Educational Perspectives

Journal of the College of Education/University of Hawai'i Mānoa

CONTENTS

Special Education in Hawai'i
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As time went by...

1964 was a very good year to have been appointed editor of *Educational Perspectives.* The College of Education, with nine recently established departments, provided an exciting environment in which I assumed my recently added "volunteer" responsibility. After all, the first editor, **Richard Alm**, had progressed, in two years, to become editor of the *National Teachers Journal.* My assignment would in all probability be a brief one.

Never did I expect to spend, as a part of my professional life, the next 35 years serving as editor of the Journal of the College of Education. And what memorable years they have been! Let me recall a few.

The first issue of Educational Perspectives published by its "second editor," volume 3, number 4, dealt with the then "broadly significant program in our College, and in Hawai'i, Educational Television." When the first station was up and running, thanks to **Robert Reed**, then director of our College Communication Center, it was to become part of the State's and eventually national educational television network. It took a while for this to become reality.

The themes selected for subsequent issues reflect the major concerns in the College, on the University campus and interests of those faculty who were willing to help in developing and assembling manuscripts for an issue. Some of the early journals were built around themes specific to Hawai'i: The East West Center and International Education; The Legislature and Education; Teacher Education in Hawai'i.

Others included themes reflective of national as well as local concerns: Special Education; Children's Literature; Museums and Education, most of which included articles by mainland as well as local authors.

During the past 35 years, 95 issues of Educational Perspectives have been published which have included approximately 450 articles by local, national and international authors.

The evolution of printing processes over 35 years is especially interesting. In 1964, we sent typed copy to the printer to be typeset, then prepared paste-ups, blue lines and worked long hours to assure accuracy and alignment. Early card-punching and Wang system typesetting, which required coding for every change in type size or indentation, was not the great leap forward that we were to experience with the advent of desktop publishing.

The fun parts, including planning, working with authors, deciding on cover art that would "grab" our readers, made preparing each issue a new adventure. Receiving awards for "superlative achievement" from Educational Press Association on seven occasions, justified our efforts. I transferred my wheel-throwing philosophy; "the next pot will be the best-ever," to my quest for excellence in the production of each issue of Educational Perspectives.

The quality achieved in the journal is a tribute to the consistent support of the College administration, the professional faculty serving on the editorial board, and as guest editors, and the hundreds of authors from many parts of the world who contributed their time and professional expertise in preparing manuscripts. Also, to the fine photographers, especially **Francis Haar**, who provided the art work enhancing many issues and the discriminating printers in Honolulu with whom we worked.

Pulling all these elements together and providing the passion and dedication that made each issue special were **Alexander Poki Kali** who worked with me on the journal from October, 1976 until his death in October, 1993, and **Marcia Little** who has been an integral participant in continuing the journal since 1994. Both of these individuals have had a major influence in supporting and maintaining the quality of *Educational Perspectives.*

To the new editor, **Hunter McEwan**, may your years as editor be as rewarding as those of the past 35.
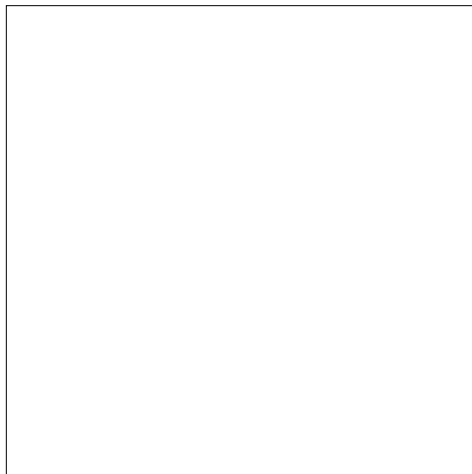
Alexander L Pickens   *Photo by Tom Haar*

"Here's looking at you."

This issue of Educational Perspectives provides insights on the past, present and future status of education and related services for children and youth with disabilities in the State of Hawai'i. In their unique ways, the authors of each article provide guidance on improving ongoing efforts to more align closely the state-of-the-practice in special education with the state-of-the-art. State-of-the-practice is a term that describes how we *actually* operate in the field. State-of-the-art is a term that describes how we *could* operate in order to achieve the most productive outcomes for children and youth with disabilities. In the field of special education, advocacy, teacher education and qualifications, working conditions and the use of research-supported practices are identified as factors that have advanced, and will continue to advance, the field toward the state-of-the-art in special education.

