap we have used this technique to record mat weaving, coconut husking and grating, de-clawing land crabs for grilling, and barbecuing fish – capturing all the sounds that go with the visual details. Children learn through the details. They like to see and stare at them: the eye of the reef fish and the flesh torn by the spear. They like to hear the little noises: the sizzling and popping sounds of crabs roasting and the grunting of pigs. We capture these sights and sounds by shooting up-close and personal.

Storyboards and shoot lists

Videos can be shot for many different purposes. Many of our video letters (see Unit 9) are informal and strictly for fun, in which case anything is permissible. When shooting videos to be edited in post-production, however, we pre-plan with a storyboard and shoot list and then record with discretion, strategy, and intent. This is particularly true for videos that tell stories or show activities (such as a field trip), describe how to make or do something (such as how to steer a canoe or make a headdress), or record ceremonies (such as cultural celebrations).

Storyboards and shoot lists set out in writing what we think we want to film. Storyboards usually consist of 8 or 10 frames in which we sketch our planned sequence of events – both the big scenes and activities and the transitions (e.g., walking down a path to connect one scene to the next). From our storyboard we generate shoot lists, which are lists of elements to include

in our scenes – people, places, and small details (e.g., wild flowers, porch swing, cats). Since children learn best in details, we think of how we might capture these in close-ups. We think of the people who will be involved, trying to include everyone doing and saying something. Videos capture a moment; we want everyone to be honored and remembered.

A group of teachers in American Samoa recently produced a video letter of a tour of Tutuila to be shared with Samoan children back in Honolulu, knowing that many of these children have been away for a long time or may never have been there at all. The teachers wanted to show off the newest “hot spots” on the island: McDonald’s, the bowling alley, and KFC. Had they made a shoot list, they might have listed many details to include – from ordering food at the counter to bowling a strike. As it was, they stood out in the parking lot and shot only the facades of the buildings. The narration was fun and interesting, but it could have been enriched by so many details.

Stories usually have beginnings, middles, and ends. This too can be planned. How might we begin our film? Should we have a host who takes us about and provides continuity from scene to scene? Do we want an introduction or a closing? Are there costumes or props that we might like to include? Have we visited the setting to think about camera angles, lighting, and sound? How are we going to establish the beauty and uniqueness of place? All of these can be considered before the day of the shoot.

Framing shots

During actual video recording, especially when out in the community, we try to remember that battery life is limited and that everything shot should be considered. Some people are careless with the camera, letting it run and run – zooming and swaying and searching. We try to avoid this, preferring to search with our own eyes, pick particular shots, compose pictures, and then (and only then) record. We like to film in teams of two or three, with one person handling the camera and the others looking for shots.

We frame our shots and hold them for 10 seconds or more, trusting that action will come to the camera if we are patient. This is in stark contrast to those who weave, bob, and pan, this way and that, hoping to catch something on the lens. We compare our technique with putting bait on a hook or seeds in a bird feeder; we let the fish and birds come to us.

Perhaps the worst video composition we ever witnessed was that of a teacher who wanted to film her students throwing spears. As each child released the spear, she jerked her camera toward the sky in pursuit of its flight path. The effect was dizzying, nauseating. What she later learned, with our encouragement, was that her camera with its restricted field of vision could not accomplish what she could do with her eyes. Had she known this, she could easily have filmed the child in close-up throwing the spear, and then in a second take, the path of the flying spear. In the editing and playback, no one would have known that the two events were separated.

Picture composition

We ask teachers to compose their video as they might imagine a painting or a photograph hanging in their living room or adorning the wall of a public building. We insist upon headroom, allowing for “air space” from the top of the head to the top of the frame. We also include a bit of shoulder and chest. Artists rarely chop the head at the neck. We discourage “rear shots” of people bending over and “thigh shots” of people sitting.

If people (the “talent”) are being interviewed, we give them a chance to comb their hair and make themselves presentable. We ask people to sit a little closer together than they might otherwise choose. Video has a way of making people look larger and further apart.

We try to think of how people are sitting or standing. Are they oriented toward the camera? Is there an appropriate backdrop or setting? Do people understand that they are helping to make a movie and are they willing, therefore, to wait for us, put up with us, and partner with us in the process? When making movies we are rarely producing candid documentaries but working in partnership to produce the best of Pacific voices. Not surprisingly, this often requires re-takes.

Cueing routines

If the talent is going to speak, sing, dance, orate, or demonstrate a craft or skill for the camera, we try to maintain a consistent cueing routine. The camera operator usually acts as the floor director, reminding the talent that because the video audience is “inside” the camera, it is important to look into it at least some of the time.

Often we create a small live audience, even during the recording, as it helps the talent to connect with the video audience later. We insist that everyone involved give their complete attention, realizing that the people in front of the camera are on the spot. Their words and spirits are being captured. It is not as easy as it looks.

When the camera operator believes that the talent is ready, she says, “Quiet on the set.” When the set is quiet, she says, “Standing by” and begins counting down from three. Anyone in the room has the right to say, “Wait a minute.”

After “One” she says, “Rolling” and starts the camera. Two seconds later she points to the talent to begin. Sometimes the talent forgets where or who the audience is and begins talking to fellow adults instead of to children. The talent may also forget to look into the camera, focusing instead on the live audience in the room. In this case, the floor director reminds the talent by pointing at the camera.

We ask that when the talent is done, he or she looks into the camera and smiles until the camera operator has paused the camera and said, “All clear.”

This procedure contributes to a much easier edit later; sometimes our takes are so clean that we do not have to edit at all.

This process teaches children the professional language and routines of television production studios. There are important reasons for routines and vocabulary. We try to keep career education in mind as we work with the children.

Integrating the camera into classroom routines

The video camera is intended to be used every day. It is not just for special occasions, although we take pride in filming weddings and funerals, graduations and baby luaus, festivals and entitlement ceremonies. We know that the community expects us to honor such events, which are filled both with learning opportunities for children and collective memories for the community.

Nonetheless, we value the video camera most as an everyday classroom tool for documentation and communication that can be integrated into the curriculum as much as the computer. When the camera is mounted on its tripod, children can record their accomplishments, safely and independently. We know this to be true, because we see Dora's 4th graders at San Antonio School in Saipan doing it every day. They create video portfolios – daily video logs that are neither edited nor saved. It is enough to have a weekly showing – the week in review. Then the tape is reused.

Remembering place, audience, and purpose

Communication is a social event. We tell stories to an audience, most often children. Especially when recording elders in villages, we do all we can to remind them that they are speaking to children, asking them to describe events in detail, use vocabulary and concepts that will help children to appreciate and learn, and choose stories with elements of excitement, mystery, and surprise.

Two cautions regarding children as audience are in order. Some people stare into the camera and get lost. Others avoid the camera altogether, preferring to speak to the camera operator or someone else nearby. In either case, our child audience is forgotten. Among the techniques that we have explored to produce child-friendly recordings are the following:

- Ask storytellers to tell an authentic story – not just to tell *how it was* or *should be*, but to describe what happened, with plenty of details, perhaps a surprise, and best of all a lesson (e.g., “Perhaps you could tell us about the time you caught the big lobster or when you first encountered the fish who grunts like a pig or when you were visited by spirits.”).
- Ask storytellers to imagine that they are telling the story to their own children or grandchildren when the day is over and the children are asking for a story.

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- Invite several children or youth to join in during the recording to create a live audience.
 - Invite teachers in the village to serve as the live audience, asking the storytellers to provide more details or elaboration.
 - Record the story at the place it happened and capture pictures to enrich the words.
 - Ask storytellers to tell the story twice. Because the storytellers are partners in producing a recording that children will enjoy, they are usually happy to comply. Often the second recording is the charm.

Capturing children's imaginations and curiosities

We are teachers and educators, not anthropologists or ethnographers. We use our recording tools to celebrate village wisdom in ways that capture children's imagination and curiosity. First and foremost, we are interested in stories, because they provide the pathways to adventure and imagination. Storytellers provide models for children to become storytellers and story writers themselves.

Some children are gifted storytellers in their own right. We met a 4th grader in Majuro who could tell stories with the traditional chants in ways that held his classmates spellbound. We recorded him so that his stories might be included in the curriculum and shared with the larger community. He sat on a stool in front of his classmates, using a clip-on microphone and camera-on-tripod, speaking in the tongues of his ancestors.

VIDEOS – EDITING AND SHARING

We believe strongly in project-based learning, not in teaching technology skills in the abstract. Our technology is contextualized with people in action, engaged in projects of community value. The best projects are often the simplest ones. In Saipan, for example, we give a cooking lesson. In Pohnpei we bake and pound breadfruit. In Yap we prepare crabs for grilling. In Chuuk we harvest tapioca and copra. On O‘ahu we work knee-deep in mud to tend *kalo* (taro). On Kaua‘i we harvest Hawaiian salt.

If cameras, notebooks, and audio recorders are our tools to gather classroom and community wisdom, *iMovie* is our tool for editing, publishing, and broadcasting – what we call digital storytelling.

We use *iMovie* for many purposes: to harvest still photographs for books and posters, produce video big books, create *QuickTime* movies for interactive CD-ROMs, edit videos for school and home, produce broadcast-quality videos for community television, and occasionally produce recorded books, readers’ theater, and radio plays using only its sound editing and mixing features.

Lessons From *iMovie* Projects

All of us bring to videography our own sets of expectations and dreams. We watch television and movies and imagine producing our own work. The reality, however, is that well-edited videos require skills, teamwork, time, and access to equipment, all of which can be in short supply, especially for teachers and children. Nonetheless, in 2003, every school in the *Pacific Voices* network produced *iMovie* projects, encompassing a diverse array of styles and topics. What follows is a short list of the lessons we have learned.

Practicing in-camera and camera-to-VCR editing

Whenever possible, we shoot videos that do not require computer-based editing; we practice the arts and skills of in-camera and camera-to-VCR editing. We save computer-based *iMovie* editing for the special projects that need finishing touches or conversion to *QuickTime*.

Including teenagers on video production teams

We include middle school and high school students on our video production teams. They are highly motivated and mature enough to learn editing skills. For instance, our high school editors in Chuuk are among the best we have recruited, committing long hours and great enthusiasm to making their movies and mentoring younger children at Sapuk Elementary School.

Using still shots and still clips to make slideshows

We produce *iMovie* slideshows with our students. Still shots are far simpler to edit than rolling video, yet they provide all of the opportunities for children to produce and narrate video stories and reports. We introduce a wordless book activity, in which teams of English for Second Language Learner (ESLL) children and their parents are given 8 to 10 compelling illustrations, scanned into digital form from a children's storybook. Each team reviews the illustrations, sorts them into a sequence in *iMovie*, adds titles and transitions, writes a script and records it, and then adds music and sound effects.

Although every team uses the same set of illustrations, every story is different, with the pictures sorted in different orders and the narrations unique to each group of storytellers. The stories are recorded in the home languages of the families, as well as in English. This activity offers a warm and inviting first experience with video editing, honoring ESLLs and their families as authors and producers. The videos are saved in *QuickTime*, and some are posted on the World Wide Web to be played on computers across the world. (Please respect copyrights on published materials. If illustrations are scanned in from books to be used in these slideshows, permission must be sought from the publisher before the projects are shared on the Web.)

Promoting writing and reading in movie making

We insist on written language (titles, captions, credits, and text screens) in our *iMovie* projects. Children love pictures and music; they would be content to produce an endless train of music videos. As teachers, we value language and critical thinking. We require students to write scripts for their video narrations, rehearse their readings, and record with technical skill and professional resonance.

Celebrating local musicians

We enhance children's projects with background music. Music sets the tone for video and is one of the most important elements in video making. Music can be recorded at the school or in the village and archived in *iTunes* as MP3 files. We include a mix of vocal and instrumental music in our archives. When children are narrating their slides, they usually prefer instrumental music as background, often reggae music. Local musicians all across the Pacific are adapting the reggae beat to their island rhythms. We honor these musicians by naming them in the credits.

Integrating sound effects

Sound effects, such as the sounds of ocean waves, a dog barking, footsteps crunching on sticks and leaves, or crickets in the night, attract people's attention. Along with music, they are especially important when producing radio plays.

We have learned to integrate hundreds of sound effects into the *iMovie* interface. They can be purchased on CD-ROMs and copied into the *iMovie*

resources folder. Children who are good at producing sound effects can be challenged to build their own digital archives. It is a career with a future.

Disseminating work to an audience

We export our movies into *QuickTime*, an easy and universal format for sharing. We also save exceptional student work to videotape for sharing at school and home and on community television. We insist that student work be presented to an audience, often the peer group. Nothing is as motivational to students as gaining a voice for their work. Too often this is forgotten in the hustle and bustle of school. One strategy is to organize children into mini audiences so that everyone gets a chance to share their work with at least a small group.

Helping children to make career connections

Our media projects require the same skills and roles employed by professionals in media production studios. We are journalists and photographers; we produce video documentaries, record radio shows, and write books. Children learn to appreciate many roles, as writers, illustrators, layout designers, equipment managers, camera operators, light and sound technicians, set designers, floor managers, hosts, guests, and audience.

Teachers and students engage technology with purpose. Throughout the Pacific, they have found great value and joy in the production of videos, including the documentation of classroom projects, community performances, and television commercials.

Video Storybooks

We make a strong case for *watching* videos at home, but *interacting* with videos at school. There is one notable exception in the libraries of our partnering schools in Pohnpei and Guam, where children are encouraged to sit back and enjoy storybooks on video, especially during their after-school programs. The *Reading Rainbow* video series, for example, is played regularly in the Price School Library in Guam. The videos serve to popularize the books, available for free reading and checkout.

Commercial video books

Many popular children's books can be ordered with accompanying videos at reasonable prices. Vicky, the librarian in Pohnpei, purchased both the video- and audiotapes of *Where the Wild Things Are* for less than \$20. Although nothing replaces the hard cover book, video- and audiotapes can enrich the experience and in some cases provide access to children with disabilities and ESLL students.

Classroom-produced read-along videos

It is not necessary to purchase commercial videotapes of story reading. We regularly produce video books, in many formats, with children and teachers reading stories and sharing illustrations. All that is needed is an enthusiastic reader and a video camera on a tripod with a microphone. If care is taken

during the recording, the books do not need to be edited on a computer. In Chuuk, students handle the camera on the tripod as their peers read and share their books. In Ebeye, children create read-alongs by underlining the words with their fingers, so that viewers can follow along. In American Samoa, we produce video books in American Sign Language.

Children will watch and enjoy video books, even of this homemade sort – all they need is a quiet place to watch, listen, relax, and enjoy a good story. The school library may be just the place. Video books can be sent home and broadcast on community television as well.

Special Education: Role Modeling and Self-Modeling

Pacific Voices explores video projects that include role modeling and self-modeling. These are powerful concepts in education. Video can be used in many creative ways to support people to visualize themselves in new and valued roles. Children with disabilities in the Pacific are often deprived of access to peers and adults with disabilities who could serve as their role models.

Role models in video letters

We produce video letters (see Unit 9) in which children with disabilities meet and experience role models. In American Samoa, for example, we produced several videos for Kineti, a boy with muscular dystrophy, sharing with him lessons in daily living from a scientist in Hawai'i who is completely paralyzed below the neck. Before his death, Kineti had watched the video many times to gain courage to go back to school and rejoin his peer group.

Video feed forward: Self-modeling and visualization

We also produce self-modeling videos, which we sometimes call video feed forward. Usually these videos are 3 to 5 minutes in duration, depicting a child performing a skill with accuracy and competence. For example, a child who is a dysfluent reader sees himself reading fluently and competently on a video. This self-modeling video is produced through editing. We record in small segments, rehearsing with the child before each take. The edited video does not depict the behind-the-scenes rehearsals. It shows the child displaying competence. Children watch these videos repeatedly to visualize their possibilities.

There is growing evidence that as children watch themselves in competent roles, they become what they behold. Perhaps the success of self-modeling relates to the power of visualization, which is now commonly practiced in sports psychology.

Modeling and self-modeling in deaf education

Video cameras are useful and motivational for deaf children and their families. The language of the deaf in our Pacific region is American Sign Language. It is a visual language that is ideally suited for capture on video-tape to be shared with others and reviewed for practice and learning.

Video recordings can be made of teachers, deaf community members, and deaf children signing pictures, stories, and books. We have done it many times with the deaf community in American Samoa. Deaf children will watch these tapes with joy and enthusiasm, imitating the American Sign Language they see. We have given the deaf educators in American Samoa their own video camera because they find it so useful.

Children watch and imitate the models and role models they see. When children have mastered the signs for a picture or story, we record them so that they can watch themselves display their skills. This self-modeling is perhaps the most powerful motivator for learning.

We promote the Shared Reading Project in partnership with Gallaudet University and the deaf program in American Samoa, producing videotapes of storybooks in American Sign Language. These tapes go home with deaf children in a video book bag to promote sign language learning and shared reading at home. Video book projects have also begun in Ebeye and Majuro, RMI.

The Shared Reading Project is valuable not only to deaf children and their families, but to others as well. The deaf education specialist in American Samoa has just completed her master's degree in deaf education, using the project as the cornerstone of her work.

Sharing Videos With Parents and Community

The video camera presents an eye and an ear to the community. It can document village wisdom to be incorporated into the school curriculum, and it can give back to the community the faces and voices of their children.

In order to make several copies of VHS tapes for the community, it is easiest with two VCRs, using one as the player (source deck) and the other as the recorder (record deck). Videos produced at school are shown in the villages, both on home VCRs and local community television. Children take videos home in their backpacks in Ziploc bags and return them the following day. Videos are shared among households, which is common practice in the Pacific.

Most community television stations in the Pacific are eager to broadcast locally produced work, especially the work of children and teachers. The manager of the television station in Majuro, for example, assured us that our VHS tapes would receive multiple airings in prime time slots. Although most Pacific Islanders do not yet have access to cable channels, many influential people on the islands do.

Video rental stores may be willing to catalog and manage the distribution of school-produced videos as a community service. Many video stores in Hawai'i, for example, have public service collections that can be checked out free of charge.

Toward a Concept of Critical Viewing

We encourage schools to spend a little extra money to purchase 4-head VCRs. These VCRs do not cost much more than the cheaper 2-head models, and they allow for pauses that are distortion free. We believe strongly that videos should be presented interactively to students by pausing at critical junctures for discussion, critical thinking, and note taking.

At home, we watch television passively. At school, we view videos critically. The pause button on the remote control is an important feature in the teacher's hands. Moving pictures can be compelling and instructional, but still frames allow for reflection and critical discussion. In our schools, we need to change our viewing habits.

Sonny Gamponia, an educator on Maui, represents our best model of this media ethic. Sonny is a speech and language therapist who employs self-made videos to evoke language from children with communication disorders. Sonny described his initial experience with this technique in a letter to me:

I went in the Peace Corps in 1978 to 1980 with five years experience in programmed instruction and very structured behavior modification from a special education program in Southern Oregon. I was assigned as a speech pathologist to the School of Hope working in three classrooms in central Jamaica (Mandeville, May Pen, and Black River).

At our first orientation at the beginning of the school year, the director of the School of Hope gave each of the Peace Corps volunteers a ream of paper and a box of crayons – and a short description of using language experiences for speaking, reading, and writing. This is what we took with us to the classrooms – no programmed instruction kits, picture cards, or worksheets. All the vocabulary, spelling words, and sentences were a reflection of the students' routines and recollections of their experiences throughout the day. This was the perfect balance for my heavy "behavior mod" background.

Now years and miles removed from Jamaica, Sonny illustrates his students' worlds with his video camera, documenting their daily lives: carving a pumpkin, preparing popcorn, shopping at the market, sightseeing in Honolulu. Like the silent movies of years ago, Sonny inserts text screens to introduce and close each scene. As the children watch, Sonny pauses his videos to engage the group in reading, critical thinking, and reflection. Children talk, they predict, they write. And then, when ready, they move on to the next scene. Perhaps Sonny's technique can best be described as interrupted video or video triggers. It involves immersing children in brief, familiar media encounters to trigger language and problem solving.

