

MicroWorlds in Avalon

Celebrating a Wintry High-Tech Workshop in Australia

By Catie & Fred D'Ignazio

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On August 6, 1997, two little turtles set off on a fantastic journey. Fred the Lumbering and Catie the Plodder left their little pond in East Lansing, Michigan, bound for Melbourne, Australia. They carried only what they could strap to their shells (or bribe the airlines to check). This included laptops, tape recorders, magic cables, adapters, microphones, Zip drives, QuickCams, and videos. CD-ROMs, phone cords, and SCSI cables. Video cameras, a scanner, and a good deal more. And like good little turtles, they allotted themselves one chocolate bar each to ensure their success.

For me, getting to know a domain of knowledge is much like coming into a new community of people. Sometimes one is initially overwhelmed by a bewildering array of undifferentiated faces. Only gradually do the individuals begin to stand out.

—Seymour Papert (1982, p. 137)

On August 14, 1997, after a long ocean trek involving pirates and smugglers (not wholly relevant to the current story), Fred and Catie spotted Avalon, home of mythical Camelot and the court of mighty King Arthur.

The two turtles splashed and clambered ashore only to find themselves in the middle of a gothic fairy tale. Wandering up to a nearby sign, they read “Avalon Conference Center, Avalon, Australia.” The thunder crashed, the lightning flashed, and suddenly they saw it right in front of them: an old creaky structure, rooms with organs, and stray cats. This 200-year-old building seemed like the only shelter available. Catie wanted to jump back into the ocean, but Fred declared that he was plunging ahead, by golly! In the midst of their confusion, they heard a noise. Fred jumped under a bush and Catie prepared to do kung fu.

It was another turtle!

“Hey,” said Gary the Grumbling, “you guys wanna do some MicroWorlds, or what?”

Fred and Catie breathed a sigh of relief. They had reached their destination for the week: an intensive gothic playground with multimedia for jungle gyms and microworlds for merry-go-rounds. Gary ushered them into the castlelike conference center, and they began to decorate with cables and computers.

The week was to be major event in Turtle World, which is, incidentally, the world in which we all live. Turtle teachers carrying little laptops came from all across the Australian continent. They journeyed to Avalon Castle on a pilgrimage to pool their knowledge and gain insight into the bewildering world of educational technology.

It was winter in Avalon—miserable, cold, and damp. Avalon Castle sat on the edge of Victoria Bay. On one side of the castle lay a vast realm of water; on the other stretched an endless panorama of wetlands, bogs, and swamps. The castle itself was part of a farm. As they strolled the castle grounds, the turtle teachers mixed with a noisy gaggle of chickens, horses, sheep, and pigs. Each morning the teachers sprang from their beds and raced to the showers. The early birds got hot showers; the slackers shivered in water that was numbingly cold.

To stay warm during the day, the teachers fashioned “turtle shells” from layers and layers of sweaters, jackets, pants, and socks (see Figure 1). To gain a few precious degrees of body heat, the teachers drank coffee and tea in great quantities. And they built fires—huge, roaring fires—until the castle’s firewood

supply was exhausted. Then the teachers hungrily eyed the surrounding trees and wooden farm buildings, gauging the waves of cozy heat the wood might generate if it were heaved into the castle’s huge fireplaces.

With frostbite and hypothermia their constant concerns, the workshop leaders designed a warm-up activity as soon as the first wave of turtle teachers arrived. Their plan was home movies! The movies would:

- throw the teachers immediately into a hands-on multimedia project;
- help them reveal their personalities, backgrounds, and so forth;
- encourage them to bond into MicroWorlds production crews for the rest of the workshop; and
- keep them warm, discourage frostbite, and stir up the blood.

Fred and Catie brought three two-minute biographical movies from the United States that they used as examples for the teachers and as a means to introduce themselves. The movies were titled:

- “A Dog’s Eye View of Heaven,”
- “Stalking the Elusive Sandbox Fred” (see Figure 2), and
- “Is Art a Bath or What?”

The movies worked. They propelled the diverse group of teachers into instant action. Five minutes after the movies were over, the teachers grabbed handheld camcorders and drove off in cars, chased pigs and chickens across the castle lawn, collapsed corpse-like on the nearby beach, and climbed tall trees—all of them frantically shooting wacky biographical videos of their own.