## Concerning This Issue

Dennis McDougall

Our lead article features an interview with **Ivalee Sinclair**, Hawai'i's most influential and prominent advocate for the enhancement of education and related services for students with disabilities. Ivalee describes the development of special education, in Hawai'i, from the era which preceded implementation of the landmark federal Public Law 94-142 (Education of All Handicapped Children Act of 1975) to the era of the Felix Consent Decree. Her experiences, both personal and professional, highlight the importance of individual and group advocacy efforts in obtaining, improving and expanding services for *all* children and youth.

Shimabukuro, Edelen-Smith and **Jenkins** examine working conditions of special education teachers in Hawai'i, a critical element in the State's recent efforts to improve services and overcome chronic shortages of fully qualified special education teachers. This survey study provides an example of how a professional organization (the Council for Exceptional Children) and college faculty can collaborate to address important issues that affect public school teachers and their students. By identifying and addressing working conditions that teachers cite as problematic, educational agencies are likely to improve recruitment and retention of fully qualified special educations—factors that have been identified as major inhibitors to progress in the field.

Soon and **McDougall** describe a classroom-based intervention designed to meet the individual needs of students with Attention Deficit Hyperactivity Disorder (ADHD). The improvements in academic accuracy and attention demonstrated by the elementary school students in this study illustrate the importance of applying sound, research-based interventions in actual classroom settings. Like the other articles, this intervention exemplifies efforts of faculty and graduate students at the College of Education in aligning the state-of-the-practice with the state-of-the-art.

Salas, Ornelles and **Avery** describe the recent and dramatic expansion of teacher education programs, in the area of special education, within the College of Education. These programs were funded via a Memorandum of Agreement between the Hawai'i Department of Education and the College of Education with the goal of increasing the supply of fully qualified special education teachers who enter the field. These programs provide an important supply-side avenue for overcoming the State's critical shortages of special education teachers. The development of a fully qualified teacher workforce, as with any profession, should improve educational outcomes and services.
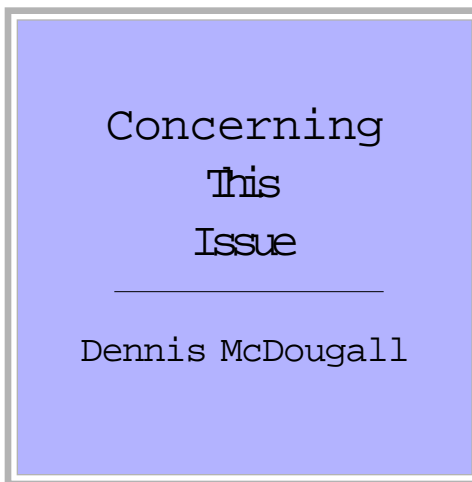
Dennis McDougall, guest editor for this issue of Educational Perspectives, is an Associate Professor in the Department of Special Education at the University of Hawai'i. His research interests include self-management, behavioral disorders, and special education litigation and law.

Introduction

Ivalee Sinclair is recognized widely as perhaps the leading, long-term advocate and proponent for improvements in education and related services, for children with disabilities and their families, in Hawai'i. She and her husband, Dave, have resided in their Mānoa home for nearly 40 years. Having raised six children, her current energies and interests include lending a helping hand, as "grandma," to some of her nine grandchildren. In fact, Ivalee managed to keep her youngest grandson, seven-month old "JD," quite content, as he sat in her lap during this interview. We conducted this interview on the front lanai of the Sinclair home, with the interviewer's laptop and tape recorder placed snugly, amongst the comfortable clutter of household items, on a table that included Dave's tobacco and the dog bones of Stinker, the family's adopted canine. We have taken the liberty of selecting excerpts from this interview, rather than reporting the entire interview verbatim. We based this decision, as effective advocates, educators, parents, and grandparents are prone to do, on our past experiences that help us to learn from our mistakes. In this particular case, we observed that, prior to falling asleep, JD listened attentively throughout most, but not all, of the interview (more likely, the electronic contraptions and dogbones on the table entertained him). So, we hope that readers will be entertained by this abbreviated version of grandma's words of wisdom.

> Dog Bones, Tobacco, and JD:
> An Interview with Ivalee Sinclair, Hawai'i's Grandma of Advocacy
> —————
> Dennis McDougall

The Dingy Haole Lady

McDougall: Ivalee, could you describe your background and how you become interested in the field of special education and disabilities?