DVD Players

One of the newest technologies for video in the classroom is the DVD player. DVD players now cost less than \$200, about the same as VCRs. They offer features for educational instruction that are not available with VCRs. We are excited about this technology, looking for partners who will join us in experimentation.

In Pohnpei, we purchased a DVD player for the library at Ohmine School, asking Vicky, the librarian, to explore it with students and teachers. We provided five DVD movies for the project, along with their accompanying books. Vicky helped us to understand how the DVD player could be utilized to promote oral language, decoding fluency, vocabulary growth, and critical thinking. The following is what we have learned from her.

Digital books: Chapters, text, and freeze frames

Unlike VHS videos, DVD movies are divided into scenes or chapters. Typically, these last 8 to 10 minutes. Using the remote control, teachers can jump to a given chapter without having to rewind or fast-forward. Additionally, DVD movies contain captioning in English. With the freeze frame feature on the remote control, movies can be displayed as captioned slideshows, providing opportunities for discussion, dialogue, and reading.

With the captioning turned on, DVD movies become talking books, empowering teachers to turn pages (freeze and unfreeze the screens), discuss with students the vocabulary and concepts illustrated on the screen, and read and rehearse the caption text. These are the same activities that we employ in shared reading activities.

Integrating DVDs into shared literacy experiences

Based on our experience in Pohnpei, we propose the following model:

- Read and share a storybook with students.
- Make the book available at a reading-while-listening station for independent practice.
- Using the movie adaptation of the book, introduce reading-while-viewing on the DVD player.

Reading-while-viewing: DVDs as electronic books

Reading-while-viewing should be integrated into a lesson plan that includes oral and written vocabulary and concept development, as well as decoding accuracy and fluency. The reading-while-viewing sequence described below requires 2 to 3 hours of instructional time. It is best to divide the lessons into several sessions.

- The students, as a class, watch an 8 to 10 minute DVD chapter with the English captioning turned on. Encourage them to read the captions aloud with you.

- Play the same DVD chapter again, this time with the volume off. Read the captions aloud, encouraging the children to read along, and pause on selected screens to check comprehension, build vocabulary, and rehearse the decoding of captions. Write key words and concepts on the board, which students should copy into their notebooks. This portion of the lesson may take 30 minutes.
- Play the same chapter a third time, again with the volume off. This time, the students watch straight through, reading the captions in unison with you.
- Engage students in a writing activity based on a question or theme that is referenced to a selected screen from the chapter. Display this screen as the children write, encouraging them to use the vocabulary presented in the lesson.
- Assess students orally or in writing to measure the objectives of the lesson in terms of word meanings and decoding accuracy and fluency, based on the word and concept lists in their notebooks.

Classroom videos on VCDs and DVDs

Any computer with a CD burner can record videos to CD-ROMs using *Toast* software, which is available online and at many computer software stores. Video CDs (VCDs) play in most DVD players. Their quality is a bit grainier than VHS tape, but adequate for disseminating children's voices in villages. VCDs are very popular in Palau and many parts of Asia.

For a \$100 investment in software, schools can burn VCDs as easily as they burn CDs. Given the environmental impacts of moisture and mildew on VHS tapes and the widespread proliferation of DVD players in home markets, schools may want to take advantage of this VCD technology, at least as an interim step before DVD burners become commonplace in our classrooms.

We have just begun burning our first videos to DVDs. We purchased a new iMac with a built-in DVD burner and a suite of multimedia software – *iPhoto*, *iTunes*, *iMovie*, and *iDVD* – that is available with the new OS X operating system. This suite is integrated so that teachers can archive thousands of recordings and photos as playlists and albums; these in turn can be incorporated into photo essays, slideshows, and videos that can be burned to DVD as easily as they are exported to tape. We now have the tools to maintain digital portfolios of the creative life of our classrooms.

VIDEOCONFERENCING

Videoconferencing is in its infancy in the Pacific, especially with regard to connecting teachers and children. An exciting and new technology that calls out for exploration, video teleconferences (VTCs) are now available in every entity within our *Pacific Voices* network. To date, most conferences consist of meetings in which adults talk and plan; *Pacific Voices* is exploring child- and teacher-centered applications. We have sponsored numerous VTCs between teachers and children, mainly between Hawai'i and American Samoa. Recently, we extended our reach to Saipan.

Teaching and communicating via television is very different from the face-to-face experiences of teachers and children in Pacific classrooms. The camera is selective in what it sees, and children are unaccustomed to speaking to it. They must learn the rules of taking turns and confirming with communication partners that the messages are understood.

We must learn to manage the microphone so that soft-spoken children can be successful. We must cope with the challenges of small and sometimes hot rooms, poor lighting, noisy air conditioners, transmission interruptions, and traveling to and from the VTC site. We are learning, and in so doing, our vision is expanding. We are encouraged by the possibilities, believing that video communications will become the community builder for Pacific island classrooms.

The descriptions that follow include four diverse experiments in videoconferencing. One project involves deaf community building, in which a deaf role model from Hawai'i teaches American Sign Language and deaf culture to a community in American Samoa. The other projects are youth-centered, in which young people manage both the content and the delivery of the communication.

American Sign Language and the Deaf Community

Pacific Voices sponsored a 15-week telecourse to teach American Sign Language and literacy to 25 deaf and hearing children, educators, and parents in American Samoa. The Hawai'i-based instructor, Linda Lambrecht, is also deaf. The course provided rich opportunities to explore the video component of VTCs. American Sign Language is a visual language. On one occasion, the audio component was completely lost, but the class went on without a hitch, in the silence of hand signs, gestures, and facial expressions.

In the *Pacific Voices* VTC studio, Linda stood not more than three feet from the camera and television. Rather than using the camera to zoom in on her visual aides (photographs and book illustrations), Linda held them up to the camera, using the television monitor to frame and focus. We call this technique a physical

zoom, which is easier and quicker than using the remote. It also put Linda in control of her own demonstration.

In Hawai‘i, we hired a Samoan facilitator, Mua, as a hearing companion for Linda. Mua, a graduate student interested in both technology and American Sign Language, spoke Samoan to the students back home when there were communication breakdowns. She zoomed and panned the camera with the remote control and knew whom to contact when encountering technical breakdowns. Her role as facilitator was very important, as it allowed Linda to focus on teaching without worrying about the equipment.

In American Samoa, we hired a camera operator to zoom and frame each of the students as they communicated with Linda, encouraging them to look into the camera, establish eye contact with her, and use facial expression, gesture, and sign to communicate. This model requires an alert camera operator with an in-your-face technique. We also encouraged all of the Samoan students to own the process of visual communication by taking turns and ensuring that they were on camera when talking with Linda. All of this required teamwork.

The process is very different from the “fixed camera, talking head” model so often associated with videoconferencing. It is much more akin to studio-based television production, and certainly much more exciting.

The deaf community is being nurtured thanks in large part to Linda, an exceptional teacher and deaf role model who has gained her voice using a visual medium appropriate for American Sign Language. Because this course was such an overwhelming success, it will be continued and perhaps expanded to include other Pacific island communities.

Saipanese Children Teach Weaving

In spring 2002, we hosted a student exchange between Hawai‘i and Saipan. The goal of the exchange was for a group of six Saipanese children to teach eight Hawaiian youth how to weave coconut palm fronds into four different animals. The lesson was planned in advance, and the Hawaiian youth were asked to bring palm leaves to the studio to follow along.

Weaving is difficult to teach, especially via television. The children in Saipan took turns teaching, learning to wait until the camera was in close-up mode, demonstrating the weaving process one step at a time, articulating each step in clear voices, and confirming with the youth in Hawai‘i when and if it was time to move on. The children in Saipan had to learn to look at the television monitor to make sure their demonstration was clearly visible to their students in Hawai‘i.

This weaving activity was an excellent opportunity to involve children in the intricacies of television teaching. There are so many technical considerations, including microphone management, lighting (positioning each student to

minimize backlighting), and camera operation (zooming, panning, and tilting to frame the right shot), not to mention clear leadership from a floor director.

After 90 minutes, the Hawaiian youth each left with two woven animals and a warm feeling of appreciation for their Saipanese counterparts. What was perhaps most interesting was that the “teachers” were 4th graders and the Hawaiian “students” were 8th graders. As the Saipanese children were returning to their classroom after the VTC, one boy was overheard to say, “I can’t believe they were so big, and we were the teachers!”

Hawaiian and Samoan Youth Cultural Exchanges

We have supported a series of three VTCs between two classes of 8th graders, one at Anuenue School in Hawai‘i and the other at Matafao School in American Samoa. Each teleconference lasted two hours and was filled with cultural exchange and friendship building. The Matafao students speak English as their second language; the Anuenue students speak Hawaiian and are learning Hawaiian culture, which allowed for many interesting comparisons between both languages and traditions.

The most successful exchanges included shared songs, dances, chants, games, foods, and photo essays. Discussions and “talk story,” by contrast, were more difficult, perhaps because of the language challenges and the intimidating nature of talking over television in large groups. Group size should always be considered: there were 25 Samoan students and 15 Hawaiian students.

Samoans in Hawai‘i Connect With the People Back Home

Perhaps one of our most interesting projects involved 6 Samoan youth from Fern Elementary School in Honolulu interacting with 15 Samoan youth from Leatele School in the village of Fagasa, American Samoa. This was a much easier exchange because all of the youth spoke Samoan and shared a common Samoan experience. The Samoan youth from Fagasa sang traditional Samoan songs, and the Samoan youth from Hawai‘i reciprocated with urban rap. Both groups had so much in common, yet were experiencing such different lives.

Much preparation was needed to facilitate this exchange. Initially, the Fagasa youth prepared an extensive video letter (see Unit 9) about life in their village and school, including footage shot from the back of a pick-up truck coming down the mountain and through the village, stopping at churches, beaches, and stores. This letter was shared with all of the 6th graders at Fern. One Samoan boy begged to see the video letter again. He was homesick for his homeland and so proud that his classmates could see its beauty.

Next, the youth in Hawai‘i examined *Dolphins of Fagasa*, a legend that explains why the dolphins return to the village every year in large numbers, bringing with them great quantities of fish. The legend was sent via email from American Samoa to Hawai‘i. Dan Kelin, a drama teacher from the

Hawai‘i Theater for Youth, worked with the students to explore dramatic interpretations of the legend. This lasted several weeks, resulting in an increased interest about the legend and life and culture in Fagasa.

After these preparations, the youth in Hawai‘i were eager and ready for the VTC with the youth from Fagasa. The conference lasted nearly two hours and was filled with joy and laughter, information sharing, friendship building, and pleas from all the children to schedule another VTC as soon as possible.

Looking to the Future: *Pacific Voices* VTCs

Among the lessons we have learned in holding the VTCs are the importance of having a floor director and a common set of communication rules. These include the children waiting to speak until they are framed and focused; cooperating to move the microphone close to children with quiet voices; restating questions, reminding speakers to state their names, and confirming that communications have been successful before changing topics or speakers; and minimizing audio noise by asking all participants to listen when others are speaking.

Were the teleconferences between the schools worthwhile? The youth at both ends certainly thought so, as did their teachers. We were left wondering, though, how more dialogue, interaction, and shared problem solving could have been arranged. Perhaps the groups were too big to realize this vision. We would like to explore VTCs with smaller groups of 8 to 10 at each end, in which the children plan or work on a common project. Perhaps this could be a shared art project, a readers’ theater, a play, or a guided discussion on a topic agreed upon in advance.

VTCs offer fascinating opportunities to bridge the loneliness and pain that comes from leaving a home island. We believe that immigrant youth will take great pride in reconnecting with their loved ones back home, to share stories and reports, plan joint activities, teach language and skills, and rekindle pride, friendship, and the collective memory of their home cultures. The groundwork is already laid to connect Chuukese immigrants in Honolulu with their counterparts at Sapuk Elementary School in Chuuk, and Marshallese immigrants on the Big Island with children in Majuro and Ebeye.

Video conferencing presents great opportunities to promote Pacific communications across every aspect of our school curricula. One of our dreams is to utilize our VTC studios to enable parents, educators, and children to participate in dialogue that can be video recorded, edited, and broadcast on the cable television networks across the Pacific. Given the network of VTC studios, in combination with digital video editing, we have every opportunity to create a great chorus of Pacific voices. We are limited only by our imaginations.

DIGITAL CAMERAS

Digital Cameras in the Classroom

Digital still cameras are now commonplace on the islands. For many children and teachers, they are more inviting and friendly than video cameras. Most of us already have a sense of confidence when it comes to taking a picture with a still camera. It is simply point and shoot.

Many digital cameras record to disks or memory sticks and contain video-out RCA connections, permitting classroom television presentations and media storage without any dependence on classroom computers. They can be used in many ways, as indicated below.

Digital cameras as tools for observation

We have just acquired waterproof housings for digital video and still cameras, which are expanding our possibilities. We encourage children to photograph details of objects in their natural environment, including the underwater recording of various life forms and interesting perspectives on swimmers, canoe paddlers, and surfers. The camera is both a magnifying glass and binoculars, depending on the zoom.

Off-camera activities

We encourage children to work in teams to produce storyboards in which they plan a sequence of pictures to tell a story or make a report. Children first make a shoot list of the photographs they will need in order to communicate effectively. They may draw or color their titles on paper, then photograph them as a part of the story sequence. We encourage students to take pictures of the process of their work, so that viewers can meet the authors and gain insights behind the scenes.

Valuing pictures and words

We transfer digital pictures to the computer to be processed in digital books and slideshows, adding text and narration, music and sound effects, and other creative extras. Children need to write and talk about the photographs in their storyboard. Although pictures tell a thousand words, we want children to compose their own words as captions or scripts and record narrations they have written.

Children like to take pictures of one another. This is natural. Olomoana, a partnering school in American Samoa, has taken the next step of photographing the ongoing events and activities at the school. These thousands of photos, all shot on a Sony Mavica digital camera, have been imported into *iMovie* to produce a video slideshow with narration and music. This video becomes their school yearbook. It is less expensive than producing the yearbook on paper, and every child receives a copy on graduation day.

In some communities, cameras and printers represent the only photo processing services. In these circumstances the pressure is on to print photos. We try to format our photos as contact sheets to publish as many as possible in an inexpensive way. We also burn photos to CDs to give to families that have home computers. This is an inexpensive gift, costing perhaps 50 cents for the blank CD.

Digital Cameras in Special Education

Each summer *Pacific Voices* co-sponsors and participates in a summer camp in Waimea on the Big Island of Hawai'i. Camp Reach serves children with autism and other communication disorders. Digital still cameras document their field trips and camp activities, including details such as the foods at lunch, the puppy on the playground, and an insect on a leaf. The children take the pictures themselves; they appreciate the value of the equipment and are careful.

Sometimes we sit with children individually to review the pictures on the camera, supporting them with language to describe the experiences of their day. Every morning we hold a "morning circle" during which we greet one another, sing songs, catch up on news, and plan for the day ahead. We project our pictures on a television monitor to review and discuss what we did and learned from the day before. This daily routine of shared pictures provides a priceless opportunity for non-verbal children to remember, share, and communicate.

Organizing and Managing Digital Photos: *iView*, *MediaPro* and *iPhoto*

We take photographs every day we are working. During our summer 2003 course in American Samoa, we took more than 100 photographs a day, including pictures of daily life on the island, ava ceremonies, portraits, and artwork. We took pictures with digital still cameras and harvested photographs from our videos using the "save frame as" command in *iMovie*. We utilized our photographs to produce slideshows, newsletters, and interactive books. We also archived our work so that others could have access to it. In American Samoa we installed collections of island life photographs on many computers to provide story starters for writers.

The challenge is the management and organization of photographs – finding the right picture at the right time. Years ago, in the days of print photography, we received pages of proofs or "thumbnails" of our photographs along with the negatives. We could organize the proof sheets into notebooks to review the collection and select photos to develop for yearbooks. The photos on the proof sheets were no larger than postage stamps and thousands could be stored in a 3-ring binder. It saved money and provided a system of organization.

Now, in this digital age, there are two software programs that accomplish the same ends. *iView MediaPro* is for sale on the Internet and *iPhoto* comes free with new Macintosh computers running OS X. Both programs create master libraries of thumbnails that can be sorted, re-named, and organized into

albums. Each thumbnail, when selected, expands to the full-sized photograph it represents.

This means that teachers can archive, organize, and access all of the digital photographs and artwork produced in their classrooms. Both of these programs provide functions so that subsets of photographs can be shared as slideshows. For those who use pictures as the springboard for teaching, this feature is extremely valuable.

With grade 6 students at ‘Ele‘ele School on Kaua‘i, for example, we took more than 500 photographs of the Hawaiian Salt Ponds during field trips. Fifteen student teams each selected 15 to 20 photographs to organize into a narrated slideshow. Although we used *iMovie*, the organizational process is simpler in *iView MediaPro* or *iPhoto*. By printing a contact sheet of all the photos, the teams could mark their pictures on the sheet, copy their choices into team folders or albums, and write their scripts before ever going to the computer.

AUDIO

If schools in the Pacific are to respect and include the traditional knowledge of elders, *spoken voices* must be honored. Long before alphabets and writing, there were sound and voice. With the Bible and schoolbooks, the missionaries and others brought written language and writing, most of which to this day do not represent Islanders' voices.

Even on the rare occasions that children see written versions of their elders' stories, they do not carry the same authority as when chanted and whispered, spoken, and sung in the voices of ancestors. The collective memory of a people is conveyed through voice. *Pacific Voices* believes strongly in literacy that is grounded in it. We begin with the voices of community, as spoken, gestured, and shared in context and experience. Community elders are typically delighted to allow children and teachers to record their village wisdom. In our classrooms, children and teachers are enthusiastic about recording their voices for all sorts of purposes.

We now have the tools to record community voices (including elders and children), critically listen to them, integrate them with new knowledge from books and the Internet, and give them back to the community on CDs, tapes, MP3 players, and radio. And with *SimpleSound*, *iMovie*, and *iTunes* software, we can mix, burn to CD, and share community wisdom within minutes.

When Pacific voices are joined with Western literacy, a transformation of knowledge and learning is possible. Children listen to, illustrate, role-play, write down, and transform the stories they hear. They research, validate, extend, and give back the knowledge that is shared by their elders and processed in school.

Children are eased into reading by listening to recorded books and songs in the familiar voices of the community. Children are supported to become orators themselves – storytellers, story readers, and public speakers – by hearing and re-visiting their own voices and those of their parents. These values and skills can now be embraced with readily available classroom technology tools.

Classroom Audio Recording Studios

With the computer revolution, we have access to complete audio recording facilities built into classroom computers. We can now record anyone or anything, edit the recordings, mix music and narration, and publish to CDs and tapes. We can also create playlists just like the radio stations, but in our voices, celebrating our talents.

In the *Pacific Voices* project, we take digital recorders into communities to record songs, stories, and interviews within the contexts of village life and then

mix the audio with music and narration right in our classrooms. For these activities, the best recorders are our digital video cameras.

Besides using our cameras, we also record material directly to our computers. Using *SimpleSound* software, children and teachers sing songs, tell and read stories, and produce talk shows, readers' theater, oral reports, and oratory – mixing it in radio show formats to record 70-minute CDs. We do our audio mixing in *iMovie*, allowing for voice tracks, music tracks, and even sound effects. We publish to CD using *iTunes*.

Just as we prefer an external handheld microphone for our video cameras, we prefer the same for our computers. We plug our *PlainTalk* microphones in the older iMacs and utilize USB microphones with the newer models. We hold the microphones in our hands like talking sticks. We are disk jockeys, newscasters, storytellers, and entertainers. The medium is ours.

The process may be no better now than in the old reel-to-reel days, but it is certainly more efficient and capable and clean. Now that we record digitally, we do not depend so much on the fragile world of video- and audiotapes, with problems of mildew and breakage. Although we record to tape in our video cameras, as soon as we're back in the classroom we transfer the digital content onto our computers and are virtually tape-free from then on.