Avalon Castle was large enough to become its own little microworld. Gary, Catie, and Fred called the main room in the castle “Mission Control.” Here they plugged the teachers’ laptops into a network. From other parts of the castle, participants brought files as offerings on Zip drives to add to the centerpiece of their work: a MicroWorlds 2.0 project devised by each turtle team. Gary acted as master chef on the MicroWorlds projects. Fred and Catie assisted teachers’ multimedia machinations.



Figure 1. One teacher's “turtle shell.”

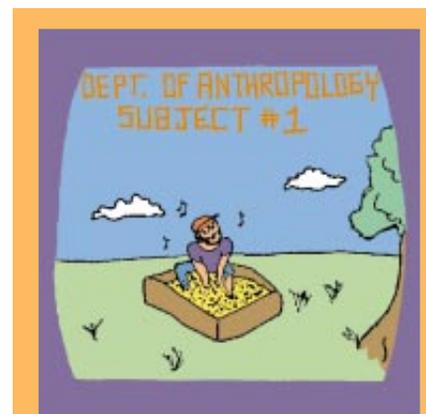


Figure 2. Video clip from one of Fred's biographical movies.

Avalon Castle's far-flung rooms became the project studios for the teams' multimedia productions (see Figure 3). A cavernous living room was converted to a video-capture theater in which teachers transformed their movies into Zip files bound for MicroWorlds projects in Mission Control. A satellite prep kitchen became an audio room. At all hours of the day and night a cornucopia of sounds emanated from this kitchen. Groups of teachers became improvisational rock bands banging on spoons, wailing on electric guitars, plunking musical keyboards, harmonizing, jamming, and crooning. Far into the night, strains of music of all sorts drifted down the hall from the audio kitchen into dormitory rooms, lulling good little turtles to sleep.

In other rooms scattered around Avalon Castle, teachers sat on floors like high-tech squatters and tapped on keyboards, chatted feverishly, previewed videotapes, listened to boom boxes, scribbled notes, wrote MicroWorlds procedures, and hastily sketched cartoon frames in project storyboards.

Teachers rushing outdoors and lugging video cameras on tripods passed other teachers hurrying indoors and hauling armloads of worm-eaten firewood. Strong smells of hot chocolate, stout coffee, English tea, and burning logs ebbed and flowed through the castle's interior, all overlaid by the odor of undeniable tension. Every few hours, like a town crier, Gary floated through the castle crying, "Demo or Die! Demo or Die!" And frantic teachers would dive into action in front of roving bands of other teachers, demonstrating their ragged, unfinished projects as raw works in progress.

Catie and Fred were overwhelmed by the cold, chaotic frenzy around them. There were too many skills to be learned by too many teachers in not enough time. What to do? They glanced nervously over their shoulders. At any moment they knew that Gary would come grumbling through, crying "Demo or Die!"

They had to do something to speed things up. Teachers were simultaneously trying to learn MicroWorlds, Logo programming, digital video, MIDI music composition, digital photography, research methods on the Internet, and a smorgasbord of other arcane, high-tech arts. All the raw media gathered by the teachers had to be clipped, cut, copied, and pasted into their MicroWorlds projects. These projects were the "glue" that held all the media together. And they were due in a few short hours.

Suddenly, Fred and Catie remembered a quotation from Seymour Papert, whom they affectionately referred to as Pappy Smurf. His words were perfect about new domains of knowledge. The domains were the hodgepodge of skills these teachers were trying to learn.

Papert (1982) had called the domains "a bewildering array of undifferentiated faces" (p. 137). And the only way for everyone to learn *these* faces in time was to distribute responsibility for learning across the entire group of workshop participants. After the biographical home movies, the teachers' momentum to learn had grown so strong that perhaps each one could learn