Ivalee: I have been in the islands since 1945. I went to the mainland to go to school and I returned here in 1960. I have six children and nine grandchildren; some live on the mainland. One of my children and one of my grandchildren have learning disabilities.

McDougall: So your personal experiences with you own child sparked your initial interest?

Ivalee: Yes. Years ago, I was commonly referred to as the "dingy haole lady" at the elementary school that my son attended, because I could not understand why he could do his homework with my help yet fail his schoolwork. You know, in the middle of six kids you gain some sense of what is going on. I knew when he was born that he was different. He did not sleep well. He was very clingy and he was very sweet. At the end of his first year in school, the kindergarten teacher told me, "You should teach him his address and his phone number, his left from his right. And he gets upset when we change normal class routines." My thoughts were, "OK, what have you been doing all year long? How come it's *my* job to teach my child. Why haven't you told me anything until now? Why wait to tell me this at the *end* of the year?"

In his third-grade year, I noticed that he could read less than one-third of the words in the regular reading book that was sent home. He would reverse words. When I sent him to the bathroom to do things like wash his face, brush his teeth, and comb his hair, he did not remember what he had been sent there to do. He and I were in tears. I was furious [in response to her son's academic difficulties and the lack of explanations from professionals]. When I spoke to the principal, she indicated that he was having difficulties learning and that they did not know why. I was very grateful that the principal at least acknowledged that they had not been able to accomplish what their task was, instead of blaming …

From Dumping to Diagnosis: How can Brain Dysfunction be Minimal?

McDougall: So what happened with your son?

Ivalee: They put him in a mixed class. He did not really read until he was 14, but he found other ways to learn. The approach in our house has always been, "you try something, and if it does not work, then you throw it away and try something different."

In seventh grade, he developed all kinds of psycho-somatic symptoms at Stevenson Intermediate. He did not want to go to school, he was afraid to go to school, but he knew that, in our house, you only stay home from school if you're really sick. Being sick meant no TV and no play-ing with friends. When I went to the school, his teacher said that he could only attend for 20 minutes, that he could not pay attention for the entire period. She said, "I don't understand why he can't do his work for 90 min-utes." The pediatrician said, "Teachers sometime make mistakes …I don't think that there is anything wrong with your son. There's this new thing called learning disabili-ties, but I don't think your son has that." Well, teachers had said it was my fault, that somehow I was spoiling him, and that I had too high expectations for him. They said he would be fine if I just disciplined him. The usual kinds of dumping. I call it dumping because that is what it feels like.

The doctor sent me to a neurologist who said, "Your son has abnormal, bilateral, temporal brain waves." I re-plied, "What does that mean?" He said, "We don't know." I replied, "Should I be worried about it?" He said, "We don't know."

Finally, I talked to a psychologist who told me, "You have a son who has above average intelligence, difficul-ties in processing, and minimal emotional problems. He has minimal brain dysfunction." I said, "How can brain dysfunction be minimal? It is not minimal. It has inter-fered with his life in many, many ways." The doctor rec-ommended that my son should be enrolled in small classes and get intensive remedial assistance.

At that time, the system had mental retardation (MR) classes; they did stamp collections, coins, and manini things that were inappropriate for my son's needs. I found the Honolulu Junior Academy, a tiny school where he stayed for five years. The advantage of that school was that they realized that LD was an up-and-coming area, and they brought in University people. He did things like geometry and he was good at mechanical drawing such as blueprints. When he was 15 and 16, he went to school half-day, got a job at Safeway, and drove a motorcycle to get there.

The Education Game

McDougall: So how did your son do? How did things work out for him?
Ivalee: My son transferred to Roosevelt High School his junior year. He learned how to play the education game. He found out what he had to do and then did the least he could to get by. He asked other students about who the easiest teachers were …he found out that he had to read four books and do four book reports for the year. The next year he did the same thing. He took the same re-ports, changed them a little, and handed them in again. This is the education game. The reason I call that the edu-cation game is because nobody really looked to see whether he was learning anything or not. The teachers just wanted compliance to the requirement, not what he was getting out of it. They did not ask: Did he learn any-thing from these processes? How was this going to ben-efit him and his learning? What had he gained? Over time, we learned that my son picked up information in a dif-ferent way. If he could not get it out of book, then he would ask and he would go back to people repeatedly until he got the information. I learned that, for book in-formation, using a tape without a visual aid was no good for him… Now he is a very successful contractor.