Our constant challenge is determining how best to utilize audio media to support teaching and learning. We look to creative teachers and librarians to help us. What follows are examples of methods we used for audio recording.

Audio CD for the Utwe Youth Choir in Kosrae

Pacific Voices associate Lillian Segal is of Kosraean heritage. In the 1960s her father, Harvey Segal, taught English language and literature at Utwe Elementary School. In his role as village teacher he was granted permission from the governing council to re-introduce dancing to the community after nearly 100 years of church suppression. The children produced a bilingual play in Kosraean and English languages, and for the first time in the memory of the people, they danced. The entire island turned out in celebration.

In a description of an audio recording project Lillian recently undertook with her Kosraean colleagues in the same Utwe village, she followed in her father's footsteps. She wrote in a letter to me:

Some of the students we work with at Sansrik School are members of the Utwe Youth Choir in Kosrae. They are well known on the island for their beautiful singing. They wanted to make an audio CD of their singing and were really surprised to find out how easy it was to do when we shared our technique with them.

We went to one of their evening choir practices and used a digital camcorder to record their singing. The next step was to pour the video footage into *iMovie* on our iMac computer. We extracted all the audio from the movie and deleted the pictures. We edited the audio track to cut out the parts we didn't need and to separate the different songs they sang. We made sure to empty the trash in *iMovie* so that the changes we made would really occur and we saved before closing and exiting *iMovie*.

Next we opened the media file of the *iMovie* project we were working on and renamed each music file so that we could easily recognize each song later on. We then closed our *iMovie* file and opened *iTunes*, which is the built-in audio software on the iMacs. While in *iTunes* we imported each song we saved in the *iMovie* media folder we had been working on and saved them in the *iTunes* library. Next we created a playlist in *iTunes* and copied the songs we just imported into this playlist. After all that was done, we burned the songs onto a CD and made the Utwe Youth Choir's very first audio CD.

Digital Storytelling in Yap

Perhaps our first immersion into the world of digital storytelling occurred on the main island of Yap, where a beautiful young woman named Stella, disabled since childhood from polio, lives with her grandmother in a forest. Mobility and transportation are challenges for Stella. She spends much of her time at home, weaving and cooking and caring for neighborhood children.

Stella is a marvelous storyteller. She and others in her family know many of the traditional Yapese stories and ways. They value the Yapese culture and want to do whatever they can to share it with the world – beginning with the children in their own community. In the evenings the children gather to listen to Stella's stories. She chews her betel nut and weaves tales through red lips to the light of kerosene lanterns and twinkling stars.

Our dream, of course, is to empower Stella and her family to reconnect her with the larger community, perhaps as a teacher or teaching assistant in one of the preschools. Knowing that she would make an awesome contribution to a classroom, assuming that attitudes are right and transportation is arranged, we decided that technology might build a bridge for communication.

I visited Stella every day that I was on her island, recording her stories as she sat on the porch of her grandmother's home. We used a video camera as the recording instrument, positioning it a few inches from her lips, as we would any microphone. Stella chewed her betel nut. She got nervous, starting and stopping more than once, preparing more betel nut for chewing. Stella shared the microphone with her auntie: She talked and her auntie chanted. Together they wove magic.

When certain men of the village walked by, the recording stopped. Stella waited until they left. She would not tell the stories in their presence.

One rainy afternoon, I asked Stella if she would like to go riding. The rental car was parked on the dirt road down the path from the house. Stella and her auntie accepted the invitation. We drove to the fairgrounds of the Yap Day celebrations, where hundreds of villagers dressed in traditional costumes sought shelter from the rain.

Stella, smiling, preferred to stay in the backseat of the car when we parked in the muddy field. Her auntie disappeared into the crowd. I took out my camera and handed it to Stella, asking if she might like to tell a story. She pushed the red start button and told a story as magical and melodic as a song. Children and young people listened at the windows to a story as old as the Yapese people themselves.

That night, back at the hotel, I transferred Stella's stories to *iMovie* to extract the sounds and then imported them to *iTunes* to burn them to CD. The next day, Stella and I drove to the Maap Elementary School where I presented to the school principal the gift of a boom box purchased the week before in Palau for about \$100. We put Stella's CD into the boom box. We listened and enjoyed. We dubbed it twice to audiotape – one copy for Stella and the other for the school.

This recording technique works for the islands. In the days that followed, we recorded many storytellers in Yap. Village elders and teachers were eager to share their stories on tapes and CDs. We set up our recording studio in the open classroom outside the Maap Elementary School library, plugged a microphone into the computer, and assigned a teacher to act as technician and floor manager. People gathered to wait their turn; technology and culture were in harmony.

Recording Books in American Samoa

At Matafao School in American Samoa, we set up two recording studios. One was in the office of the vice principal, to “commandeer” her iMac for our project. The office was as quiet as an empty church, perfect for our purpose – to record books for reading-while-listening activities.

Our second studio was set up beside an open, second-story window looking out at the pounding surf on the beach below. It was not as appropriate for book recording, but it was ideal for storytellers. They could stand at the window, holding the microphone an inch or two below their lips, gazing at the ocean – sharing stories and songs from the collective memory.

We assigned a teacher as the audio technician and floor manager for each studio. We did not expect our talent to have to fuss with the technology. For our storyteller recordings, we mixed and burned them to CD, numbering and labeling the CDs with a waterproof marking pen and storing them in Ziploc

Software and Hardware for Audio Production

bags. We included a 3x5 inch file card that listed the content track by track and educational suggestions for the classroom teacher or parent. For our book recordings, we created a sleeve on the inside back cover, where we inserted the CD and file card.

SimpleSound, *iMovie*, and *iTunes* are pre-installed software programs on Mac computers that can record and edit voices, mix music and sound effects, organize sound files into playlists, and publish them to CDs and tapes. All Macs have built-in microphones as well, but because classrooms are noisy places, we provide an external *PlainTalk* microphone, with a cord long enough to allow groups of children to cluster around the computer to record group songs or readers' theater. On the newer computers we use USB microphones mounted on desktop pedestal stands; three or four children can gather around these.

To record directly onto the computer, we typically use the *SimpleSound* software, which is easy to open and manipulate. We encourage students to record files of 2 to 3 minutes each, one after the other, building a folder of sound files. We open these *SimpleSound* files in the *iMovie* soundtracks to edit out the bloopers. Next we add music, sound effects, and any additional narration before exporting to *QuickTime* for processing in *iTunes*.

iTunes is our software of choice for managing audio files. We record and collect songs, chants, prayers, stories, book readings, interviews, oral reports, dramatic readings, plays, poems, and other oral interpretations. We maintain these recordings as MP3 files within an *iTunes* library, creating customized playlists to satisfy changing programming goals. Usually we create playlists that are 60 to 70 minutes long so they will fit on a music CD.

Just as we ask children to write about their pictures, so we ask them to speak about their recordings. Children are free to create customized playlists, but we expect them to record their own introductions and conclusions to the selections. In essence, children become radio or talk show hosts, weaving their own voices into the playlists.

MP3 CDs

In addition to standard audio CDs, *iTunes* burns MP3 CDs, which can be played on most CD players. Because MP3s are extremely compressed files, a 74-minute CD can hold an astonishing 10 hours of audio recording. This is valuable for librarians creating a listening center for their library. A single MP3 CD can support 40 or 50 children's books recorded by teachers and other competent readers. The books can be shelved at the listening center, along with an MP3-compatible CD player and 5 to 7 sets of earphones. The children independently access the CD tracks for each story, without having to manipulate any tapes or disks.

Apple iPod

One of the newest technologies from Apple is the iPod, a deluxe MP3 player, which we have field-tested in American Samoa to rave reviews. It has no moving parts, which is an educator's dream. We plug the iPod into the computer, and the customized playlists created in *iTunes* are automatically downloaded. We unplug it, and it is portable and ready to play hundreds of hours of recorded books and stories. The iPod can be updated in seconds and utilized in classroom listening centers, connecting with multiple pairs of headsets to make the perfect listening-while-reading station.

Boom boxes

Inexpensive boom boxes play both CDs and audiotapes. They also record audiotapes from CDs. Once a school has produced a CD, tapes can be copied for use in interactive listening lessons and library listening centers. They can also be sent home with children to share with family members. We encourage the development of a laminated, printed listening guide – outlining topics for discussion, concepts to explore, and vocabulary – so that parents and children can actively listen and participate in the material.

Listening Stations

Audiotape recorders also provide wonderful supports for recording and listening. We encourage tape recorders to be used both as recording stations and listening stations in Pacific island libraries and classrooms, especially when digital computing tools are not available.

Listening centers in Pohnpei

Ohmine School in Pohnpei has recently acquired five listening stations for their library. Each station comes in a suitcase containing a durable tabletop tape recorder with eight headsets and the connection cables. The library has also purchased hundreds of books with accompanying audiotapes and, in some cases, videotapes. The librarian or a teacher shares a book with the children, using a lesson plan that includes vocabulary building and concept development. Only after the book has been shared with the children through this direct instruction does it become available at the listening station, which is a follow-up to shared reading. As many as 35 children can sit at listening stations in the Ohmine School library, each with headphones. It is a sight to behold.

Children love to put on their own headphones and be transported by dramatic readings. Schools may purchase commercially recorded books, or teachers may record the books themselves. If read with joy and feeling, the recordings will be a hit with the students.

Reading-while-listening

At the listening station, small groups of children can engage in reading-while-listening, i.e., reading along in unison to a storybook as they listen to its recording. One child is assigned to underline the text in the book with their finger as the group reads, so everyone can follow the words. When

using the right set of adapters, as many as eight pairs of headphones can be attached to the tape recorder. Headphones are not required for reading-while-listening, but children love the privacy they provide.

Recording books on tape

Pacific Voices produces audiotapes at schools in the voices of teachers, parents, and children who read with dramatic flair. The tapes are recorded at a rate of 80 to 100 words per minute, which is slow compared with commercially recorded tapes. This rate allows children to keep up and read along. The recordings are not word-by-word, as we want to expose the children to fluent models of oral reading. We read in phrases and sentences, pausing without breaking the rhythm of the language. With practice, any competent reader can become a recording star.

We're not surprised when children ask to listen to the same book many times; we encourage this. Repetition is good. We insist, however, that they continue to underline the words with their fingers and read in unison with the recorder.

Setting fluency goals and charting progress

In grades 4 to 8, it can be motivational to set fluency goals, in which children are challenged to rehearse a passage or story until they can read it independently at a rate of 80 to 100 words per minute, or faster. Children practice and rehearse, and then check their rates with a stopwatch. They read aloud for one minute, count the number of words they read correctly, and chart their progress toward fluency. This method of repeated readings has been used with great success with reluctant and dysfluent readers in special education.

Integrating Recorded Stories Into the Classroom Curriculum

At home, we listen to the radio or music to be entertained; at school, we interact with media to engage in critical thinking. We predict, visualize, discuss, write, and learn. When recorded stories are integrated into the classroom curriculum, children are expected to process them in depth. Just as teachers prepare children for story reading, they prepare them for listening by introducing key vocabulary and concepts. They pause the recording at significant junctures to confirm comprehension and to engage the children in responsive discussion.

Stories may be listened to more than once. Younger children can be asked to illustrate the story or to re-tell or re-create the story using their own imaginations. They may compose a song or create a play. Their illustrations and retellings may be recorded as video posters or plays (see Units 5 and 10) or slideshows to give back to the storytellers. Recorded stories and illustrations can be made available at listening centers in the classroom or library.

We want children to learn from audio recordings and teachers to incorporate them into their lesson plans. Listening and memorization are highly valued in the Pacific. Now that we have the tools for recording and playback, we face

Inquiry-Based Learning: Moving From Stories to Reports

the challenge of integrating these technologies into the curriculum. We are limited only by our commitment and creativity.

As children grow older (perhaps 4th grade and beyond), we ask them to listen to stories more critically, seeking to identify elements that merit research and report writing. We call this model inquiry-based learning (IBL). The model is grounded in critical listening to authentic stories, which in turn become springboards for critical thinking and questioning, research, written reports, oral reports, and speeches.

A fisherman, for example, may tell a story of a fish that cries. Children may wonder if fish feel pain or experience emotion, or how the sound travels in water, or why the fish might cry at all. These kinds of questions, grounded in story, lead to research and reporting. Our IBL model is as follows:

- First, we record a compelling story from the community, such as the story from the fisherman. The stories can be recorded to CD or video.
- The teacher and students critically review the story, identifying vocabulary and concepts for further learning. We refer to these concepts as “learning issues.”
- Working in teams of 3 to 5, the students choose a learning issue for further research.
- The students research the topic using two strategies: they go back to the village or to their elders to ask questions and gain folk wisdom, and they turn to the books and Internet resources at their school.
- The students prepare a poster presentation. The poster depicts the research questions and their findings, using illustrations and text. The poster thanks and acknowledges the storyteller and the references, including the community informants and the authors of publications.
- The poster and the voices of the students may be mediated by technology to be shared with the community. This can be done as a video poster (see Unit 5).
- Students make their poster presentation, inviting members from the community as appropriate. They also share their video posters, giving elders in the community the opportunity to watch and talk with them.
- Exemplary video posters may be submitted to the local community television station for broadcast.

Pacific island children can be introduced to the Western models of research and education by anchoring their learning in the oral storytelling traditions of

Pacific Islanders. We value techniques that garner from communities authentic, child-friendly stories, which in turn can be explored, celebrated, re-searched, and interpreted in classrooms, using the curriculum tools of science, technology, and media.

Our model is grounded in the belief that all of the central tenets of sustainable living are alive and well in the villages of the Pacific. Children and teachers should learn to use technology tools to bring that wisdom to light so that the values of literacy and scientific method will flourish within local contexts, while supporting fragile Pacific communities to find their voices amid the tides of change.

Audio Supports for Children With Special Needs: Self-Modeling

Many children with learning difficulties are dysfluent decoders. They read haltingly, word by word, and their comprehension is usually low. Self-modeling is a strategy to help these children hear and visualize themselves as competent readers. We produce audio recordings of children reading a story fluently. Once these recordings are produced, children can read in unison with their own fluent voice models.

Creating self-modeling tapes

If children cannot read fluently, how do we produce a recording that simulates their competency? The key is to selectively record children reading the story sentence by sentence, allowing them to practice each new sentence before it is recorded. The initial recording is created in *SimpleSound* and then edited in *iMovie* to create the illusion that the children are reading independently and fluently. We may also add background music before exporting to *QuickTime* and place the recording in the *iTunes* library. On playback, the children read in unison with their own fluent self-model. Children hear themselves reading as never before.

Respecting comprehension rubrics

We also want children to hear themselves discussing books and stories for their content and meaning. To do this we use a comprehension rubric (e.g., the “wh” questions: who, what, when, where, why) to rehearse and then record the child re-telling the story, identifying the setting, characters, plot, and so forth.

We insert this comprehension recording into the *iTunes* playlist, along with the recordings of fluent reading, and burn the playlist to CD. Self-modeling is a well-established procedure with proven effectiveness. *SimpleSound*, *iMovie*, and *iTunes* provide the tools to make this possible.

Supporting memorization

Many of the cultures in the Pacific value memorization; songs and chants, stories, Bible passages, and oratories are all memorized. In American Samoa, for example, Kalele, a young man with low vision, is studying to become a

talking chief. He listens to the formal Samoan oratory of the chiefs to memorize the speeches given at weddings, funerals, and public functions.

Listening, rehearsing, and memorizing are essential for Kalele to achieve his goal. *iTunes* can help. Kalele can record directly onto the computer, create playlists, and then burn CDs of the speeches he wants to memorize. These CDs enable him to hear and practice the oratories at any time.

Talking book machines

Tape recorders provide critical supports for children with disabilities related to accessing books and text. This includes children who are blind or have low vision, who have learning disabilities that make it difficult to comprehend visual versus aural text, or who have physical disabilities that present challenges when holding books or turning pages. Recorded books in English and talking book machines are available free of charge to Pacific islands through the Hawai'i State Library for the Blind and Physically Handicapped. Schools may submit an application form on behalf of any student with disabilities.

CREATING DIGITAL BOOKS

At the very heart of literacy are the tools for writing. We are proponents of language experience approaches to writing. Children live an experience, which they are encouraged to look at, listen to, discuss, illustrate, and write about. In chapters 3 to 7, we explored the tools for looking, listening, and speaking; from this springboard of multimedia we introduce the writing process.

Bilingual Books

All of the schools in the *Pacific Voices* network are committed to bilingual education. Their island nations introduce vernacular languages from the first school day, and English from about 4th grade. Our bilingual books celebrate at least two languages: the vernacular and English.

Because English is the accepted second language of our network, we envision children and educators producing bilingual books that can be shared across the islands by re-writing them in all of the vernacular languages. In this way, we can dramatically increase the number and variety of curriculum materials available to everyone – sharing folklore, stories, and cultural practices, as well as environmental projects and strategies for sustainable island living.

Our story composition process typically includes the following steps:

- Children share a story that includes characters, setting, and plot. Working in groups of 3 to 5, they tell their stories and dramatize them as a skit. This is a familiar story form, used in many churches throughout the Pacific. These stories can be re-tellings or re-creations of stories they have heard or read, but as often as not they come straight from the children's imaginations.
- Children create 10 to 12 illustrations for their story. Sometimes they draw their pictures directly into the computer using the paint tools in *AppleWorks*, *KidPix Studio*, or *IntelliPics Studio*, but usually they draw and paint using pencils, colored pencils, crayons, and pastels.
- We digitize the illustrations. Usually we use a camera instead of a scanner to record the children's art, because it is often easier and quicker (see Unit 3).
- We import the digital pictures into the digital portfolio in sequence. Children are then free to add 3 to 4 pieces of clip art or animations to each page.

- When the picture composition is complete, the children create and type their words. Depending on the children's developmental levels, we may help them to compose captions, sentences, and paragraphs. When appropriate, we act as scribes.
- Finally, children record themselves reading the text and making dialogue captions for the clip art. We expect them to record and re-record until their readings are fluent and comprehensible. The stories, in final form, are saved as templates so they can be rewritten, re-interpreted, and produced in other languages.

Picture Essays

There is probably no activity more pleasurable across all Pacific cultures than sharing photographs among friends. The Pacific is not yet inundated with visual media. People want to see themselves, their villages, their churches and cultural practices, as well as images from far away. Pacific Islanders enjoy comparing how they live with the way people from other islands live.

Children and teachers love to take photographs and make videos. We harvest photographs from all of our video recordings to produce slideshows and digital books. However, we are not satisfied with pictures alone. We want children to bring language to their work, expecting them to record their voices and compose their prose to give reflection and meaning to their drawings, paintings, and photographs.

Photographs and art present friendly environments for emergent writing and reading. We want children to look at photographs, describe and learn from them, and write captions, sentences, and paragraphs to accompany them.

We have produced our own albums of photographs representing many of the islands in our network. We make these photographs available within our bookmaking software to provide a quick start for composition. Additionally, we have collected more than 1,000 pieces of clip art (including characters, animals, and objects) to provide storytellers with the characters and props to make photographs and paintings come to life.

If photo essays are to be printed on paper, we suggest using black rather than color ink, as it is far less expensive and quite satisfactory for most projects. Additionally, we suggest that photo essays be laminated, as photographs are precious commodities to be shared and saved. In Chuuk and American Samoa we are exploring a 3M laminating machine that works from a hand-crank, without electricity. It is a simple and functional way to ensure that student work is preserved.

Our picture essay process includes the following steps:

- Children take 10 to 12 digital photographs that relate to a theme. At Ebeye Elementary School in RMI, for example, children photographed flowers blooming on the campus, including close-ups of leaves and petals.
- We insert each photograph onto its own page in *AppleWorks* (or any application that allows for photos and text, such as *PowerPoint* or *IntelliPics Studio*).
- Children compose one or two sentences for each photograph, using a large font.
- The picture essays are printed and laminated to display on classroom bulletin boards, or presented as slideshows on the computer.