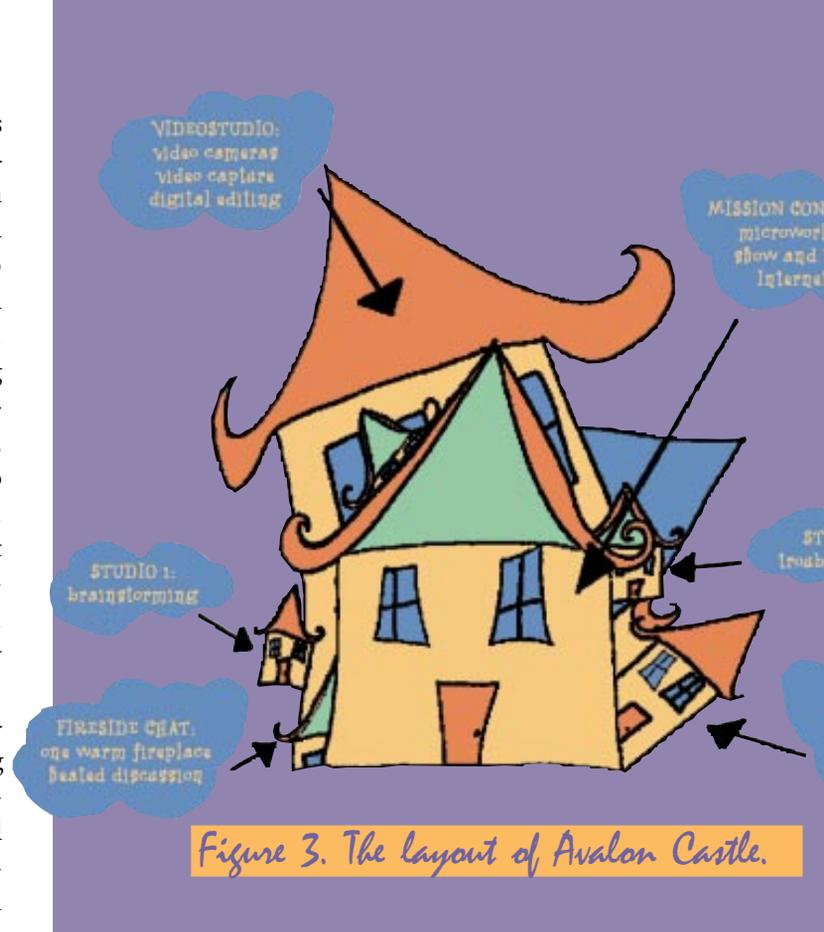


Figure 3. The layout of Avalon Castle.

a few pieces of knowledge and then share them with other teachers who needed the same pieces. No single guru could be in every room in Avalon Castle coaching all of the teachers, but individual teachers could be one-minute gurus who could be called on at a moment's notice to share the small but critical skills they had acquired. All teachers could contribute. All teachers could share knowledge. A knowledge web could be formed. And each node in the web would be a human being.

Fred quickly sketched the major knowledge domains in his workshop notebook. Catie grabbed a stack of poster paper and magic markers and drew "Domain of Knowledge" posters. Teachers pitched in and hung the posters around the Avalon Castle dining room. Catie and Maree the Registrar ran around the castle photographing teachers with a digital camera. Mark the techie turtle printed the pictures on a workshop printer.

Fred, Catie, and Gary called for a turtle huddle. The teachers assembled, and the three leaders explained the new strategy. Each teacher had to:

- walk around the dining room and study the domains of knowledge that had to be mastered,
- pick one or two domains that he or she would like to learn,
- learn just enough of that domain to apply it in his or her team's project,
- teach his or her new knowledge to at least one other team member,
- paste an autographed copy of his or her digital photo onto the Domain of Knowledge poster that matched the new skill,