McDougall: So your parental experiences with your son helped you decide to become active in the field of special education and disabilities?
Ivalee: Yes, these experiences with my son and his school-ing got me into field. When a clinical psychologist said he learned differently, I realized I needed to provide a special program because none was available. I sent away for materials and the psychologist gave me a lot of mate-rials to read. I read an article by Pat Hunter in the *Honolulu Advertiser* that described my son and LD very well. I still have that article. I began to learn what to do for my son. I started working to effect changes at the school level. I got on school legislative committees. I be-came President of the Board of Directors of this tiny school. We got legislation passed to support the school but the Governor did not release the funds ($100,000). I left the school and decided that I needed to do some-thing else. I couldn't just *not* do something because no-body seemed to know what I was talking about. I be-came Executive Secretary-Director of the Hawai'i Asso-ciation for Children with Learning Disabilities (now

known as LDAH). I had to learn and do a lot of new things to keep the organization alive. I had to get it funded, do the newsletter and communicate with legislators. I learned a lot of other skills. So that's how I got into this field.

The Fox Guarding the Chicken Coop

McDougall: Would you describe some of the major events and cases that have impacted development of special education and related services in Hawai'i as well as major events in your career?

Ivalee: Well, there are many. For example, Paul Austin, a legal aide, brought an action, in 1973, called *Silva v. Hawai'i* because students with mental retardation were refused opportunities to attend school in Waianae. This class action suit ended in 1977 when the Silva Consent Decree was settled under terms of the Rehabilitation Act of 1973. Interestingly, Hawai'i has had, on its books since 1949, a policy to serve exceptional children but never ever gave adequate money. Thus [in past years], the majority of kids with cerebral palsy and MR did not receive adequate services. Some were placed in private facilities … or in the closet.

During the time of PL 94-142, I went to national conventions. I participated in efforts to have regulations changed to reflect the needs of children with disabilities. I participated in the White House Conference for the Handicapped and met with President Carter and Califano [Secretary of Health, Education, and Welfare]. This is how I became involved in advocacy.

At that time, there were 87 children with disabilities enrolled in three private schools—Variety School, Assets, and the Special Education Center on Oahu. The families were provided transportation to these schools at no expense because the Department of Education (DOE) did not have appropriate programs for them. But DOE was not paying the tuition. Of course, this was a problem because the regulations required that students receive free, appropriate, education at public cost.

Shelby Floyd (Legal Aid), Paul, and I worked with the families. Families who had the transportation approved by line staff, at district level, received a letter from the district superintendents, which stated DOE now had appropriate programs for their children at DOE schools. Shelby filed suit. Judge Sam King ruled that DOE would continue to provide transportation until all legal actions

were completed. About one-third of the 87 immediately accepted the DOE programs without any fight; one-third agreed to the DOE programs over the course of about two years and one-third continued to fight their children's placement in DOE schools throughout the suit. The DOE and I learned a lot about the law in this process because you had to know the regulations and procedures in detail to participate in hearings. We had about 30 hearings during the 1977-78 school year. DOE found 10 people to be Hearing Officers including many former principals, one attorney, Lloyd Dunn, and the Head of the Special Education Department. I thought that having former principals as Hearing Officers was a bit like having the fox guard the chicken coop. At that time, hearings lasted one or two hours. Then I went to the national learning disabilities conference and they recommended that we never go to a hearing without a team of people prepared to deal with legal issues…

In spring of 1987, a military family had a child whom we had been trying to get services for … Mom, unknown to me and others, taped a meeting at school. Well, the Department decided to take them to Federal Court. At one point, the State Attorney General's office decided to bring suit against the family for not providing appropriate care. The also sued us—Barrett McCandless, principal and head of the board of directors of Assets School and my board members—personally and professionally—for interfering. This suit made it more difficult for me to recruit board members in the future for fear of being sued. The DOE had wanted to look at the records of students placed at Assets. I wrote a letter indicating that the records could not be inspected without parental permission. Some confusion occurred because some parents had prevailed in the matter of obtaining tuition payment from the State. Therefore, the DOE had the right to look at those [particular] records. Two and one-half years later, we prevailed in Court on the "interference" issue.

On Advocacy: You Can't Just Ding the System

McDougall: How did these cases impact you, the schools, and so forth?

Ivalee: One of the outcomes of this suit is that it gave me power that I never had before because we had prevailed in Federal Court. People began calling. I began testifying before the Board of Education and the legislature to obtain resources because you can't just ding the system. At

first we were very uncomfortable. The case caused a harsh strain. After the case was settled though, we found it much easier to get things done via the Individualized Education Plan (IEP). We had been having 20-30 hearings, but then we only had about six hearings that year.