Video Dialogues

Movies can be satisfying to produce and enjoyable to watch. As teachers, we want to integrate videography into the curriculum to promote critical thinking and literacy. We do this by deconstructing our videos into scenes that can be reviewed and considered in isolation from the flow of the film. We publish these scenes as *QuickTime* movies so that they can be displayed with accompanying text, one page at a time, in a digital portfolio.

We display each *QuickTime* movie in a frame that occupies about one-third of a page. The rest of the page contains one or several text fields, so that students can read guiding questions that set a purpose for their viewing and write their own notes, commentaries, and questions. They can pause and replay the movies at their discretion.

In short, video dialogues provide an interactive context for critical thinking and critical viewing. Often the videos are shown to groups so that children can engage in shared discussion.

Our video dialogue process includes the following steps:

- We use *iMovie* software to convert 6 to 8 scenes from a video, each no longer than one minute, into *QuickTime* movies.
- We open the *QuickTime* movies in *IntelliPics Studio* and insert one movie per page.
- Children compose 1 to 2 sentences for each movie.
- We burn the video dialogue to CD to be shared on a computer.

Lillian Segal, a *Pacific Voices* associate, employed this technique to create mini-lessons of a village elder in Kosrae discussing the medicinal value of local plants. Lillian shared her project with a group of Kosraean youth in Hawai‘i. Each page of her digital portfolio included guiding questions to assist the group to view with purpose; each 3- to 4-minute *QuickTime* scene was followed by comprehension questions to stimulate discussion and understanding. Discussions were lively. The Kosraean youth were eager to learn village wisdom and proud that the source was one of their elders so far away.

Universally Designed Digital Storytelling Software

During the 1990s, *HyperStudio* became the digital portfolio software of choice in most U.S. schools, allowing for a relatively easy integration of pictures, text, and recorded voice. In recent years several slideshow/presentation software programs, including *PowerPoint*, *AppleWorks SlideShow*, *KidPix Studio Deluxe*, and *iMovie*, have begun to include similar interactive features.

Until 2002, none of these programs provided portfolio environments as interactive or accessible as *HyperStudio*. Then the IntelliTools Company released *IntelliPics Studio*, the first digital portfolio software universally designed to meet the access requirements for children with disabilities. It costs about the same as *HyperStudio* (\$100 for a single user) and contains the same basic interactive elements.

Creating visions of inclusion

In June 2002, *Pacific Voices* produced videos and interactive books in Saipan focusing on the inclusion of youth with severe disabilities in island life. We created four 20-minute videos, highlighting four youth with cerebral palsy and one child with Down Syndrome. All of the former are wheelchair users; two have trouble manipulating the pages of books; none can speak.

We set a goal of producing media and materials that would tell exciting stories of inclusion that the youth with disabilities could share with their peers in school and their families and neighborhood friends. This was one of our first efforts to invent our own stories of inclusion, rather than simply documenting inclusive practices in the community. Our projects included the following:

- A basketball game, complete with referee and cheerleaders, starring two of our teenagers who cruised the court in wheelchairs. The game dramatically portrayed the intensity of physical contact involving two young men with severe physical disabilities.
- A music video in which another wheelchair user danced with a traditional Carolinian dance troupe. This troupe had never before included a performer with disabilities. She was positioned on the lawn, dressed in traditional costume and beaming with joy – becoming a voice in the choir, moving her arms and hands, dancing and chanting, beautiful and captivating.

-
- A re-enactment of a traditional Carolinian legend of a broken family and healing, starring a boy with Down Syndrome. We produced our play at the Carolinian Cultural Center, using a traditional canoe for spear fishing and a Carolinian hut for the central stage. Our actors wore traditional costumes. They caught and grilled fish and prepared breadfruit, as they enacted a soap opera of high drama.
 - A joyous documentary of a picnic in which children with disabilities were included in all activities, even the preparation of local Chamorro foods and delicacies. The video was produced at a local park, complete with sports competitions, barbecuing, and feasting, including close-ups of the red rice, potato salad, and pickled mango.

The process of developing the stories and producing the films involved many people: parents, teachers, therapists, friends, and family. Each video was shot in a single day, after storyboarding and forethought. We edited the movies in *iMovie*, adding titles, music, and sound effects.

These four 20-minute films, which required three weeks to complete, depict persons with disabilities as participating and valued members of the community. Nothing like this had ever been produced on the island before. The movies were copied to VHS tape and burned to VCDs using *Toast* software, then given to the families and the youth themselves. The story was even included in the local news.

Moving beyond videos to interactive stories

As successful as our projects were, our challenge was to move beyond a video product. If we were to produce genuine communication opportunities for youth with disabilities, we needed something more, something interactive that could give these youth the voice to tell their own stories.

How could we re-purpose the materials into interactive media in which the youth might take more control over their sharing and communication? We needed to create interactive stories that could be activated by single switches, since several of the youth were limited in their physical movement. Further, the stories needed to contain voice recordings and synthetic speech, as none of the youth could speak or had access to augmentative communication devices.

Valuing universal design

This is when we heard about *IntelliPics Studio*. Like *HyperStudio*, *IntelliPics Studio* is driven by buttons that read text and play sounds, movies, and animations. Both of the programs are open in architecture so that photos and paintings, sound files, and *QuickTime* movies can be imported from *iMovie*, *iPhoto*, and *iTunes* collections. Both contain painting tools so that artists can express themselves.

From our standpoint, however, the compelling reason for adopting *IntelliPics Studio* was its universal design for access for persons with disabilities, including:

- built-in scanning features with one or two switches for children with physical disabilities;
- keyboard equivalents for blind users to make button clicks;
- text-to-speech (with text that highlights as it scans) for persons with print disabilities;
- on-screen keyboards for persons with physical disabilities;
- an easy interface with the IntelliKeys Keyboard for users requiring custom keyboard layouts; and
- accessible palettes of Pacific-referenced clip art and scenery to use as story starters.

Our visit to Saipan ended before we could make this interactive and accessible vision a reality. It was all we could do to leave our videos of inclusion with the teachers and families. We left, however, determined to explore a cross-platform, universally designed, easy-to-learn multimedia software to develop digital books for and with teachers, children, and families. A year later, in American Samoa, we got the chance.

Digital Storytelling in American Samoa

In July 2003, educators from the Early Childhood Program in American Samoa approached *Pacific Voices* to help them produce locally referenced digital stories to share with preschoolers.

Since transportation is an important theme in their early childhood curriculum, we told a story about catching a bus in downtown Pago Pago and taking a ride past the tuna canneries. Most children on the island have first-hand knowledge of this story. It is in the familiar that concepts and vocabulary flourish.

The *aiga* (family) buses in American Samoa are flatbed trucks that have been converted into overstuffed buses that rock and roll across the byways of the island. They blare with music from boom boxes. Their dashboards and windshields are adorned with all sorts of miscellany. Their exteriors are hand painted with portraits and scenery, village names, and sayings. They are works of art, some of them ramshackle. The U.S. Department of Transportation keeps hinting that they are time limited, as they fail to meet U.S. safety standards. But they are loved by the people and will not go down without a fight.

Video recording and rough cut editing

Our friend dropped us off at the central bus station in downtown Pago Pago. We approached the driver of the tiniest bus to inquire whether he would let us make a movie on his bus. We offered him \$3, which is much more than the typical charge, to let us ride for about an hour, out past the cannery and then back into town. The driver nodded in agreement. We boarded the bus and sat on the wooden benches that run along the sides, with passengers facing one another across the aisle. The music blared. The driver shifted his gears and we rolled.

We filmed from many angles: out the windows at the trucks and cars passing by, over the driver's shoulder to see him turning the wheel and shifting the gears, out the door to see the people coming and going, paying their fares, and waving goodbye. Our camera recorded the music on the bus and the ornamentation on the dashboard and ceiling.

After an hour, the driver dropped us off at Matafao School to do the editing. We imported 30 minutes of footage onto the computer, using *iMovie*, and edited the piece down to 8 minutes. We call this rough cut editing. Our goal is not a polished film – we simply want a documentary piece filled with the familiar sights and sounds of the bus. It took about an hour to make our movie.

Harvesting still photos

The next step was to use *iMovie* to harvest 25 still pictures, or frames, that would serve as photo illustrations for a digital book. We harvested photos that told the story from beginning to end, choosing those that captured details and events to teach concepts and vocabulary. For example, the children were learning to count, so we included a close-up of the driver's 10 fingers wrapped around his steering wheel. The children were learning colors, so we included photos of red trucks near the Korean Union Hall, blue trucks at Halleck's motors, and a yellow forklift at the cannery. We gave each photo a unique name, saved them all as JPEGs, and put them in a folder. All this took about 10 minutes.

Creating *QuickTime* vignettes

Next we created short *QuickTime* movies, each no longer than 30 seconds, so that some pages of the book have movies for the children to watch and observe, talk and write about. To accomplish this, we returned all our edited clips to the *iMovie* shelf – bringing down individual targeted clips to the timeline. We exported each clip to *QuickTime* and repeated the process about six more times. We put these *QuickTime* vignettes into a folder, giving each an identifiable name (e.g., “driver shifts gears” and “child boards bus”). This process took another half hour.

Extracting environmental sounds

We wanted to extract sounds from the movie to attach to still photos: a song from the radio, the whining of the transmission as the driver shifted gears,

the sound of the brakes as we pulled to the side of the road, the thunderous roar of the canning factory. Once an element (scene or sound) from a video is converted to *QuickTime*, it can be played either as a movie or as sound. The process of extracting sound bites from a video, therefore, is no different from converting a movie scene. In *iMovie* the process is very simple: we select a targeted clip and then choose “export to *QuickTime*” from the file menu. We put the *QuickTime* sounds into a folder, giving each an identifiable name.

Exporting to *QuickTime* and VHS

Finally, we exported the movie in its 8-minute entirety to *QuickTime* for our archive of teaching materials. We also exported it back to the camera for dubbing to VHS tape for viewing on VCRs at home or school.

Then we closed *iMovie* and deleted the film from the hard drive of the computer. About three hours into the post-production process, we had already harvested all of our media to produce the digital book, including photographs, movie scenes, and environmental sounds.

Inserting the media

We opened *IntelliPics Studio* and created 25 blank pages. We inserted one photograph on each page, sizing and orienting it then locking it in place. We attached an environmental sound to each photo or recorded our own descriptive narration. When a child clicks on a photo, it will burst forth in sound, especially important for children with visual impairments. On some of the pages we inserted a *QuickTime* movie. This entire process took a little more than an hour.

Adding clip art

Clip art adds little extras or embellishments to encourage interactivity and joy for the children while teaching them vocabulary and concepts. We added 2 or 3 clip art objects to each page of the book. Because our story was of a bus ride, we included pictures of helicopters and airplanes, dogs and cats on the road, and a bug crawling across the dashboard. We also added objects for the people to carry, such as a blue backpack, a red umbrella, and a lady’s hat. Clip art can be sized as appropriate and either related to the concepts and vocabulary the children are learning or added just for humor and fun. We can even add voice recordings to them.

Creating the English text

We produced both English and Samoan versions of the book, starting with the English version. We created a text field on the first page, customizing its size and appearance. Because this book is for young children, we chose a 36-point font, yellow text on black background. We copied the text field to use as a template for subsequent pages.

We composed the text, locked the text field, and made it “read only” – confirming that when we clicked on it, the computer read the text with the

voice synthesizer. We pasted the text field template onto the rest of the pages and composed the captions and sentences. On some pages we left the text fields empty for the children to dictate or compose their own sentences as co-authors.

We saved the book as a template, which makes it available for countless revisions. With it we can support children and parents to write a hundred versions of the story, simply by composing new text for our media. This is how we become efficient.

Creating the Samoan text

Next we composed the Samoan text. We opened the template we just created and on each page, we deleted the English text and typed the Samoan text. This process was as quick as the competence of the author.

The only difference between the creation process for the English and Samoan versions is that we did not want the computer's voice synthesizer to read the Samoan text, as it would mispronounce the words. For each of the Samoan language text fields, then, we turned off the "respond to mouse click" feature. We then created a transparent button over the text field in which we recorded the Samoan words in a teacher's voice. Thus, when the child clicks on the text, the words come to life in a familiar Samoan voice.

Creating buttons in *IntelliPics Studio* includes selecting the button tool and clicking and dragging a button over a portion of the screen. To make a button transparent so that, in this instance, the text field underneath is visible, we selected "transparent" from the "button appearance" menu.

Our final product

We now had two versions of *The Bus Ride*, one in English and one in Samoan, both 25 pages long. Each page contained a photograph or short movie, along with text for reading or text boxes for writing. Each page contained clip art objects that the children could play with and animate. Each page provided voice models of fluent reading. In the English version, the computer's voice read the text, using a voice and a reading rate that could be customized to the preferences and needs of the children. In the Samoan version, the text played in a human voice.

This total project required a day's work. We burned the story template to CD-ROM to share with others. We printed and laminated the book and placed it in the classroom listening center.

Shared literacy events

The Bus Ride is rich with opportunities for critical thinking, concept and vocabulary development, and shared experience. As many as 10 children sat on mats in front of the computer monitor, reading the words, watching the *QuickTime* movies, and talking about the pictures. External computer speakers amplified the voice recordings and enhanced the listening experience.

Vocabulary and concepts were introduced within the context of the media and text within the book. The teacher, sitting at a right angle to the computer with the keyboard and mouse on a lap tray, typed the children's words as they made up their own sentences and recorded their voices using an external microphone as they described the picture and read the text. This was accomplished with great joy and merriment.

Supporting Youth to Be Writers and Illustrators

Adolescents and young adults can be encouraged to illustrate and compose their own stories. We recommend 8 to 10 illustrations, which can be collages of pictures from magazines and newspapers or original drawings using colored pencils and pastel crayons. The illustrations can be digitized using a scanner or, as we prefer, a digital camera. The students then import their illustrations into our template and follow the same steps described above to produce books for publication.

Recently two students produced a beautiful, original book called *My Lost Tooth*. They drew the illustrations with colored pencil – simple line drawings with minimal shading. They recorded Hawaiian slack key guitar music using a tape recorder in one of their homes. They wrote a simple story in local Hawaiian dialect, in the voice of a child about to lose her first tooth. They narrated every page themselves.

At the end of their story, the students inserted a short *QuickTime* movie in which they introduced themselves and shared some of the story's background. We call this page "Meet the Authors," believing that it is essential for children to understand that stories are written, illustrated, and narrated by real people with important purposes.

We published *My Lost Tooth* on CD-ROM along with the *IntelliPics Studio* player so that the digital story could play on PC or Macintosh computers, with no additional software requirements. These two student authors never believed they could create such a work of art and could not thank us enough for the opportunity to produce an interactive book.

Converting Commercially Illustrated Books to Digital Formats

We have used similar procedures to create digital books of commercially illustrated children's literature, making sure to honor copyright by securing the publishers' permission. In American Samoa, for example, the Humanities Council has funded local artists and writers to produce illustrated children's books that are referenced to island life.

Using a camera-as-scanner technique (see Unit 3), we re-created the books in digital formats within our template in a few hours. This enabled children to read while listening to fluent Samoan language models and to compose their own prose as writers and record their own voices as readers. In turn, these digital books could be shared across all 20 computers in the lab so that an entire group of children can learn and contribute.

Interactive Books in Special Education

For upper elementary and middle school students who are struggling to become fluent decoders, we create digital books that contain fewer illustrations and considerably more text (approximately 20 pages with 50 words to a page). Often these stories are high interest, low vocabulary texts written especially with adolescents in mind.

Some of the stories are scanned, page by page, and converted to text using the optical character recognition (OCR) software that comes with scanners. Other stories are downloaded from the Internet and are already in digital form. Sometimes we type the stories ourselves.

Whatever the case, we copy and paste one or two paragraphs of the story into text fields on each page of our *Pacific Voices* template. By locking the text fields and making them “read only,” children can read along while listening to the voice synthesizer read the text aloud while highlighting the words. In *IntelliPics Studio* the speed of the reading can be regulated to a very slow rate, allowing students to point to each word as they listen and read aloud in unison with the computer.

When students engage in this activity, they use headphones to rehearse by reading-while-listening. They listen to the fluent voice model as many times as required to master the text. When the students feel ready, they select the on-screen recorder and self-record the text. If the recording is unsatisfactory, they can continue to rehearse and re-record until each page contains a fluent self-model of oral reading. This technique permits readers to rehearse and record in private until they have a book that they are proud of. The book can be replayed in slideshow mode in the students’ voices, reading with fluency and expression.

ASSISTIVE TECHNOLOGIES AND OTHER SOFTWARE SUPPORTS

The multimedia activities we have described thus far depend upon three core software applications: *iMovie*, *iTunes*, and *IntelliPics Studio*. In this chapter we describe inexpensive, motivational software that provides visual and auditory supports for story writing and augmentative communication for both young children and children with disabilities. We believe in inclusive communities in which younger brothers, sisters, and cousins can be included, as well as children who are challenged by communication. The software is enjoyable and empowering to persons of all ages – including village elders who have never before touched computers.

Storybook Weaver Deluxe

Storybook Weaver Deluxe is inviting writing software providing a rich graphics environment that is appealing in its humor, beauty, and diversity. It lends itself to storytelling and story writing, providing sets of characters, animals, and objects in concert with scenes of volcanoes, reefs, islands, villages, towns, and cities. If the software has any drawback, it is that children, left unchecked, will spend hours creating their pictures and scenes rather than composing and writing. This problem can be managed by requiring children to compose their stories offline before visiting the computer lab.

Storybook Weaver Deluxe has many classroom applications. At Maap Elementary School in Yap, for example, children interviewed elders in their villages to learn stories which, in turn, they interpreted, wrote, and illustrated using the software at school. Many of their stories were written bilingually, both in Yapese and English.

We also encourage *Storybook Weaver Deluxe* to be used for storytelling, especially with young children. Because the graphics can be moved (or dragged), the software provides all of the features of the felt board stories that are commonly used in early childhood classrooms. The teacher and children tell the story while moving the graphics.

Using *iMovie* to create video big books

The simplest and quickest way to produce video big books is to export *Storybook Weaver Deluxe* stories directly into *iMovie*. The process includes using a screen capture utility (e.g., *Flash It*) to copy and save each page of a story as a PICT file, importing the PICT files into *iMovie*, adding the audio tracks (narration, music, and sound effects), exporting the movie to a video camera, and dubbing to VHS tape. The process is seamless and efficient, resulting in video big books that are ready to be shared in the school library, sent home to the villages, or broadcast on community television. For the text to be readable on

television, the largest text format must be used. In *Storybook Weaver Deluxe*, this is an 18-point, bold, Comic Sans font.

To create video big books, the narrators both read the text and add creative elements of free dialogue using voices for the characters and sound effects. We then add more sound effects and music to enhance the video experience. Once we create a book in *Storybook Weaver Deluxe*, we can re-purpose it to video within two hours.

We have produced video big books in Palau, Yap, Pohnpei, and Kosrae to the delight of children and teachers alike. It is rewarding to publish a story and then honor the author by producing an accompanying video big book.

Writers' workshops and parent involvement

Storybook Weaver Deluxe also lends itself to inviting parents to the school for writers' workshops. Parents and their children can share a story, creating the pictures and writing the text. Even parents who have never before touched a computer can be gently led into story writing by using this software with their children.

***Storybook Weaver Deluxe* in Special Education**

Storybook Weaver Deluxe presents an ideal assessment and teaching environment for children with learning and communication disabilities. Because the graphics environment is so rich and accessible, special education teachers can create customized visual environments in which teaching and evaluation of vocabulary, concepts, and word recognition can occur seamlessly.