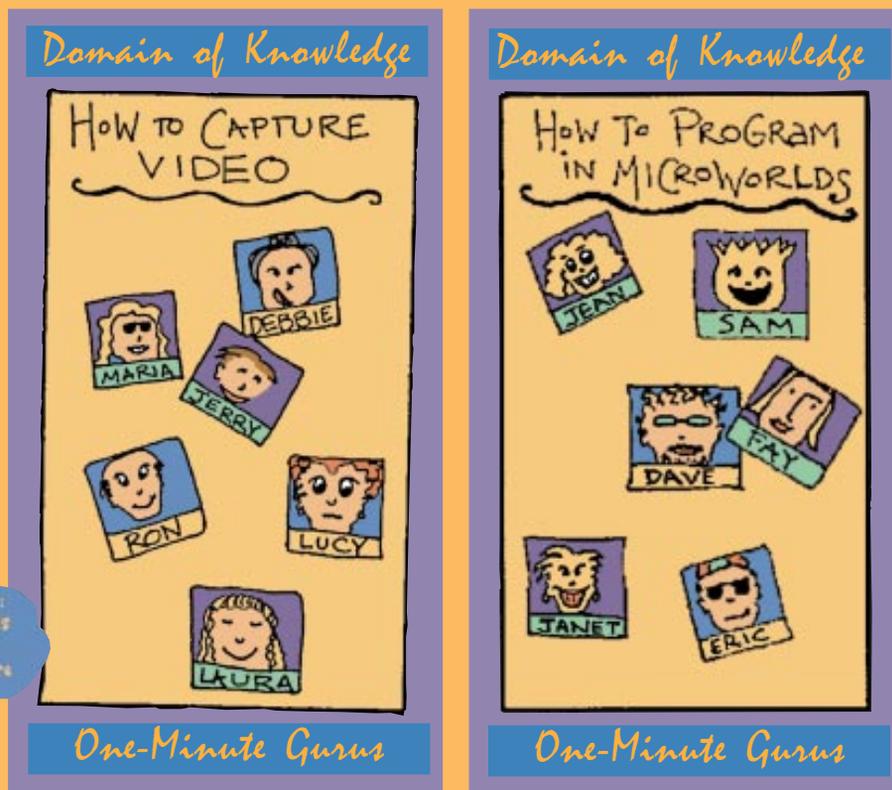
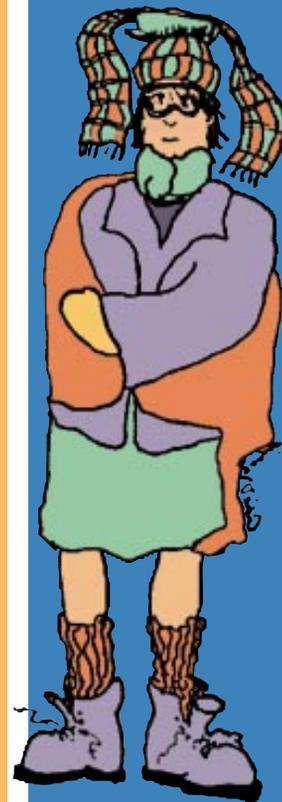


Figure 4.
"Domains of knowledge"
poster with
pictures of
one-minute
gurus.



- seek help from teachers who had already learned the necessary skill, and
- offer help to any teacher who asked.

"Ready! Set! Go!" Gary cried. And the teachers raced off. By lunchtime that same day, the Domains of Knowledge posters began to fill with names and pictures of teachers who had published themselves as one-minute gurus (see Figure 4). The posters functioned as oversized business cards advertising help with each skill for their fellow teachers. Gary, Fred, and Catie flew around Avalon Castle fighting fires, troubleshooting, and offering special-purpose advice. But all the rest of the problem solving, teaching, coaching, and learning that day subtly shifted onto the teachers' shoulders.

At the end of the workshop, the posters were magically full of teachers' names and pictures. And the projects were miraculously completed.

Gary, Catie, and Fred looked around Avalon Castle. What they saw was good.

They followed the teachers into Mission Control. The lights dimmed. Everyone relaxed in a theaterlike hush and watched the final demonstration of the teachers' MicroWorlds projects on the big screen.

Catie, Gary, and Fred shared a secret with every teacher in attendance: The workshop's success or failure had not rested on the shells of the three leaders. It had rested on the shells of every teacher. And because every teacher had made a contribution, the teams and the workshop were both successful.

The demonstrations ended. The screen darkened. Mission Control's lights came on.

The workshop was over. In exhaustion and in a final gasp of energy, the teachers rushed out the castle doors and to their cars. Off they drove to their Australian farm houses, suburbs, villages, and cities.

Freedom. Free at last. Good-bye, horses. Good-bye, pigs. Good-bye, cold, damp swamps.

Gary, Fred, and Catie were led like tiny baby turtles to cars that would whisk them away into the night. All three dozed as teachers drove them through the dark to their faraway accommodations.

Long live Avalon! Long live MicroWorlds! Long live Australian teachers! ■

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Reference

Papert, S. (1982). *Mindstorms: Children, computers, and powerful ideas* (2nd ed.). New York: Basic Books.

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