A Different Kind of Advocacy

Ivalee: When I was at LDAH we launched a petition to get summer school services and, in the summer of 1976, we got the services. I consider this a landmark. This was a different kind of advocacy. Two parents from different school districts had the same issue and they were willing to put their shoulders to the wheel and work. We met and worked with the Superintendent, the Board of Education, and others. We got the resources. Senator Joe Kuroda was very helpful in getting a budget line item for summer school. The Board had no summer school policy until then. Then, in 1979, the Superintendent at the time decided not to have summer school for students with disabilities. Shelby [Floyd] filed suit on grounds that services were being denied due to Departmental prerogatives, rather than on the basis of IEP decisions based on each student's individual needs.

Mental Health Now and Then

McDougall: Can we talk a little about mental health services?
Ivalee: As in the past, there is still inconsistent understanding of special education, requirements and disabilities in the DOE. Principals and others have to have some knowledge of the regulations. They don't have to know all of the regulations, but they should know the intent and spirit of the regulations, and what to do … and that the IEP team has authority and not somebody above who pulls the rug out … so that when we go to an IEP meeting, if a child requires something that is not readily available to the school, we put it in the IEP then we figure out [afterwards] how to pay for it. We don't say, well, we can't do that because that [decision authority] is up to the District, which is the pattern that we had for years and, which I think, is still the pattern at many schools.

So we move on. A group of us, known as the Special Education Task Force, which included teachers, parents, professionals, mounted an intensive campaign to deal with the 1980 federal regulations. We generated in a very

short time over 1200 letters to Washington, DC, and defeated the Reagan regulations. Meanwhile, another group of us tried to get child and adolescent services as a separate division, instead of as a part of Adult Mental Health. The problem was that Adult Mental Health dealt with adult issues and children's services were being cut drastically. So we got that Division going and, in the mid-80's, there's a CASSP grant [Child and Adolescent Service System Program]. It was implemented for five years. That's how we got the CASSP principles that were used in the *Felix vs. Waihee Consent Decree*.

When they reorganized the Child and Adolescent Division, the resources and staff stayed with the Adult Division, so we did not have infrastructure at that level. We were able to get the budget increased a little each year via a task force that contacted the Governor, the legislature, and other key people but the budget did not increase to the level where it needed to be.

With concerns about how much PL 94-142 was costing, the Legislature passed a very stupid bill. The bill stated that mental health services would be provided to children only to the degree that money was available. So we testified against the bill, but it passed.

I want to say that there were legislators who supported us. Back then, people did not understand that if Department of Health (DOH) can't do it, then DOE has to do it. The thinking in the field was that, if we don't have money, we just won't offer the service, and the division [between DOE and DOH] became even more polarized than it had been previously. Integral to this was CAMHD [Child and Adolescent Mental Health Division], but I should probably tell you how we got the Family Guidance Centers and the Children's Teams started.

In 1974-75, a nun was heading Mental Health Association services, a small, nonprofit organization. She did a lot of research that documented the need for community services and trained experts to provide mental health. We rallied support …You know, anytime you have a bill passed, you have the problem of how to implement, especially when no long-term plan exists. Well, in 1987, a small group lobbied for mental health services.

Much of what you do as an advocate is communicate with the legislators, the Governor, the Board of Education (BOE), and committees. A lot of advocacy is conducted at the system level – not just at the individual case level. Eventually, the Hawai'i Advocates for Children and Youth brought over a nationally recognized

child advocate. The advocate gave a talk about the cluster system used in Cleveland. We introduced a bill to the legislature to start a cluster system with the purpose of developing programs here in Hawai'i and to decrease mainland placements. The process included how to decide who or what agencies pays for what. This actually became a vehicle for cost-sharing to send kids to the mainland rather than to develop programs here. Conceptually, the idea was good but realistically it has never worked well and was disbanded. We thought that this was going to be the answer to a lot of problems, but it turned out that it did not work very well at all.

Support and Training for Parents and Professionals

Ivalee: Another very important aspect of advocacy is support and training of parents and professionals. I think this has been sadly neglected in the State of Hawai'i.

We wrote a grant, the AWARE grant – I failed many times before we got the grant. So we got Parent Training Information in 1989. It called for us to train parents of children with all types of disabilities.