In American Samoa, we helped Mata, a young girl who is hard of hearing, to improve her vocabulary. Because she cannot hear phonic sounds, a sight word approach to reading was appropriate. With *Storybook Weaver Deluxe*, it was easy to create picture and word associations for her. We placed 5 objects and 10 corresponding text labels in Samoan and English on each page of a 10-page book. The graphic objects and their text labels were out of order and in a different sequence on every page. As we pointed either to the objects or their labels, we asked Mata to find their match, teaching her the words that she did not know. Mata was motivated to choose and manipulate her own graphics and backgrounds and compose her own sentences.

The language experience approach

For children who are reluctant or struggling writers, we recommend the language experience approach to writing, in which the teacher (or any competent scribe) supports children to generate text for their illustrations. The scribe may do the keyboarding as the children dictate their sentences. Often we pull language from children by getting them to include describing and action words. The rich and motivating graphics environment in *Storybook Weaver Deluxe* brings joy to these language development exercises.

For nearly a decade, *Kid Pix* has provided a joyous painting environment for children. With each new edition of the software, the number and variety of painting tools have increased. With *Kid Pix Studio Deluxe*, a companion program called *Kid Pix Slide Show* is included. This allows children to present their work, including voice recordings (narrations) and slide transitions. *Kid Pix Studio Deluxe* and its companion slideshow work together seamlessly, providing teachers and children with rich opportunities to illustrate stories and reports, then view and share them.

Kid Pix is often misused, because teachers view it simply as a computer art or play environment for young children. Rather, it is a story creation environment in which children learn to illustrate text across a planned sequence of slides (the storyboard). Writing and illustrating lends itself to teamwork and cooperative learning, a cornerstone of Pacific pedagogy.

Kid Pix is a worthwhile investment. Children will master many professional painting tools. They will learn to storyboard their work and parse it into slides. They will learn microphone techniques to narrate and describe. And they will have the opportunity to share their work formally with others.

Storyboards of slides with pictures and text

To take advantage of the *Kid Pix* tools and to make efficient use of limited computer time, we ask children to first create storyboards of their projects, in which they visualize a sequence of 8 to 10 slides that will tell their story. Every slide is to contain both picture and text. With younger children, we are content with a sentence or perhaps even a caption for the picture. With older children, we expect a paragraph. Stories and reports contain predictable writing elements, including authorship; beginnings, middles, and ends; characters, scenes, and plots; concepts and vocabulary; and perhaps a main idea or lesson. Children should plan for these elements on paper before sitting at the computer, where they use the typewriter tool (not the letter stamps) for their writing.

Stamps and stamp sets

Children love to stamp miniature pictures on their paintings. *Kid Pix* provides thousands of stamps, many of which are organized around themes (or stamp sets). Stamps can help children enrich their scenes with elements of plot (characters, objects, actions). Children can paint a background or import a photograph and then enrich it with stamps depicting the story line. Because using the stamps is such fun, we suggest setting a limit of perhaps 10 stamps per slide.

Writing and narrating

Stamps and paintings do not supplant writing. We insist that children add text to every slide. At the core of the school curriculum is the creation and sharing of stories and reports. Illustrations are important; but text is essential. As teachers, we must help children balance their creative energies to integrate

their art into the writing process. Children draw by nature; they compose, write, and edit with encouragement.

Just as every slide contains text, it is also narrated or described in the voices of the authors. The *Kid Pix* interface for voice recording is so easy that even kindergartners can work independently. The children simply click on the microphone icon and begin speaking.

Authorship and presentation

We require that children present their work as a natural and expected part of the writing process. Just as stories and reports have voices and authors, they have audiences and the social context of shared learning. Children share their work within the formal constraints of the *Kid Pix Slide Show*. We suggest that slides be set to their maximum display duration of 30 seconds, so that the audience has ample time to look at and appreciate the presentation.

Kid Pix slides can be exported to *iMovie* to produce video big books. To open *Kid Pix* files in *iMovie*, complete with text, we use the “export graphic” command and save as a PICT file.

Use in special education

Dr. Peter Dowrick and his team at the University of Hawai‘i Center on Disability Studies wrote the Computer ACE program, which is a community-based tutorial program to promote reading fluency among young children. The program is easy to implement, utilizes inexpensive, commercially available software to immerse children in decoding and comprehension activities (including *Reader Rabbit*), and empowers parents and other community volunteers to successfully tutor children in reading. The program has been adopted in several schools in Hawai‘i, American Samoa, and Micronesia.

Computer ACE includes a creative application of *Kid Pix* to help children practice the decoding of sight words. We put each child’s photograph into *Kid Pix* and then use the typewriter tool to type a series of sight words and phrases. We quickly create as many as 50 slides, each using the same photo but a different word or phrase, and import them into *Kid Pix Slide Show*. The children then record the sight words or phrases in their own voices.

The outcome is a series of flash cards in which the children are exposed to slides that contain their picture and their own voice, reading the words and phrases they are trying to learn. The game is for the children to try to read the words before they hear it on the computer. The flash cards are compelling because of self-modeling – children see their own pictures, hear their own voices, and read their own customized list of sight words. There is perhaps nothing more motivational than self-modeling.

Imagine a word processing program that not only reads aloud every letter, every word, and every sentence that children write in the English language, but that also repeats itself as many times as the children choose. Now imagine a story reading program that reads stories to children, word by word and sentence by sentence, as slowly as the children choose. Imagine that the program also highlights every word as it is pronounced, giving children access to the print as they make text-to-speech connections.

IntelliTalk II is both a talking word processor and a text-to-speech reader. We have explored its applications in many schools and homes in the Pacific, finding it motivational and helpful to children who speak English as a second language, have trouble learning in school, or are visually disabled. Even the youngest children who are first exploring alphabets on keyboards find the auditory feedback compelling.

IntelliTalk II is our choice for universal access in word processors and text readers. We recommend it highly for Pacific island classrooms.

Voice synthesis: Text to speech

Perhaps the greatest appeal of the software is its handling of voice synthesis. As children engage in keyboarding, the computer speaks aloud. Children have the choice of listening letter by letter, or word by word, providing immediate feedback. They see and hear what they are typing. For children who are just learning to touch type, the software provides auditory feedback without their having to look at the screen.

At Sapuk Elementary School in Chuuk, for example, children clustered around the computer to watch, read, and listen to the typist at work. These children wrote legends they learned from their elders in both English and Chuukese. The English versions of the legends were copied and pasted into *IntelliTalk II*, with an easy-to-read 36-point font. Together, groups of 8 to 10 children read and rehearsed their legends in unison with the computer's voice. Unfortunately, *IntelliTalk II* cannot be used to read Chuukese, as it pronounces words using English phonetics.

We also explored these features with two blind children in American Samoa. The auditory feedback of the software invited them to explore the keyboard and compose text.

Choral reading and speed reading

We use *IntelliTalk II* as a story reader, providing an ideal environment for reading-while-listening. Short stories of about 500 words are opened as text files. The font is set at 36-point so that 6 to 8 children can gather around the computer and enjoy reading together. One child acts as the story manager, clicking the voice button to make the computer read one sentence at a time. As the computer reads, it highlights each word so the children do not lose their place.

Initially the computer reads at 50 words per minute, a slow rate that allows dysfluent readers to keep up and perhaps even predict ahead. The children practice reading in unison with the computer until they can read the story with confidence. Then the fun begins: The reading rate is increased to 70, 90, and 120 words per minute. The computer becomes a speed-reading machine, driving and motivating children to reach automatic decoding speeds. This builds fluency.

Creative teachers can make games of these activities. Children rehearse in unison with the computer and then are challenged to beat the clock without the computer's help. These time trials involve stopwatches and charting, so children see their progress and are motivated to engage in rehearsal. Goals are set. Children are recognized and rewarded for bettering their speeds and declared winners when they can independently decode a story at rates of 100 words per minute.

Controlling listening comprehension

IntelliTalk II provides on-screen buttons that give students control over the text reading functions. Instead of listening non-stop to an entire story, students have the choice to selectively play just one sentence or paragraph per button click. They can repeat the playback of each sentence countless times. These control features enhance comprehension, because students can listen, re-play, and reflect on the material at their chosen rate.

Use in special education

IntelliTalk II provides built-in templates to support access for students with disabilities. For example, if students cannot use the computer keyboard, they may select from several on-screen keyboards, becoming enabled to type just by pointing and clicking on the virtual keyboard. For these students, we recommend a trackball or traction pad, rather than the mouse, as these assistive technologies allow for greater accuracy and less fatigue. *IntelliTalk II* is also equipped with built-in scanning features, so that users who are limited to switch use can activate all of the software features by scanning and clicking.

Augmentative Communication Software

The *Pacific Voices* project serves children with autism and cerebral palsy. Augmentative communication software is intended to support people who have trouble expressing themselves with spoken language. The software described in this section creates picture boards and labeled picture books, so that children can point to pictures and words to facilitate communication. *Picture It* and *Pix Writer* also support children with voice synthesis to help them understand what they read and to encourage them to write.

Currently we are exploring five augmentative communication software programs for Pacific Islanders: *Picture It*, *Pix Reader*, *Pix Writer*, *BoardMaker*, and *Overlay Maker*. The programs are relatively expensive (each \$100 or more) and intended for children and adults who may require picture-based supports for speaking, reading, or writing. Each program quickly and

efficiently generates picture symbols, which in turn can be displayed and printed as picture boards or rebus books.

We have explored the software in American Samoa and Hawai'i with children who are non-verbal due to cerebral palsy or autism. We look forward to extending our explorations to children who are deaf and to learners of English as a second language.

Picture It and Pix Reader

Picture It is an efficient tool to produce labeled picture books. The software application is a productivity tool for teachers and curriculum developers to create stories in English that are enhanced with picture symbols. The creation process is simple: English text is pasted into a conversion window and then parsed into pictures. The English text must be spelled correctly or the parsing process fails. Almost immediately small pictures become attached to the English words to illustrate their meanings. We have produced a labeled picture book using a Chuukese legend, and Chuukese curriculum specialists have encouraged us to pursue this further, as it may make English language storybooks more accessible to young readers.

These books can be printed or read on the computer in a companion software program called *Pix Reader*. In this software, children see the words and pictures and listen to the words with an easy-to-use voice synthesizer. In fact, children can click their way through the story one word at a time – looking, listening, and reading. *Pix Reader* gives children control of reading-while-listening.

Pix Writer

Pix Writer is a software initiative by the Slater Company, the authors of *Picture It*. Intended to support reluctant writers, *Pix Writer* enables students to create text and picture symbols on a grid, organizing them by parts of speech (nouns, adjectives, verbs). A child can click on the symbols to build text and picture sentences that are immediately displayed and read aloud.

Pix Writer presents a controlled writing environment in which children can initiate written communication. For example, the symbols might include three animals (a dog, cat, and bird), three verbs (is eating, is sleeping, is playing), and three locations (in the house, under the tree, beside the car). Children can choose the building blocks of their own sentences.

BoardMaker

BoardMaker is the software chosen by most augmentative communication specialists. It contains libraries of thousands of graphics that are searchable by keyword and integrated with communication board templates, offering quick and efficient design of communication boards for non-verbal children. Typically, these boards are printed as grids, with each cell in the grid containing a picture and its corresponding text. The text can be in English, the vernacular language, or both. The picture boards are then laminated.

Non-verbal students communicate by pointing to the pictures on the board. Picture boards can be as tiny as a file card or as large as a place mat. They can contain as many picture-messages as appropriate for the students' cognitive and motor skills. Some children carry notebooks with pages of picture boards organized around themes or activities. Others build their own "sentence strips" by using key words laminated with Velcro backing.

Picture boards should be readily available and thematic, so that when it is time for a game, for example, all of the key messages for successful participation are available. Then, later, when it is time for lunch, a board with food choices and mealtime conversation becomes available.

Many special education teachers utilize *BoardMaker* to produce and display picture symbols and communication boards at all of their activity centers. As children move from one center to another, their communication opportunities are readily available.

Overlay Maker

Overlay Maker provides an easy-to-use set of tools to create picture boards. Ideally, a team consisting of teacher, parent, and speech therapist design a series of communication boards intended to support communication across the many contexts of a child's day.

The team can undertake an ecological inventory by exploring the child's daily routines to identify the various settings and contexts for communication. This includes getting ready for school, riding on the bus, participating in classroom lessons and routines, eating in the cafeteria, playing with friends, and so on. Ecological inventories lead to the planning of communication boards, because different boards are required for different contexts. This planning process requires teamwork, time, and creativity.

The creation of the boards is the easiest part of the process. Using *Overlay Maker*, the team creates cells on a grid into which they paste photographs, clip art, or text labels. Each grid may contain as many as 36 picture cells, including customized borders and other colorful layout features. *Overlay Maker* provides a seamless interface to a clip art collection containing humorous, friendly communication symbols that express a broad range of classroom-relevant concepts categorized for easy access (e.g., actions, animals, body parts, foods, weather, feelings, transportation, shapes, colors). Photographs can be copied and pasted as well. The overlays are printed on legal size paper and laminated. Well-designed overlays look like colorful game boards that invite interaction and communication.

A NEW VISION FOR THE PACIFIC

The rhythms of the islands were invisible to those “outsiders” who believed that they had a mission to serve the Pacific island peoples. Every island has a word for the outsiders – the German or Japanese, British or French, American, Spanish, or English pirates, whalers, missionaries, and entrepreneurs. They brought the copra and sugar cane industries. They introduced Christianity, literacy, and Calrose rice. They brought devastating illnesses, the “Great War,” and atomic bombs. Now they bring the information age with Internet, cable television, VCRs, MTV, and CNN.

The outsiders brought formal education to the islands. They built schools, brought books, and provided teachers. The curriculum of the schools was the outsiders’ curriculum, and Pacific Islanders learned to speak Japanese or English or French. They learned to read the Bible and became Christians. They learned the history and grandeur of the “great powers,” but they did not learn much about themselves. That was left to the wisdom of village elders.

Toward a Vision of Oceania

The *Pacific Voices* project is part of a new vision of the Pacific, a vision searching for a name and a metaphor. Some of the newest maps refer to the Pacific Basin as Oceania. The islands were divided among the great powers depending upon the outcomes of wars. The peoples of Oceania are divided by the politics of 19th and 20th century colonialism.

Pacific Voices is defined by this legacy as well. We are funded by the United States government to support those island nations affiliated with the American sphere of influence. They are a complex mix of political entities variously called territories, commonwealths, and freely associated states.

This political reality colors our work, putting us in creative tension with our search for an Oceania worldview. Hawaiians hold many affinities for Maoris, for example, but Aotearoa (New Zealand) is not within the *Pacific Voices* network. The Samoans are divided by nationality, with Samoa (formerly Western Samoa) not 60 miles from our American territory, yet a world apart in politics and education. Fiji holds great influence in Oceania, both now and when it launched its ships many hundreds of years ago. The University of the South Pacific in Suva trains health and human service providers throughout the region, yet remains unconnected to *Pacific Voices*.

These political realities challenge us to think outside the box, recognizing that educational and communication technologies are the keys to nation building, regional development, and sustainable living. We must have a vision of the

Pacific Basin that acknowledges its history and the natural affinities of its peoples. This involves respecting and cooperating with diverse models of education and economic development, including, first and foremost, the indigenous peoples themselves.

This issue becomes most evident with telecommunications and distance education. Satellites and the Internet shamelessly traverse boundaries. Under these circumstances, how do we ensure that island peoples find their voices within this global network?

Technologies for voice

The aim of *Pacific Voices* is to support Pacific educators to employ multimedia tools to explore their own voices, celebrate their own island rhythms, connect with one another across the waters, and celebrate the synergy of old and new. Pacific Islanders have many more similarities than differences. Some island peoples are clearly related to one another through migration. All are related through the common experience of making a life on land surrounded by the mighty Pacific Ocean.

In this book, we focused on projects that celebrated language arts, social and cultural studies, and environmental studies that value bilingualism, village wisdom, and school and community partnerships. We introduced technology tools for authorship and production, including story writing and publishing, storytelling and recording, video making and broadcasting, and interactive CD-ROMs.

In Western textbooks this equipment may be described as productivity tools. We think of them as empowerment tools: tools that give voice. The Western concept of productivity, however, may be useful and valid. Our goal is to support indigenous peoples, and particularly children, to become producers of knowledge: to think creatively and critically, to synthesize old and new, and to engage in trans-Pacific dialogues, with possibilities for transformation.

Technology and culture

We operate under some cautions. We do not believe that educational technologies are culturally neutral. The concept of a tool sounds culture free. A hammer, after all, is just a hammer. It can be used for pounding any place, any time, can't it?

Be assured: Tools are not culture free. Some years ago many of us enjoyed the film *The Gods Must Be Crazy*. In it, a Coke bottle is dropped carelessly from a small plane, lands in the bush, and is discovered by native children. This story shows, with wonderful humor, how a new technology – a shiny glass bottle – could disrupt life in a community.

The United States and Japan are at the forefront of technological innovation, telecommunications, and information management. This new information era raises disturbing questions: Whose information will be disseminated and

**Technology
Integration to
Support Cultural
Wisdom**

heard? Whose voices will rise through the din? If knowledge is power, whose knowledge will be honored? Can diversity be respected in a world driven by CNN world news and MTV world music? Can traditional communities survive if schools are committed to transforming the children into consumers of Western lifestyles? We do not have answers to these questions, but those of us who disseminate innovation and technology into the Pacific must engage in these dialogues with indigenous peoples.

Cable television is now in place on all of the major islands in our network. MTV, CNN, the Movie Channel, and even the Golf Channel are glowing in the living rooms where storytellers sat not 10 years ago. VCRs and video rental stores are found in even the most humble neighborhoods, sometimes powered by generators on atolls where power lines have not yet been laid. Action movies rule, perhaps because no one has to speak much English to figure out who is shooting whom.

Through all of this, thoughtful educators are struggling with the role of education on the islands and the constant of change. So, what can we do? What should we do?

At the heart of Western education is literacy. Math and science are important, but literacy sits at the core. Children and their parents need access to print in both English and vernacular languages, in all of its forms: books, newspapers, comics, and magazines that can be slipped into backpacks and shared in villages. While the Western and Eastern worlds can do a much better job of bringing print to the islands, the schools can become printing houses for the stories and wisdom of the villages they serve. *Pacific Voices* commits its resources to this vision.

In this book, we have explored many ways to make print accessible to communities, including listening centers and recorded books, video books, big books, voice synthesizers on computers, picture books, DVD captioning, and all sorts of graphic supports to promote comprehension. We have also explored many tools to support speaking, writing, and performing, including word processors that talk, audio recorders, video cameras, and boom boxes. With every technology we ask how it might be applied to support bilingualism and cultural wisdom.

Uprooted peoples and broken connections

Many Pacific island families are uprooted. They come to the main islands (or Hawai'i or Guam) seeking work. Traditional family structures and village governments are stressed and sometimes broken. Children come to school without the stable fabric of home and community. Many children and families of the Pacific are now immigrants – away from home, disoriented, and economically poor.

These challenges have no ready solutions. They must be part of our ongoing dialogue. *Pacific Voices* supports educators to work with families and com-

munities to document, share, and produce knowledge. At Maap Elementary School in Yap, for example, we supported teachers to produce videos about their garden, so that children and families can maintain sustainable lifestyles that are not so dependent on store-bought goods. In Utwe Village in Kosrae, we recorded a canoe builder who teaches village youth to build their own canoes to fish in the mangrove forests, rather than depend on the motorboats that they cannot afford. We also explored ways to re-connect immigrants with the people of their home islands via video teleconferencing and the Internet.

When fieldwork gets real

Having said these things, we have not written this book in a rote or prescriptive way. The tools we support work well together in thousands of combinations. Workshops and courses each assume personalities and lives of their own – as they should. We encourage teachers and trainers to take from this book whatever can be of use. You should own your content, just as we have owned ours.

It has been a wonderful experience to work on this *Pacific Voices* project; it has also been difficult. Once we committed to the concept of authentic activities, everything became much more exciting and real, and also more problematic. By authentic we mean that all activities were negotiated and explored with Pacific Islanders, in schools and classrooms and villages. This was not intended as a research project or a teacher-training project. Its mission was (and is) to develop a technology integration curriculum that could be taught in college courses and professional development workshops, using face-to-face and distance learning instruction.

To accomplish this, however, we have undertaken considerable teacher training and engaged in field-initiated research and service. Many of the ideas in the preceding chapters and the instructional units that follow could never have been imagined in the abstract. They became apparent on the islands.

*Who would have dreamed that fingernails
would slice through the control pads on our cameras?*

*Or that a power spike in Ebeye could be so intense
that it burned through a surge protector to destroy the computers?*

*Or that most of our colleagues had never before heard their voices
on tape recorder or seen their images on camera?*

*Or that our computer and camera would become
the only photo processing service on an island?*

Or that storytellers would line up to record their knowledge?

*Or that a Peace Corps volunteer from Japan would assist us
to record an old man telling the creation story of Majuro?*

*Or that we would be asked to film a child who was dying
so that his parents could have a memory?*

SECTION II

VIDEO INTERVIEWS

Teachers and students will learn to use the video camera as a classroom tool for reflection, critical thinking, listening, and speaking.

Invitation for learning

This is an excellent first activity for introducing the video camera to the classroom, including handling all of the basic equipment, assigning roles, developing a simple script, and learning about set and lighting considerations. Once teachers learn this basic video interview process, they can apply it to numerous learning opportunities for themselves and their students.

Directions

Working in teams of five, learners will produce video interviews in which they share something of interest, such as a remembrance from childhood, to an identified audience. Teams will:

1. Clarify and visualize the audience for their interviews. For example, teachers being interviewed may want to think of their students as the audience.
2. Create a script for a five-minute interview, including (a) host introducing and welcoming the guest, (b) question list for guest (e.g., childhood memories, something special about guest or family), (c) questions or comments from the audience, and (d) host closing and signing off.
3. Choose an indoor or outdoor setting with (a) optimal lighting (no backlight), (b) seating (chairs or bench), (c) an attractive backdrop (e.g., wall hanging, bushes), and (d) minimal distractions.
4. Set up the equipment: camera (adjusting the camera height to eye level), tripod, and handheld microphone.
5. Assign roles:
 - *Camera operator/Director.* The camera operator manages the following shots: shot on host, shot on host and guest, shot on guest, slow pan between guest and host, slow pan to audience. As director, this person also controls the action on the set by saying, “Quiet on the set” and “Standing by” before starting the recording, pressing the record button on the camera, waiting two seconds before pointing to the host to cue the start of the interview, and pausing the camera at the end of the interview before saying, “All clear.”
 - *Set manager/Audio monitor.* The set manager sits just off the set to keep bystanders quiet and under control. As audio monitor, this person also wears headphones attached to the camera to ensure that the audio signal stays loud and clean.

- *Host.* The host honors the guest as the most important person on the set, ensuring that they are at ease and comfortable, working with them to develop and review the script, and listening carefully to them, asking follow-up questions as appropriate. The host often writes notes and questions on a sheet of paper that can be taped to the tripod as a prompt sheet. The host also remembers to smile and talks to both the guest and the camera, sometimes looking at one and then the other. At the close of the interview, after signing-off, the host waits and smiles until hearing “All clear” from the director. This role can be very difficult and overwhelming for children, so initially the teacher may want to assume this role.
 - *Guest.* The guest sits to the left of the host, talks to both the host and the camera, and understands that the interview is not over until the director says, “All clear.”
 - *Audience.* The audience sits to the right of the host, just off-camera, listening to the interview. When the host asks if there are questions or comments from the audience, they take the microphone, introduce themselves, and speak.
6. Shoot five interviews, alternating the roles so that everyone has the opportunity to experience each.
 7. Copy the interviews to VHS tape while viewing and enjoying the work. If a VCR and television are not available, play the interviews directly on the camera.
 8. Send the VHS copy home with participants to share on home VCRs with family and community.

Classroom applications

Video interviews can play a central role in Pacific island classrooms. Many of the projects described in this book are anchored in video interview skills. Children learn to listen and record one another (and community guests) as they talk and share information about themselves, their families and community, and their in-school learning. Their videotapes can be copied to VHS to be shared with parents and the community, or archived in the school library.

The skills needed to conduct video interviews have immediate relevance for careers in media and communications. Students who learn to produce quality video interviews may have their work broadcast on community television. Interviews with community elders, storytelling, story reading, and poster lessons may be particularly appreciated.

Stretching our imaginations: Dare to dream

Imagine a video station for your classroom, where student teams show and tell what they are learning. The station is in a safe place: a corner of the classroom, sheltered from the entrance door. A small set is decorated with a wall hanging and a mat. The camera is on the tripod, at low eye-level, so that children can sit on the mat. There may be one or two small chairs for adult participants. Hosts and presenters rehearse before the shoot, developing a script that is reviewed by their teacher. Teams each have their own videotapes to maintain portfolios of their recordings. Impossible? Not at all.

VIDEO AS STILL PHOTOGRAPHY

Teachers and students will learn to use the video camera as a still camera, taking pictures of details in nature, portraits of persons, and local scenery.

Invitation for learning

This activity enables teachers and students to observe, discuss, and describe their environment. At once, the camera is a microscope and a pair of binoculars.

By thinking in terms of still pictures, video cameras become tools to capture photographs of people, places, and events. These photographs, in turn, can be used to produce classroom materials, such as posters, newsletters, reports, books, and slideshows.

Many of the textbooks used in Pacific island schools come from the United States or New Zealand. Other books that are locally published may be out of date. Teachers want access to photographs that reflect the communities in which they live. With the video camera, this is now possible.

Directions

Working in teams of three, learners will use the digital video camera as a still camera. Teams will:

1. Create a shoot list of 20 close-up detail shots (e.g., flowers, bugs, plants, people's faces, jewelry, T-shirts, tools, arts and crafts, foods) to take with the camera.
2. Record each shot for seven seconds, using the side viewfinder and the wide-angle lens (zoom out). Teams can attain close-ups by physically moving the camera close to the subject (a physical zoom).
3. Create a shoot list of 10 portrait shots (e.g., individuals or small groups of people) to take with the camera.
4. Record each portrait shot from the shoulders up (not the full body), using the same procedures described in step 2 above.
5. Create a shoot list of 10 postcard shots (e.g., beaches, mountains, reefs, fishing boats, businesses, government offices, parks) to take with the camera.
6. Record each postcard shot for seven seconds, using the side viewfinder and the wide-angle lens (zoom out).
7. Attach the video camera to a television monitor to display the pictures, in pause mode, one at time, describing to an audience who or what they are, and why they were taken. When used as a professional development exercise for teachers, teams might also indicate how the photos might be used for instruction or supplementary classroom materials.

Classroom applications

In order to create photographs from video, the camera must be attached to the computer. The video material is transferred to the computer using *iMovie* software. Still photos are then selected, saved, and published as reports, books, newsletters, posters, calendars, and yearbooks. These activities usually require additional software (e.g., *HyperStudio* and *AppleWorks*), although sometimes the photos are just printed as is to be laminated and added to the teacher's collection of curriculum materials.

Stretching our imaginations: Dare to dream

A video camera records 30 frames (photographs) per second. Recording close-ups of the faces of children singing produces thousands of candid photographs to choose from for school yearbooks and calendars. It is a case of establishing an intimate relationship between camera and subject.

VIDEO CAMERA AS SCANNER

Teachers and students will learn to use the video camera as a scanner, digitizing family photographs to use in a narrated slideshow.

Invitation for learning

Our best learning often occurs when we explore and examine the commonplace in our environment. We may touch and consume Calrose Rice or StarKist Tuna nearly every day, but have we read or tried to understand the labels? Artists in our communities produce beautiful posters, calendars, and postcards, but do we know how to bring this visual information into our classrooms to engage children in critical thinking? Our students love to draw and paint, but do we integrate their art into literacy activities? When is the last time we really looked at a dollar bill or a postage stamp with our students? These materials offer a world of information.

The video camera is in fact a scanner. So long as the lighting is right, we can take pictures of nearly anything, including the postage stamp on a postcard or the 10-cent coin in a child's pocket.

Directions

Working in teams of three, learners will use the video camera as a scanner. Teams will scan photographs to create a narrated family slideshow of about 8 to 10 minutes in duration. They will:

1. Identify 20 to 25 photographs that can be used to illustrate a family story. If the photographs are in family albums, remove only one photograph at a time for scanning and replace it in the album before removing the next.
2. Create a well-lit work surface. This can be the hood of a car, a dry sidewalk on a sunny day, or a table next to a window to maximize the available natural light. It may help to use a table lamp, but this is not usually necessary.
3. One at a time, place each photograph on the work surface. Holding the camera, use the side viewfinder and the wide-angle lens (do not zoom). Frame the photograph in the viewfinder and record for 8 to 10 seconds. If you can maintain the focus, move the camera closer to the photograph to record individual people or details. If there is glare from a glossy photo, tilt the photo slightly as you record. You can record the photographs in any order, as they can be re-sequenced later.
4. Attach the video camera to the DV iMac, open the *iMovie* software, create a new project, and import the video onto the shelf. Using the "create still clip" menu command, create a series of 25 still clips along the movie line, each 20 seconds in duration.
5. Re-sequence the photographs, if desired, by clicking and dragging them along the movie line.

6. Use “save frame as” to create a folder of still photographs from each of the 25 still clips, print a contact sheet of the 25 photographs (in *iView Media Pro*), and prepare a written or oral narrative (script) to go with each photo. Do not start your script with, “This is a picture of...” Instead, say something descriptive and informational such as, “My father was born in 1917 in this small house in the village of Nu'uuli.”
7. Add two title cards to your *iMovie*: one at the beginning that gives the title and one at the end that gives acknowledgements.
8. Narrate each photograph one at a time, reading from the script developed above. We recommend using an external microphone, although the built-in microphone on the computer can suffice if the noise level in the room is subdued.
9. Add music, usually about 2 or 3 songs. Instrumental music is preferable so as not to distract the listener from the narrator’s voice. It is easier to import music from a CD, although music from tape will also work.
10. Export the movie back to the video camera and then dub it to VHS tape. Send the tape home to be shared with the families who were celebrated.
11. Create a *QuickTime* movie for CD-ROM so that you can play your movie on the computer.
12. Delete your *iMovie* from the computer hard drive to maximize available storage space for the next project.

Classroom applications

Although this activity utilized family photographs, we could just as easily have created slideshows of the illustrations in a children’s storybook, frames from comic strips, children’s drawings or paintings, or even calendar pictures. The challenge is to select pictures and create sequences that lend themselves to narration (storytelling, story reading, oral reporting), so that children bring critical thinking and language to the task.

Stretching our imaginations: Dare to dream

Sometimes a video camera can be used to digitize an image that a traditional flatbed scanner simply could not. For example, some years ago while on Tutuila, American Samoa, we video recorded close-ups of the traditional Samoan tattoos of a teacher. Working outside in bright sunlight, we used the video camera as a scanner to record tiny details of the complex tattoos on his thighs and lower back.

VIDEO CAMERA AS OVERHEAD PROJECTOR

Teachers and students will learn to use the video camera as an overhead projector to create presentations and facilitate public speaking in the classroom and beyond.

Invitation for learning

Public speaking is very important to many Pacific island educators. We want our children to be able to stand in front of an audience to make reports and tell stories. In Kosrae, for example, children worked in teams to illustrate posters that focused on topics of social and environmental concern: water and beach pollution, traffic safety, nutrition, and tobacco and drug abuse. After considerable rehearsal, they present their posters to parents and community members at a public gathering. Video cameras are classroom technologies that can promote public speaking.

Most of us have experienced the computer as an overhead projector, when people attach their laptops to computer projectors or television monitors to make *PowerPoint* presentations. Video cameras can also function as overhead projectors. Children can arrange their visual information – poster collages, photographs or postcards, paintings or drawings, 3x5 inch file cards with quotations, even illustrated books – on an easel or chalkboard. The camera, mounted on a tripod, sends a live signal to a television monitor. Children work as a team, with the camera operator zooming in on each of the visual elements in the sequence of the speech. The presenters stand next to the television, pointing and referencing these overheads as they talk.

Karaoke machines can function as public address systems. Children hold the microphone as they speak. A public address system, even when used in a classroom, changes and enhances the public speaking experience. Soft-spoken children become audible to their audience and themselves.

Directions

Working in teams of 3-5, learners will make an oral presentation using the video camera as an overhead projector. Teams will:

1. Prepare a 5- to 7-minute oral presentation on a topic of social, cultural, or environmental importance, including a sequence of 10 visual elements (e.g., drawings, photographs, book illustrations, small objects, file cards with quotations). Label (caption) each of the visual elements to be presented.
2. Set up a presentation station, including (a) an easel tray or presentation table, (b) a camera on tripod, attached to a television monitor, and (c) a public address system (e.g., boom box or karaoke machine). The camera can be distanced from the television monitor by attaching an RCA extension cable to the camera's AV cable.

3. Assign roles:

- *Camera operator.* The camera operator sits beside the camera and uses the zoom to frame each visual element as it is displayed on the easel tray.
- *Display manager(s).* The display manager sits beside the easel tray and holds, props, or otherwise displays each visual element in the sequence of the speech.
- *Audio manager.* The audio manager sits beside the public address system, adjusting the volume as appropriate and communicating with the presenters if they are holding the microphone too close to or too far from their mouths.
- *Presenters.* Presenters handhold the microphones and introduce their team and topic. They deliver their speech, making active use of the overheads as displayed on the overhead monitor. They point to and describe the visual elements and explain their importance to the topic. They also engage their audience by eliciting questions and comments.
- *Audience.* Audience members are expected to listen actively and contribute to the presentation. They should be arranged in a semi-circle close to the presenters and prepared with questions and comments. An audience designee thanks the speakers at the conclusion.

4. Rehearse the presentation first without an audience and then with an audience (perhaps a group of classroom peers) critiquing the performance. Practice and refine as needed.

5. Make the presentation for another class in the school or a gathering of parents and community members. If the topic is of broad community interest, the presentation can be re-purposed as a video poster presentation (see Unit 5) or an *iMovie* slideshow to be broadcast on community television.**Classroom applications**

Student teams may find it easier to work from poster collages – creating their visual material (pictures and text captions) on poster paper. The display manager’s role then becomes simpler; all that is needed is to display this one poster during the presentation. If teachers do not have access to poster paper, students can prepare their overheads on notebook paper or file cards. The overheads are often most effective when colored with crayon or markers.

Stretching our imaginations: Dare to dream

This activity involves team planning, creative materials development, rehearsal, and live presentation in front of an audience. After all of this work, a logical next step is to produce a video to be shared with families on their home VCRs or broadcast on community television. We suggest our video poster technique (see Unit 5).

Working in partnership with communities to research topics of significance to island life, educators can produce knowledge and media in schools that impact the social and political discourse of the villages. Educators can support students to research and share important information with their communities, while validating and honoring the village wisdom of the ages.

VIDEO POSTERS

Teachers and students will learn to create and use video posters to enhance curriculum and instruction and to raise important community issues.

Invitation for learning

Children, teachers, and parents enjoy making posters. When available, use large sheets of drawing paper, asking student teams to choose a theme, identify an audience, and plan their poster in detail, including text captions.

The finished posters are video recorded as lessons, with a presenter pointing to and describing the elements within the poster. The camera operator records close-ups of the elements as they are described. These videos are purposeful, educational, fun to watch, and often of community television broadcast quality.

Directions

Working in teams of 5-7, learners will produce video poster lessons. Teams will:

1. Identify an audience and a lesson to be illustrated. A teacher may work with the entire class to brainstorm or map elements for a poster.
2. Create the poster using flipchart-sized paper oriented in landscape view. First draw in pencil, and then add color using markers, crayons, or watercolors covering the paper with 15 or more details and captions. The entire team participates: some draw, others add color, others write the captions. Give the poster a title and list the authors' names in the lower right corner.
3. Choose spokespersons and rehearse the presentation. Spokespersons are to name the team members, give the date and place, introduce the topic, point to and describe the poster elements, provide a summary or conclusion, and acknowledge and thank those involved.
4. Assign technical roles:
 - *Poster holders.* Two poster holders stand behind the poster and each hold a top corner of the poster without blocking any content.
 - *Audio manager.* The audio manager sits next to camera and wears headphones to monitor for clear audio.
 - *Camera operator.* The camera operator stands next to the camera, frames headshots of the speaker, and slow zooms to the poster for close-ups of the picture elements, following the speaker's finger as a guide.
5. Position the camera-on-tripod 3-4 feet from the poster and record the presentation.

6. Record “reflection” interviews with the team members about making the poster: how each person contributed, what they hope people will learn from it, anything they forgot to say during taping, expressions of thanks to the team. Edit the interviews in *iMovie* (maing titles for the team members’ names) and add them to the end of the video. These interviews may best be conducted by the teacher.
7. Using camera-to-VCR editing, copy the video to a VHS tape to be packaged with the poster.
8. Display the poster next to the television monitor when the video is played – pausing the video, as appropriate, to engage the audience in dialogue and interactive learning.

Classroom applications

Poster making, poster presentations, and oral reports are a natural part of many Pacific island classrooms. These activities allow students to explore many roles, including planner, artist, and teacher. Posters are different from paintings or pictures that students typically create. In this activity, children draw details and add text captions so that they have specific things to talk about and describe during their presentation. The posters serve as a point-by-point stimulus for the presentation, with the presenter pointing to each element on the poster and talking about it. This allows for filming videos that are rich with magnified details, using the zoom feature on the camera.

Stretching our imaginations: Dare to dream

Children’s posters can provide compelling visuals for video lessons, especially if they are well conceived and rich in detail. Teachers can use student posters to produce their own video lessons. Both in Ebeye and Kosrae, teachers have created video posters using their students’ artwork. In Ebeye, a 4th grade teacher acted as the presenter for his students’ posters, pointing to their drawings and speaking.

Video posters lend themselves to community television. They are easy to produce and do not require computer-based editing. They share important themes and topics for parents and families to discuss at home. In Majuro, for example, access to community television is as simple as delivering a VHS tape to the station manager. Airtime is plentiful, and the voices of teachers and students are valued for broadcast.

VIDEO “HOW TO” LESSONS

Teachers will learn to use the video camera to create “how to” mini-lessons that bridge the gap between contemporary education at school and traditional education at home and in the community.

Invitation for learning

Many Pacific island teachers want to bring the lessons of the community into the classroom, especially the lessons of elders. On many of the islands, more and more parents are working for money outside their homes and villages. This results in less time and energy to pass on to their children traditional practices, such as gardening and harvesting; caring for animals; preparing food and cooking; sewing, weaving, rope making, lashing, and knot tying; fishing, foraging, and hunting; making crafts, toys, and games; and canoe building. Teachers are being asked to teach both the Western curriculum and the language and culture of the community. This is a big responsibility. The video camera can serve as a bridge between home, community, and school.

This activity is most appropriate for young adults (high school or older), as it requires planning and some experience in handling a camera.

Directions

Working in teams of 2-3, teachers will produce a 10- to 15-minute mini-lesson featuring a community elder as he or she demonstrates a hands-on traditional activity. Teams will:

1. Plan with the elder the sequence of the lesson: identify key elements, determine concepts and vocabulary for students to acquire, and outline the plan on paper. The aim is not to produce an in-depth documentary, but rather a short hands-on lesson: how to clean a fish, how to cook a crab, or how to play a game.
2. Identify a location for the filming – a quiet place with appropriate front lighting. When indoors, ensure that no windows or open doors are behind the elder. When outdoors, ask the elder to stand in front of a wall, bush, or tree, or to kneel so that the camera angle is toward the ground.
3. Rehearse with the elder the importance of (a) holding small objects steady and pointing while speaking and (b) narrating in detail, adding language whenever appropriate to describe the activity. Remember that this video is being made for children. Ask the elder to talk about the activity, perhaps even singing a song or telling a story while doing it. The aim is for children to acquire the language that goes with the activity.
4. Video record the lesson, using a handheld camera, the built-in microphone, and natural light. Neither tripod nor external microphone is necessary, and in fact may get in the way.
 - Maintain the zoom at a wide angle to maximize light. Physically move the camera closer to the elder for close-ups.