One of the things I did to try and substantiate that we were, indeed, serving parents of students with all types of disabilities, was write a local trust foundation grant. I could not use the word advocacy because they would not fund the grant. Advocacy was considered "adversarial" and negative. So I used the term "parent training." We created training manuals for the deaf, mental retardation and other disabilities. I went across the State and we trained parents and professionals. The training had a peer training component. The idea is not make a family dependent on an advocate but to teach parents to help themselves. Our idea was for trainees to identify buddies or parents from neighbor islands, train them, and give them stipends to support further training of parents. We had a good idea but never enough money. Jennifer [Schember-Lang] now uses a buddy system in her Americorp program, which was wonderful for me to hear. Supporting parents and professionals has to do with more than just training. You have to provide enough clerical help for them to do the job, and look at what other things impact a person's ability or inability to provide services. Also, it means finding out how to support someone when they are doing a good job. And how to do something about it when they are not doing the job.

Over the years, I have noticed that the same system problems kept coming up. So we tried with the union, University of Hawai'i and other folks to deal with these issues, but we never got far with it because these are such overwhelming issues in a highly centralized state. We came up with ideas but no long-term solutions. When OSEP [the federal Office of Special Education Programs] monitored the State, we testified about what was going well and what was not going well. I remember when OSEP filed papers that minimal services were not being provided and identified this as a DOH-DOE failure…

A Few Lessons

Ivalee: We have to have a system of checks and balances. I learned from the *Shauna S.* case that you really need to have clear relief spelled out; otherwise you are spinning your wheels. When you file a lawsuit, have all of the facts and specify clearly the relief that is needed to accomplish the task. The differences between the summer school lawsuit with a master, and *Shauna* without a master, and *Felix* is that, in *Felix*, the relief is very explicit and cuts across all state agencies. I think the latter is a more efficient way to accomplish change because it brings down barriers. With clearly stated outcomes and timelines, and baseline and progress measures, you have accountability. We've made some progress but we have a way to go still. So that's systems advocacy.

I define a good advocate as one who: acts on behalf of the family's needs rather than interject their own personal views; is able to facilitate meetings; is able to have each individual or party hear what each is saying … able to develop options and problem-solving … making sure that families understand what they are agreeing to and their rights.

I have done over 80 hearings. Hearings are not the answer because you still have to work with the same people. I try to avoid hearings because of polarization and it creates an entirely different environment at the school. I will use hearings if needed.

Another of my goals in advocacy was to try and use mediation better. Before mediation became a part of the law, I helped develop a mediation program with the Neighborhood Justice Center because I could not understand how you could go to mediation with the DOE and with the district superintendent, again, it's like the fox guarding the chicken coop.

Looking back over all of these years of advocacy, we

have effected some changes, but there's still a long way to go. Some of the very problems that existed when I first started are still in existence today, which is very sad. But I see a lot of changes, too. I think the other reason why I keep hanging in there, and keep hoping and working, is because if it changes for one kid, it can change for others. There's still the hope that we will someday have the good common sense to figure out how to make this work the way it's supposed to be, without killing people off, and without being angry and hurt as people tend to get.

Hangovers of the Plantation Mentality

McDougall: Can you identify two or three critical current needs or actions to improve public education, in particular special education and related services?
Ivalee: We must tackle union issues. Sometimes they don't see how they would benefit from changes… It takes two years to settle grievances in an Hawai'i State Teacher's Association situation. That's a waste of everybody's time. Each person – teachers and principals – should ask himself or herself *why* he or she is in a union. They must ask themselves what they want their unions to do for them and whether they can address these issues in ways other than the union and grievances.

Second, we need coalitions of people getting together to tell the real story … to understand that Felix will benefit *all* children. It's going to benefit all children because training improves everybody. We'll be able to intervene earlier and more effectively. We forget to look at the long-term effects and goals. Many people are thinking about how much money is being spent for "those" kids instead of thinking about benefits for all kids. If professionals, business people, regular and special education, etc., got together, then we could identify one priority per year to work on and effect that.

The third thing I would do is work on getting principals and VPs to be responsible, and to get them the support they need to do the job, without interference from the top. I don't have a problem with most District DES's; it's the people above them. Accountability is an important issue. How do we reward people? Administrators are not bad people; they just lack management skills.

The fourth thing is training. Training has to do with policies. When I was most active, the BOE had a policy that we hire within. This is a plantation mentality – a system with built-in mediocrity that defeats access. This limits diversity. When I first came here, we had a double standard. If you lived in Mānoa or Kaimuki, or if you were military, you went to Roosevelt (or to Iolani and Punahou). Roosevelt was the elite school. If you were from the plantation, you went to McKinley. We still have hangovers of plantation mentality in government and how we do business. These major issues need to be confronted, must be changed, or we'll never work as effectively as we can. The immigrant population has added value to Hawai'i. We are more diverse than elsewhere. As citizens of Hawai'i, because of our experiences, we've allowed old policies and practices to continue to interfere.

Finally, the move in *Felix* to establish local planning groups really must be supported to enable participation. This will be difficult to obtain participation at this level because people are not used to it. They're not going to run the show, but these local planning groups are vehicles for power into local communities.

The University of Hawai'i's Role

McDougall: What can UH contribute? What do teachers in training need?
Ivalee: They need strong training in motivation and methodology. They also need to understand the bureaucratic system that they work in… how to work with parents… their role as trainers and in providing technical assistance. Make sure that we have these people in the schools before their fourth year [last year of undergraduate program]. Have them go into classrooms as teachers' aides both in regular and special education in their first or second year of college, so they can figure out if this is what they really want.

The way we place kids [with disabilities in schools] is a disaster because we don't have programs. We have placements, not programs. UH should collaborate with DOE, and I know collaboration is difficult, to create and develop programs for kids … use forums or task forces that coalesce people with the goal of program development. I don't know that people in the administrative training programs get any coursework in special education. I've been out of touch for awhile, so I don't know if it's still the same, but the [administrative] cadre program was the same people training the same people – another example of the closed internal system. If I had my way, everyone would have to do "ghost training" and walk in

the shoes of a family for a few months … Get to the unions; the contract measures the wrong things. It's not size of class that matters. It's how we set up and support programs, teachers, and students … Classroom management is a huge problem, mostly because of the fact that we use placement decisions; for example, placing 12 multi-category kids in the same class …

Editor's Concluding Notes

Three final issues merit mention here. First, when asked to identify individuals who "stood out" over the years as helpful in efforts to improve services for children with disabilities, Ivalee named many people, including DOE administrators and educators, professors from UH and elsewhere, judges, other professionals, the families and children and especially her mentor, Barbara Bateman. Second, Ivalee identified additional important issues, which have affected the provision of services in Hawai'i, including:

- The appointment of monitors to oversee progress and outcomes of litigation.

- The tendency in our State to overlook or misinterpret portions of regulations, such as those which require individual determinations of whether a child requires summer school or extended year services.

- The movement away from large centers toward local schools and communities.

- How the State changed without public hearings the terminology in State regulations from phrasing that specified "maximum" benefits for children with disabilities, to phrases that specified benefits that could be expected to confer "reasonable" benefits for children with disabilities.

- Office of Civil Rights investigations that concluded that school classrooms were not accessible for students with disabilities.
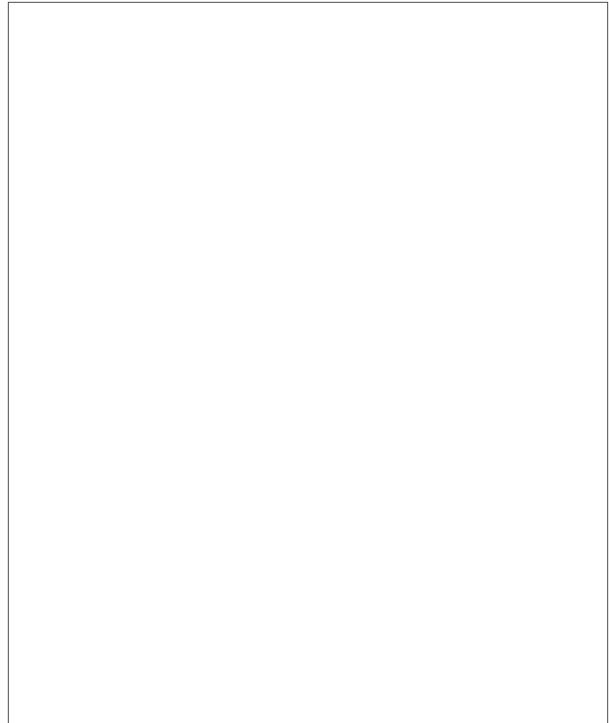
Ivalee Sinclair

Ivalee concluded that these investigations, cases, and outcomes communicated a message that some, but not all, people, have comprehended. That is, classrooms and systems must change to fit the child; not the child changing to fit the existing classrooms and systems.