- Optimize audio by shooting within 1 to 2 feet of the elder – even closer when shooting over the shoulder. In this way, no external microphone is required, leaving the elder’s hands free to teach the lesson.
 - Vary the camera angle as appropriate – over the shoulder, close-up of face and hands.
 - Begin the video with one team member as the host: welcoming the students (audience), introducing the elder, giving the date and place, describing the objectives of the lesson, and stating the vocabulary words and concepts to be illustrated. Consider including a short walkabout with the camera to show the setting.
 - End the video with the host: reviewing the concepts and vocabulary of the lesson, and acknowledging and thanking the elder.
5. Write a one-page summary of the video lesson (concepts and vocabulary) to be printed, laminated, and packaged with the video. Copy the video to VHS tape (camera-to-VCR editing) and label and lock the cassette. Put the tape and the summary sheet into a Ziploc bag for safekeeping. Share the tape with the elder so that he or she can enjoy it with family.
 6. Show the video to your students interactively by frequently pausing the video to engage them in dialogue regarding concepts and vocabulary. Ask the students to relate their own family experiences to the lesson. Using a 4-head VCR will permit pausing without distorting the still images, thus allowing students to observe, question, predict, and engage in quality dialogues.

Occasionally elders are not comfortable orating or narrating their work, making it difficult for them to both show and tell. In this case, one member of the recording team can be assigned as the narrator, using an external microphone to narrate and asking questions of the elder throughout the demonstration.

Classroom applications

Educators across the Pacific want to capture the cultural wisdom of their community elders. Traditional practices, songs, stories, and language are being lost. Unit 7 includes techniques to interview elders to gather songs, stories, and oral histories, which is a natural companion piece to this activity.

As noted above, computer-based editing in *iMovie* is not required; camera-to-VCR editing will suffice. However, these mini-lessons can be digitized into *iMovie* and saved in *QuickTime*, which in turn can be played directly on a computer.

Stretching our imaginations: Dare to dream

Video “how to” lessons touch the very core of school/community connections. For example, Uncle Walter Paolo showed children the old Hawaiian ways to practice aquaculture by grating and cooking pumpkin to feed the *opelu* (mackerel) on the reef. The children listened to Uncle Walter, learned new skills, and honored him with their attention and videography.

INTERVIEWING ELDERS AT SCHOOL

Teachers and students will learn how to use the video camera to capture cultural wisdom from village elders as an ongoing community-building project.

Invitation for learning

In every Pacific island community, there are elders who love to share stories, chants, and songs with children at school. Why not use the video camera to record the elder interacting with the children? Videotapes honor the storyteller, can be shared in other times and places, and teach the youth that projects require planning and follow-through. Further, using *iMovie* software, the elder's voice can be extracted from the video to produce CDs and audiotapes for listening centers in the library and for families to enjoy in their cars and homes.

Building sustained relationships with elders is important. They have far more cultural wisdom than can be shared in a single school visit. These elders are ongoing community teachers, resources who can visit many times to share information.

Directions

Working in teams of five, learners will invite community elders to the classroom to video record their stories. Teams will:

1. Visit with the elder in their home in advance of the classroom visit to set the goals and identify a range of stories and topics to be shared. Explain that the visit will be video recorded for sharing with others.
2. Assign roles:
 - *Host*. The host welcomes and seats the elder, explains what is planned, and reviews the agenda; ensures there is a glass of water for the elder; and manages the flow of the video process (introduces the elder, holds the microphone, listens and comments, and manages audience introductions, comments, and questions).
 - *Set designer*. The set designer creates an attractive set using a mat or printed cloth for a backdrop, and a flower arrangement or plants for decoration. This person ensures there are enough chairs on the set – one each for the host, elder, and an audience member to ask questions (placed to the side of the host).
 - *Sound manager*. The sound manager wears headphones to monitor the quality of sound from the microphone. If the sound manager hears buzzing or sound distortion, he or she informs the camera operator to stop the interview until it is corrected.
 - *Camera operator/Director*. The camera operator/director is responsible for cueing the beginning of the interview, establishing shots by panning and zooming, and cueing the end of the inter-

view. This person sits next to the camera, which is on a tripod about 8 to 10 feet away from the host and elder. This requires a microphone extension cord.

- *Audience.* The audience sits on the floor in a semi-circle in front of the elder. Each audience member must listen intently to the guest and be prepared with questions. If called upon by the host, the audience member walks to the designated chair beside the host, sits down, takes the microphone, says a few words (short introduction, expression of thanks to the guest, etc.), and then asks a question.
3. Develop an agenda (e.g., introductions and statement of purpose, story one, questions and answers, story two, questions and answers, student expressions of appreciation).
 4. Welcome the elder to the classroom, perhaps with a lei, and follow the agenda as described above.
 5. The day after the recording session, write letters to the elder to say thanks and to express something you learned or thought about as a result of the visit. Several students can hand-deliver the letters and perhaps a small gift.
 6. Copy the video to VHS videotape using camera-to-VCR editing.
 7. With the teacher, review the tape to create a viewers' guide that includes a summary paragraph of the videotape, questions for discussion, and suggestions for further learning and research. Print and package the viewers' guide with the videotape in a Ziploc bag to share with the elder, other classrooms, and the community.
 8. When the teacher and selected students share the tape with another classroom, pause the video at appropriate places to get the children talking and thinking about the content. Use the remote control to pause the video at least every two minutes to pose a question and evoke comments. Keep a fresh set of batteries in a Ziploc bag, along with the remote when not in use, in case they are needed.

Classroom applications

Storytelling is an age-old tradition that enables people to define themselves and their communities, including their origins and place. It is important to encourage elders to tell their personal stories of growing up, not just the formal stories that they heard from others. To elicit this personal information, students must learn to ask elders what they want to know, and in return, describe what they picture in their minds. One technique is to ask children to draw pictures for the elders as the stories unfold. This, too, honors the storyteller while encouraging additional information sharing.

The value of video recording is immeasurable. Many students miss much of what is said during live presentations. By viewing the video as a follow-up to the classroom visit, new information is acquired. This is especially true if you use the pause-and-discuss method of video presentation.

As a follow-up to video recording, the audio can be recorded on the computer by using *SimpleSound* or *iMovie* software. It is as simple as positioning the camera near the computer microphone and playing back the video. This recorded sound can then be burned to CD and dubbed to audiotape to be shared in homes and classrooms.

Stretching our imaginations: Dare to dream

Students can create portfolios that contain the recorded versions of elders' stories and the written and illustrated versions that the students created. Such a project honors both the young and the old, while preserving and sharing cultural wisdom with the larger community.

INTERVIEWING ELDERS AT HOME

Teachers and students will learn a simple, informal method to video record elders in their homes and communities.

Invitation for learning

For a variety of reasons, many elders cannot visit schools to share their knowledge, wisdom, and traditional culture. With minimal equipment and proper technique, issues of age, health, distance, or transportation can be overcome so that these community teachers can still participate in and contribute to children's learning.

Directions

Working in teams of 3-5, learners will visit elders in their homes to record stories, chants, and songs. Teams will:

1. Assign roles:

- *Camera operator/Director.* The camera operator/director manages the tripod and camera, framing the elder to include the upper torso and hands.
- *Set manager/Audio monitor.* The set manager sits just off the set to keep bystanders quiet and under control. As audio monitor, this person also ensures that the microphone is appropriately pinned to the elder's shirt or otherwise appropriately positioned. The audio monitor wears headphones attached to the camera to ensure that the audio signal stays loud and clean.
- *Host.* The host ensures that the elder is at ease and comfortable. When in an elder's home, the host is on camera at the beginning for introductions and at the end to say thanks. Otherwise, the host sits next to the camera, facing the elder, and acts as a very interested audience – asking questions and drawing out the elder.
- *Note taker.* The note taker writes down the names of each story or song in the order in which they are shared. The note taker comes prepared with sharpened pencils or pens and a note pad.
- *Audience.* The audience sits to the right of the host, just off-camera, listening to the interview. When the host asks if there are questions or comments from the audience, they take the microphone, introduce themselves, and speak. Usually, no more than 4 or 5 people should be brought to an elder's home.

2. Visit with the elder in their home in advance of the recording to set the goals of the recording, identify or explore songs and stories to be shared, and determine an appropriate set that is visually attractive, appropriately lit, and reasonably quiet and free of distraction. It may help to remind the elder that children are the audience. Arrange a time for the next visit.

3. Return to the elder's home for the recording, bringing the camera in its case with a charged battery, tripod, microphone, and headphones. You may decide to record without a tripod and external microphone, but it is good to be prepared. The microphone is especially appropriate if there is background noise such as a noisy fan or children playing. Don't forget to bring a gift of food or flowers.
4. Conduct the recording with everyone comfortably seated and actively listening to the elder.
 - The team sits close; no one should stand off in a corner.
 - When everyone is ready, the camera operator/director cues the host to begin.
 - Pause the camera after each story or song to express appreciation and to give the elder a chance to think of what to share next.
 - The note taker writes down the names of the stories and songs in order. You may want to ask the elder to say the name or introduce each of the songs or stories in terms of where it came from and how it was learned. You do not need to strictly adhere to the plan from the prior visit. Sometimes surprises are best, such as the elder suddenly remembering an old song.
 - Record the host, sitting beside the elder, expressing appreciation for the gifts the elder has shared. This makes a nice ending for the program.
5. After recording, thank the elder and the family, assuring them that they will receive a copy of the tape on VHS. Ask the elder for permission to show the tape in classes at the school and perhaps to broadcast it on community television or radio.
6. Before leaving, ask the family if the team can take a few shots outside so that the children at school can get a visual sense of place. This video portion will be shown first to audiences, but it is typically recorded last. If permission is granted, record the host standing in front of the house using the external microphone to welcome viewers. The host gives the date and place, and describes the content of the program, including the name of the elder and a brief introduction to the songs and stories that were recorded.
7. Upon returning to the school, create two VHS copies using camera-to-VCR editing, putting the introduction at the beginning, followed by the songs, chants, and stories. Give one copy of the tape to the elder and their family, and keep the other for use at school.
8. The video can be digitized on the iMac and edited in *iMovie*. Another technique is to extract the audio of each song and story and import these sound files into *iTunes* to create radio shows, CDs, and audiotapes.

Classroom applications

Elders should be cultivated as community teachers so that sustainable relationships can be maintained. An extension activity is to have the students produce a video letter (see Unit 9) back to the elder, expressing appreciation for the stories and songs, asking questions, and perhaps sharing a song or story in return.

Stretching our imaginations: Dare to dream

Creative teachers do many things with stories and songs in their classrooms. One idea is to create a song-book with the accompanying audiotape or CD. Another is for students to listen to the stories and then re-tell, rewrite, and illustrate them.

VIDEO LETTERS

Teachers and students will learn how to produce video letters to share cultural traditions and make new friends with classrooms throughout the Pacific.

Invitation for learning

Teachers and students can produce informal video “letters” in which they introduce themselves to a partnering classroom elsewhere in the Pacific, sharing their classroom, school, and community. These letters can contain songs, dances, humor, interviews, classroom activities, stories, and games. Children can be talking, describing, questioning, interviewing, laughing, singing, chatting – bringing their voices to the fore in whatever language they choose.

Video letters provide powerful possibilities for children to speak to genuine and valued audiences. This is especially important for children learning English as a second language, where motivation to communicate is critical. Children can decide what language to speak, visualize their audience, and plan activities to share.

Directions

Students and their teacher will produce a video letter to share with another group of students in the Pacific. The class will:

1. Create a map or storyboard of the activities, which may include self-introductions, interviews, demonstrations or presentations, and walking tours of the classroom, campus, or community. Include titles for the various scene changes.
2. Appoint one or several students to be the hosts of the letter. The hosts hold the microphone and bring continuity to the video production. They may also interview others or narrate activities as they are recorded.
3. Share in the handling of the video camera. Video letters are informal by definition; thus, camera handling can be somewhat sloppy.
4. Ensure that every student is somehow highlighted, acknowledged, and named in the video, so that students at the receiving end can recognize who’s who for future communications.
5. Shoot titles in real time by creating them on paper or chalkboard and filming them at each scene change.
6. Encourage every student to ask at least one question of the students at the receiving end.

7. Use camera-to-VCR editing to dub the video to VHS tape and mail it to the partnering classroom. The video may be sent as part of a cultural package, which could also include student art, photos, or gifts.
8. Encourage students at the receiving end to note the questions asked in the video letter and to prepare responses, either as an email exchange or as a return video letter.

Classroom applications

In video letters, students talk about themselves, their work, and their community. This can be difficult for some students, but if a light-hearted tone is maintained, video letters provide supportive contexts for communication and language expression. For ESL children, the letter may be particularly well received, especially if they are asked to communicate with a familiar audience such as their friends back home. If ESL students are given a chance to speak first in their home languages, they will choose to speak in English as they become more comfortable with the video letter process.

Stretching our imaginations: Dare to dream

Video letters provide children with opportunities to be themselves, to be spontaneous and informal. Video letters are not meant to teach. They are intended for students to make friends by sharing joy, fun, excitement, and beauty of place. Video letters can include songs and dances, gymnastics, food and games, and simple excursions about the school grounds and in the community. At Leatele School in American Samoa, for example, students put the camera in the back of a pickup truck and cruised through the village with kids smiling, narrating, and sharing breadfruit.

VIDEO PLAYS

Teachers and students will learn how to write and produce skits and plays using dialogue frameworks.

Invitation for learning

Producing movies of skits and plays is a powerful video application. Children love to act and they love to watch themselves doing it. There is probably no better way for children to explore the meaning of stories than through drama and theater. Because the video camera celebrates collage, all of the visual, performing, and language arts can be included: art, music, drama, writing, and public speaking.

Directions

Working in teams of 5-7, students will produce video plays without writing a script or memorizing lines. Teams will:

1. Develop a storyboard (a visual map) of events in the play, including the sequence of scenes and how each will look, titles, acknowledgements, and credits.
2. Assign roles:
 - *Camera operator.* The camera operator handholds the camera, shooting the role players intimately and sweeping the camera to each role player to cue them to speak. Although this procedure slows down the rhythm of the conversation, it does not interrupt it.
 - *Role players.* Skits should involve 5 or 6 role players, who rehearse their conversations but are not expected to memorize lines.
3. Develop dialogue frameworks for the scenes. Dialogue frameworks establish the communication goals for each of the scenes, allowing the players to speak spontaneously to achieve the goals. They encourage spontaneity, creativity, and fluency.

For example, in a play produced at ‘Ele‘ele School on Kaua‘i, the director set up scenes like this: “In this scene, Bill will complain that his wrist is hurting. All of you will sound caring and supportive. Tom will suggest that we visit the kupuna to see if she can help. Mary will encourage us to hurry up. Bill will remind everyone to get the salt from the salt beds. Several of you will offer to go get the salt. So, let’s start the scene with Bill telling us about his wrist...”
4. Handhold the camera as close as 12 to 18 inches from the speaker as lines are spoken, which permits use of the built-in microphone.
5. Allow for re-takes of individual dialogues, immediately following any mistakes. If a player falters, pause the camera, re-set the players, and begin the new take. The goal is to start the re-take before the rhythm and spontaneity of the scene is lost.

6. Choose and design sets that minimize backlighting and background noise, without depending on additional lighting or an external microphone. Shooting out-of-doors in a quiet location with bushes or greenery behind the actors may be preferable to inside the classroom.
7. Edit and dub the tape to VHS format, using camera-to-VCR editing techniques.
8. Time and energy permitting, edit the video digitally in *iMovie* to convert to *QuickTime* for sharing with others.

Classroom applications

Video plays can be adapted to the silent film genre, in which children perform without delivering dialogue. Scenes can be introduced with title cards. This genre can be friendlier for some children, because they can concentrate on acting rather than saying lines.

Stretching our imaginations: Dare to dream

In Pacific churches, role plays are common forms of teaching and entertainment. Lines are not written. They are spontaneously and joyfully created and shared, oftentimes amid great laughter.

Video plays are a great way to include elders and honor the lessons they want their children and grandchildren to learn. Recently in American Samoa, adults and children produced a video play about moral lessons in village life, specifically the correct way of asking to borrow from neighbors. The experience was educational and fun.

SECTION III

COMPUTER WORKSTATION

- ☐ Describe a safe and functional computer workstation for the Pacific island classroom, including strategies to manage laptop computers.
- ☐ Describe the importance of a surge protector and distinguish it from a simple power strip.
- ☐ Demonstrate care and maintenance of the printer and printer paper. Include strategies to keep printer paper dry and usable.
- ☐ Demonstrate care and maintenance of the scanner.
- ☐ Demonstrate appropriate start, re-start, and shut down of the computer, including when the computer freezes.
- ☐ Describe where to turn for help both on- and off-island when computer problems seem insurmountable.

COMPUTER DESKTOP ORGANIZATION

- ☐ Identify the Mac Tutorials and Balloon Help.
- ☐ Customize the desktop utilizing the Appearance Control Panel (background color, font, insert picture)
- ☐ Create, name, organize, and duplicate folders and documents.
- ☐ Move items to and empty the trash.
- ☐ Open, close, and re-size windows; alternate views within windows between icons and lists.
- ☐ Change memory allocations for applications, using both “Get Information” and Virtual Memory (in OS 9).
- ☐ Create aliases for applications and documents.
- ☐ Locate the control strip in the control panels and make it visible; utilize the control strip to change the number of display colors, screen resolutions, sound inputs, and volumes.
- ☐ Open several applications simultaneously and use the Application Menu to switch among them.

DIGITAL VIDEO CAMERA

- ☐ Create a plan to protect and care for the digital video camera inside and outside the classroom.
- ☐ Identify the display icon for moisture build-up and describe how to remedy the situation.
- ☐ Identify and label key parts of the camera and tripod, including lens cap, microphone jack, head-phone jack, auto focus, zoom, side viewfinder, camera/VTR on-off switch, and tripod shoe or boot.
- ☐ Describe three applications for a tripod inside and outside the classroom.
- ☐ Describe the value of a microphone for classroom video projects.
- ☐ Write a list of rules for students when using the video camera.
- ☐ Demonstrate how to attach a tripod, microphone, and headphones to the camera.
- ☐ Describe appropriate lighting conditions for videotaping inside and outside the classroom.
- ☐ List three strategies to improve lighting conditions when videotaping inside the classroom.
- ☐ Demonstrate how to utilize the camera for playback, including using the fingertip rather than the fingernail to push the control buttons (pause, stop, fast-forward, and rewind).
- ☐ Demonstrate how to attach the video camera to a VCR and television in order to dub tapes.
- ☐ Demonstrate how to label, lock, and unlock videotape cassettes.
- ☐ Demonstrate how to protect and store videotapes using Ziploc or other plastic bags.
- ☐ Demonstrate how to attach the video camera to the computer using the firewire connection.
- ☐ Work with a team to produce selected video projects, including a video interview, video poster lesson, video letter, video slideshow, “how to” video, sing-along/read-along video, and a play or skit.
- ☐ Edit projects in *iMovie*, share and critique them interactively with children, dub to VHS, and share with one or several families in the village.
- ☐ List five creative applications of video cameras to support the classroom curriculum.

DIGITAL STILL CAMERA

- ☐ Create a plan to protect and care for the digital still camera inside and outside the classroom.
- ☐ Use the menu display on the camera to erase pictures and set the photo quality to “standard” or “fine.”
- ☐ Download photos from the digital still camera into a folder or album, cataloging them using *iView Media Pro* or *iPhoto*.
- ☐ Import selected photos into *IntelliPics Studio* or *HyperStudio* and add text in vernacular and English languages.
- ☐ Import selected photos into *Kid Pix* to add text, stamps, or other enhancements; import into *Kid Pix Slide Show* to add narration and transition effects; save to *QuickTime*.
- ☐ Import the photos into *iMovie* to add titles, captions, other text, scripted narration, sound effects, and music; export to video and to *QuickTime*.
- ☐ Share projects with parents so that they can appreciate the important learning activities of the school.

TAPE RECORDER

- ☐ Create a plan to protect and care for the tape recorder in the classroom.
- ☐ Demonstrate how to label, lock, organize, and store audiotape cassettes for a classroom or library listening station.
- ☐ Describe a listening station for the classroom, including a plan for students to utilize the station independently.
- ☐ Describe reading-while-listening as an instructional technique to promote decoding fluency (including read-along and sing-along tapes).
- ☐ Describe a recording station for the classroom, including a plan for students to utilize the station independently.
- ☐ Describe three applications for a classroom listening station.
- ☐ Describe three applications for a classroom recording station.
- ☐ Demonstrate how to transfer audio recordings from a tape recorder to a computer using a patch cord, setting the sound control panel to “line in,” and opening *SimpleSound* software.
- ☐ Burn audio CDs in *iTunes* both from audio recordings transferred from a tape recorder to a computer and from recordings made directly on the computer using *SimpleSound* and *iMovie*.
- ☐ Demonstrate how to protect and store recorded books, including plastic book bags.
- ☐ Work with a team to produce three audio projects, including a sing-along tape with accompanying songbook, a read-along tape and storybook (including bilingual supports, if appropriate), and a storytelling tape with lesson plan identifying concepts, vocabulary, and suggestions for the teacher.
- ☐ Edit projects in *iMovie*, share and critique them interactively with children, burn to CD, and dub to audiotape.
- ☐ List five creative applications of audio recordings to support teaching and learning in Pacific island classrooms.

VCR AND TELEVISION

- ☐ Demonstrate the VCR in play mode using play, rewind, fast-forward, and pause. Teach an interactive lesson with video using the pause feature on the remote control to engage students in active learning and dialogue.
- ☐ Turn on the closed captioning feature and explain its value.
- ☐ Describe the value of the remote control for interactive video teaching, including a plan to protect and care for the VCR and its remote control in the classroom.
- ☐ Attach the digital camcorder to the VCR and play the camcorder's video on the television while copying to a VHS tape.
- ☐ List five creative applications of VCRs and televisions to support the classroom curriculum.

DVD PLAYER

- ☐ Demonstrate the DVD player in chapter mode using closed captioning, pause, rewind, and fast-forward.
- ☐ Teach an interactive lesson using closed captioning and the pause feature on the remote control to engage students in oral decoding and comprehension.
- ☐ Develop an integrated lesson plan around a book/audiotape/DVD package such as *The Lion King* that includes (a) reading and sharing the book with children, (b) reading-while-listening at a classroom listening center, and (c) reading while watching the accompanying DVD. The lesson plan should include objectives for discussion, vocabulary building, and decoding fluency. Teach and evaluate the lesson.

VIDEO TELECONFERENCING

- ❑ Demonstrate the necessary technical skills to set up and manage a successful VTC, including:
 - + Contacting the appropriate authorities to set up the VTC, in coordination with the partnering teacher.
 - + Arranging transportation for the participants to and from the VTC facility.
 - + Arranging appropriate seating in the VTC room considering lighting and sound and ensuring that all participants are visible.
 - + Managing the VTC, including designating a facilitator or floor director who will ensure appropriate camera shots, turn taking, and communication checks.
 - + Using the remote control (zoom and pan) to frame close-ups of children as they speak or demonstrate, and providing the necessary floor direction to ensure clear communication across the sites.
 - + Paying particular attention to audio issues, ensuring that children remain quiet while others are speaking, soft-spoken children speak up to their capacity, and the microphone is moved close to those children before they speak.
 - + Developing a strategy to display visuals such as children's art or photographs while children are speaking.
 - + Knowing who to phone and what to do when the transmission is interrupted.
- ❑ Plan and conduct three 90-minute video teleconferences (VTCs) with a partnership classroom in the Pacific, including:
 - + An initial VTC between teachers to plan the VTCs and become familiar with equipment, with email follow-up.
 - + An evaluation with students after each VTC, including suggestions for improvements.
 - + Interactive student exchanges, in which students share information about themselves and their talents, learn about one another's communities, teach skills, and engage in dialogue. This can include teaching a dance, song, game, skill, or vernacular language lesson; sharing a story or play; presenting posters, art, or photographs; discussing a topic of common interest; sharing a video letter; or planning a joint project.
 - + An opening and closing for each session, displaying respect for culture and protocol (e.g., a chant).
 - + Follow-up extension activities, in which students correspond by email, share video letters, or exchange gifts or cultural packages.

SIMPLESOUND

- ☐ Locate the built-in microphone on the computer and demonstrate its use, including choosing “built-in microphone” from the control strip.
- ☐ Demonstrate plugging in and recording with a *PlainTalk* external microphone, including choosing “external microphone” from the control strip.
- ☐ Create and name a folder for sound recordings.
- ☐ Open *SimpleSound*, create a new sound recording (up to 15 minutes duration), use the pause feature as appropriate, name the sound, and save it in the sound recordings folder.
- ☐ Transfer audio recordings from the tape recorder to the computer using a patch cord and *SimpleSound*.
- ☐ Import *SimpleSound* files into *iMovie*.
- ☐ Convert *SimpleSound* files into MP3 files, display them in the *iTunes* library, create a customized playlist, and burn an audio CD.
- ☐ Describe three strategies to employ *SimpleSound* to enhance language arts and literacy activities in the classroom.

STORYBOOK WEAVER DELUXE

- ☐ Set software preferences to “block out the desktop at start.”
- ☐ Create a title page, including title, author, “about this story,” and border.
- ☐ Compose an 8-page interactive story, employing a range of backgrounds and objects.
- ☐ Edit graphic objects, including copying, pasting, deleting, resizing, rotating, coloring, and attaching sounds.
- ☐ Set appropriate large size, easy-to-read fonts.
- ☐ Create a vocabulary index page at the end of the story (i.e., graphics from the story pasted onto a white background with accompanying text labels).
- ☐ Demonstrate the use of the voice synthesizer and describe how it might be applied to support reluctant readers.

KID PIX STUDIO DELUXE

- ☐ Create, name, and save a new picture, utilizing pencil tools, paint fill tools, stamps, and the type-writer tool.
- ☐ Create 5 to 7 original paintings and open 5 to 7 photographs using the “import graphic” command.
- ☐ Add text fields (move and size them and choose a large font).
- ☐ Add stamps by choosing from the variety of stamp sets.
- ☐ Add speech bubbles and type dialogue text.
- ☐ Create a narrated slideshow.

iMovie

Creating video big books

- ☐ Create a new project and name it.
- ☐ Set the *iMovie* preferences to import clips at 20 seconds per clip.
- ☐ Import screen captures from *Storybook Weaver Deluxe* or *IntelliPics Studio*.
- ☐ Add three or more titles, choosing a large and easy-to-read font and using a contrasting color for the background.
- ☐ Narrate the film by recording a reading of the text for each page, and add character voices or dialogues if desired.
- ☐ Add a music soundtrack (from CD or *iTunes*) and sound effects, adjusting the soundtrack volume so as not to compete with the voice narrations.
- ☐ Export the movie back to the camera and copy it to VHS videotape, or export it to *QuickTime* for copying to CD.
- ☐ Share the video interactively with students and evaluate the effectiveness of the lesson.
- ☐ Describe three strategies to extend this technique to language arts and literacy activities in the classroom.

Producing a music video

- ☐ Create a new project and name it.
- ☐ Set *iMovie* preferences to import clips at 20 seconds per clip.
- ☐ Import 10 *Kid Pix* files that have been saved as graphics.
- ☐ Insert three or more titles, choosing a large and easy-to-read font and using a contrasting color for the background.
- ☐ Add a music soundtrack and sound effects.
- ☐ Write a script and narrate the movie. (optional)

- ☐ Export the movie back to the camera and to *QuickTime*.
- ☐ Copy the movie to VHS tape to be shared in the village on home VCRs.
- ☐ Share the video interactively with students and evaluate the effectiveness of the lesson.
- ☐ Describe three strategies to extend this technique to language arts and literacy activities in the classroom.

Making “how to” movies

- ☐ Design a storyboard that illustrates the steps of an activity – playing a game, preparing food, making crafts, etc.
- ☐ Videotape the steps without narration, ensuring appropriate lighting and using a tripod if necessary.
- ☐ Open *iMovie* and create a new project title.
- ☐ Set *iMovie* preferences to import clips to the shelf and then import the video from the camera.
- ☐ Edit the clips on the movie line to tell the story by splitting them at the playhead, deleting unnecessary portions, and ordering the clips in the sequence of the storyboard.
- ☐ Insert three or more titles, choosing a large and easy-to-read font and using a contrasting color for the background.
- ☐ Write and record a narration.
- ☐ Export the movie to the camera and to *QuickTime* and archive it in a *QuickTime* portfolio folder on the computer desktop.
- ☐ Copy the movie to VHS tape to be shared in the village on home VCRs.
- ☐ Share the video interactively with students and evaluate the effectiveness of the lesson.
- ☐ Delete the audio narration and replace it with another narrator’s script and voice, repeating this step for as many students as would like to narrate. (optional)
- ☐ Describe three strategies to extend this “how to” recording technique to language arts and literacy activities in the classroom.

Collecting photos to promote storytelling

- ☐ Map and/or audio record a story or oral report.
- ☐ Identify and list from the story or oral report a shoot list of photographs and drawings to be collected.
- ☐ Videotape the shoot list, recording each shot for 3 to 5 seconds using a slow pan and zoom.
- ☐ Create a new folder on the computer desktop for photos.
- ☐ Create a new *iMovie* project, name it, and import the video clips onto the shelf.
- ☐ Use the “save frame as” command to save still pictures to the photos folder and the “create a still clip” command to save still clips to the movie line.
- ☐ Create a narrated slideshow by:
 - + Ordering the still clips in the sequence of the story map or outline.
 - + Inserting three or more titles, choosing a large and easy-to-read font and using a contrasting color for the background.
 - + Writing (scripting) and recording a narration.
 - + Exporting the movie to the camera and to *QuickTime* and archiving it in a *QuickTime* portfolio folder on the computer desktop.
 - + Copying the movie to VHS tape to be shared in the village on home VCRs.
 - + Sharing the video interactively with students and evaluating the effectiveness of the lesson.
 - + Deleting the audio narration and replacing it with another narrator’s script and voice, repeating this step for as many students as would like to narrate. (optional)
- ☐ Create photo essays by:
 - + Harvesting photos using the “save frame as” command.
 - + Importing the photos into *Kid Pix Studio Deluxe*, *AppleWorks*, *HyperStudio*, or *IntelliPics Studio* for journaling, story writing, or report making.

Producing a video interview

- ☐ Develop a list of interview questions around a theme or topic of importance to the curriculum, sharing them in advance with the interviewee.
- ☐ Assign team members roles (camera operator, sound manager, host, guests, audience, set designer).
- ☐ Conduct the video interview, employing a microphone and tripod and utilizing appropriate lighting.
- ☐ Edit the video in *iMovie*, adding titles and credits, and share it with the interviewee for approval.

- ☐ Export the movie to the camera, *QuickTime*, and VHS tape.
- ☐ Share the video interactively with students and evaluate the effectiveness of the lesson.
- ☐ Describe three strategies to extend this technique to language arts and literacy activities in the classroom.

Producing a classroom video letter

- ☐ Storyboard the elements of the video letter (e.g., classroom projects, song, dance, game, skit, demonstration, geography mini-lesson), including video and audio details.
- ☐ Shoot the storyboard, paying attention to lighting, audio, and picture composition.
- ☐ Edit the video in *iMovie*, adding titles, narration, and credits.
- ☐ Export the movie to the camera, *QuickTime*, and VHS tape.
- ☐ Save still frames of each of the storyboard elements.
- ☐ Share the video interactively with students and evaluate the effectiveness of the lesson.
- ☐ Describe three strategies to extend this technique to language arts and literacy activities in the classroom.

HYPERSTUDIO AND INTELLIPICS STUDIO

- ☐ Produce a 15-page interactive book that includes:
 - + A locally referenced story
 - + Photographs taken in the community, harvested and imported from *iMovie*
 - + Children's illustrations produced with computer art tools (e.g., *Kid Pix Studio Deluxe*, *AppleWorks*, or *IntelliPics Studio*) and on paper with colored pencils, markers, and pastel crayons
 - + Clip art and animations
 - + *QuickTime* movies (created in *iMovie*) recorded in the community
 - + Songs recorded in the community, sound effects, voice synthesis, and voice recordings
 - + Transparent buttons that play voice messages
 - + Bilingual text fields
 - + Opportunities for interactivity with children
 - + Access features for children with disabilities (e.g., button scanning, keyboard equivalents for button actions)

- ☐ Employ a screen capture utility to export the pages (screens) into *iMovie* to create a video big book that includes:
 - + Large and easy-to-read text fonts with contrasting backgrounds
 - + Narration and voicing (readers' theater)
 - + Sound effects and background music

- ☐ Print and laminate the book.

- ☐ Produce an accompanying audio CD that includes recordings for:
 - + Easy listening (with music)
 - + Reading-while-listening (without music)
 - + Descriptive narration and readers' theater (with sound effects, voices, and music)

APPLEWORKS

- ☐ Create a new *AppleWorks* word processing file and name it.
- ☐ Change the page setup orientation to landscape.
- ☐ Set the font size to 36-point.
- ☐ Insert a photograph at the top of the new page, center it, and reduce its size to the top half of the page.
- ☐ Type text (3 to 5 sentences) beneath the photo, left justified.
- ☐ Repeat the process several more times.
- ☐ Print the posters, laminate them, and display them as big books on classroom walls.
- ☐ Select the text beneath the photo and change its color.
- ☐ Choose “slide show” under the window menu, set the background to black, and click “start.”
- ☐ Present the slideshow to an audience, read the text aloud, describe the photographs, and incorporate interactive audience participation.

iTUNES

- ☐ Storyboard or outline 60 minutes of content for a radio show, including a mix of storytelling, story reading, interviews, messages, and public service announcements from teachers and principal; songs performed by students and teachers; and radio plays.
- ☐ Record the content of the show, using a tape recorder or the audio recording capabilities of the computer (*SimpleSound* and a *PlainTalk* microphone).
- ☐ If applicable, import the *SimpleSound* files into the *iTunes* library, create a new playlist, and drag 60 minutes of audio material into it.
- ☐ Assign a radio host (disk jockey) to record bridging statements and commentary between the show's segments.
- ☐ Record the host's commentary in *SimpleSound*, import the files into the *iTunes* library and playlist, and drag and drop them into the appropriate sequence on the list.
- ☐ Burn the radio show to CD, review it with a school evaluation team to ensure its appropriateness for broadcast and dissemination, and edit and re-burn two final copies as necessary.
- ☐ Deliver one CD to the local radio station for community broadcast, and make the second available for teachers to utilize in their classrooms for active listening activities.

INTELLITALK II

- ☐ Create a new *IntelliTalk* word processing file.
- ☐ Set playback features to include “read letters,” “read words,” and “read sentences,” exploring various voices and changing their reading speeds.
- ☐ Integrate *IntelliTalk* into a writing project with children and evaluate the experience.
- ☐ Copy and paste the text of a story or report into the file.
- ☐ Use the playback control buttons to pace the voice synthesizer through the text, exploring it both as a fluency building tool and a comprehension exercise.
- ☐ Support a group of children to read-while-listening and critique the experience.
- ☐ Open the “2-switch typist” template and type a note to a friend using the on-screen keyboard, explaining the purpose of an on-screen keyboard.

QUICKTIME

Creating a QuickTime movie

- ☐ Video record singing, storytelling, story reading, or an interview.
- ☐ Edit the video using *iMovie* software.
- ☐ Using the export command in *iMovie*, convert the video to a *QuickTime* movie (CD-ROM format).

Producing a QuickTime video portfolio in IntelliPics Studio

- ☐ Using the “insert movie” command in *IntelliPics Studio*, insert the *QuickTime* movie onto a page of a digital book.
- ☐ Add text that summarizes or describes the video content.

Producing a QuickTime audio CD

- ☐ Using the “add to library” command in *iTunes*, add the audio track of the *QuickTime* movie to *iTunes*.
- ☐ Create a new playlist, insert the audio track, and burn to audio CD.

AUGMENTATIVE COMMUNICATION SOFTWARE

Picture It

- ☐ Copy and paste the text of a legend or story into the *Picture It* story text window.
- ☐ Parse the text to create a rebus story.
- ☐ Set the graphic appearance to “huge” and in color.
- ☐ Print the story in landscape orientation.
- ☐ Open the file in *Pix Reader*, share it within the context of a lesson plan, and evaluate the lesson.

Pix Writer

- ☐ Create a grid of 24 rebus elements that are motivational to a reluctant writer and organize the grid into a logical pattern for sentence making.
- ☐ Support the reluctant writer to compose sentences using the rebus elements.
- ☐ Print the sentences.
- ☐ Support the writer to read the composition aloud and evaluate the experience.

BoardMaker

- ☐ Create a 36-message communication board that supports the playing of a tabletop game.
- ☐ Play the game, requiring that all the players restrict themselves to the communication board.
- ☐ Revise the board based on the experience.

Overlay Maker

- ☐ Identify a storybook to read with a group of children, including a child who is non-verbal.
- ☐ Develop a lesson plan that includes strategies to ensure active participation by the non-verbal child.
- ☐ Design a 24-message communication board that all of the children can use during the story lesson, using clip art from the *Overlay Maker* picture library.
- ☐ Conduct and evaluate the lesson, including the effectiveness of the communication board.

APPENDIX

Pacific Voices Goals and Standards

Goals

When planning its projects, the *Pacific Voices* network works toward achieving a number of literacy, cultural, and educational technology goals. They are as follows:

Literacy

- Goal 1: Students will engage in the writing process (brainstorming and mapping, collaborative writing, and publication).
- Goal 2: Students will engage in storytelling, story illustration, and dramatization.
- Goal 3: Students will read, critique, revise, and extend one another's work.

Cultural

- Goal 1: Students will interview and record community elders and storytellers.
- Goal 2: Students will conduct cultural research at the museum.
- Goal 3: Students will learn a traditional song, chant, dance, or instrumental music.

Educational Technology

- Goal 1: Students will use the video camera and tape recorder to record interviews, plays, and music.
- Goal 2: Students will create sound files and photo archives on the computer.
- Goal 3: Students will produce computer graphic illustrations.
- Goal 4: Students will utilize desktop publishing storybook software to create, save, edit, and publish their work.
- Goal 5: Students will produce video and audio storybooks.
- Goal 6: Students will develop multimedia portfolios.
- Goal 7: Students will engage in a range of telecommunications, including email, Internet, teleconferencing, CD-ROM, and video exchanges.

Professional standards

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Education. Teachers are invited to consult with their own ministry or department of education to identify standards that are locally referenced to their own island entities.

Technology productivity and communication tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.
- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

Performance standards

All students should have opportunities to demonstrate the following skills.

Prior to completion of grade 5, students will:

- Use technology tools (e.g., multimedia authoring, presentation, Web tools, digital cameras, scanners) for individual and collaborative writing, communication, and publishing activities to create knowledge products for audiences inside and outside the classroom.
- Use telecommunications and online resources (e.g., email, online discussions, Web environments) to participate in collaborative problem-solving activities for the purpose of developing solutions or products for audiences inside and outside the classroom.

Prior to completion of grade 8, students will:

- Apply productivity/multimedia tools and peripherals to support personal productivity, group collaboration, and learning throughout the curriculum.
- Design, develop, publish, and present products (e.g., Web pages, videotapes) using technology resources that demonstrate and communicate curriculum concepts to audiences inside and outside the classroom.
- Collaborate with peers, experts, and others using telecommunications and collaborative tools to investigate curriculum-related problems, issues, and information, and to develop solutions or products for audiences inside and outside the classroom.