A house painter arrived at the Sinclair home during the interview. While Ivalee was away from the table, the painter made a point of communicating to the interviewer, his appreciation for what Ivalee, personally, had done for him and his family in their efforts to obtain services for a family member. He concluded by saying, "Ivalee has saved many children and families."

Abstract

Recently, the largest professional organization for special educators in the United States, the Council for Exceptional Children (CEC), initiated a nationwide survey of special education teaching conditions. This comprehensive initiative seeks to examine factors, such as recruitment, retention, attrition, and working conditions, which contribute to chronic shortages of special educators throughout the country. In response to CEC's request for input, the Hawai'i Federation of CEC conducted a survey of special education teachers, on Oahu, in the spring of 1998. This article summarizes results of the Hawai'i survey, identifies areas of concern to special education teachers, and provides recommendations for improving special educators' working conditions.

Working Conditions of Special Educators in Hawai'i

**Working Conditions of
Special Educators
in Hawai'i**

**Serena Shimabukuro,
Patricia Edelen-Smith
and Amelia Jenkins**

Demand for certified special education teachers has increased nationwide due to three major trends. First, the number of special education graduates from teacher education programs has decreased. Second, many teachers have exited the field of special education in favor of general education teaching positions and other jobs. Third, the overall population of youth who require special education services has increased. Studies have reported up to 37% reductions in the number of special education teacher graduates from previous years. In addition, teacher attrition in some locales exceeds 30% annually. Moreover, attrition is generally higher among special educators than general educators. Finally, the number of students and youth who receive special education has increased, in some instances, by more than 4% in one year (Boe, Bobbit, & Cook, 1997; Cooley & Yovanoff, 1996; Cross & Billingsley, 1994; National Center for Education Statistics, 1991; U.S. Department of Education, 1995).

Research studies suggest that a number of variables explain why graduates of special education teacher training programs do not assume special education teaching positions, and why those that do tend to leave the field after relatively short periods of time. Numerous studies identify four work-related variables as major deterrents to teaching in special education. These deterrents include excessive paperwork, high caseloads, too many meetings, and excessive job stress (Billingsley, 1993; McManus & Kauffman, 1991; Miller, Brownell, & Smith, 1999; Schnorr, 1995). Studies, which investigated attitudes of special education teachers toward principals and other administrators, reveal that special education teachers are concerned about principals' lack of understanding about what teachers do, limited administrative assistance with problems, administrative reluctance to involve teachers in programmatic decisions, a sense of being managed from a distance, and lack of feedback and recognition from supervisors (Billingsley, Pyecha, Smith-Davis, Murray, & Hendricks, 1995; Cross & Billingsley, 1994; Gersten, Gillman, Morvant, & Billingsley, 1995; McManus & Kauffman, 1991).

In 1998, the CEC initiated a comprehensive investigation of special educators' working conditions because of chronic national shortages, poor retention, and high attrition of special education teachers throughout the United States.

In response to this national initiative, the Hawai'i Federation of CEC conducted a survey of special education teachers, on Oahu, in the spring of 1998. The purposes of this survey were: (a) to identify variables specific to the State of Hawai'i related to recruitment, retention, and attrition, and (b) to contribute to the national database that addresses relations between working conditions, recruitment, retention and attrition in special education. The authors hope that policy makers will utilize data from the national database to implement policies that will address these challenging issues at local, state, and national levels.

Method

The authors used a convenience sample of special education teachers who responded in writing to a printed survey about working conditions of special educators in Hawai'i. We delivered the survey to special education teachers at elementary and secondary schools on Oahu. Most of the teachers had formal or informal connections to our special education teaching programs, in the Department of Special Education, at the University of Hawai'i. We assured teachers that their identities would remain anonymous and that information would remain confidential (i.e., that personal identities would not be linked to survey responses).

Respondents

One hundred thirty-six special educators on Oahu responded to the survey. Over four-fifths (n = 112) of the teachers who responded were females. Most respondents spent their entire teaching careers in special education. Their teaching experience ranged form one year to over 20 years. About one-third of the respondents taught for less than four years; one-fourth of them taught special education students for over 19 years. Over 60% of the respondents possessed post-BA certificates or Master's level degrees; 83 percent were certified in special education.

Respondents included nearly equivalent numbers of special education teachers from elementary (Pre-K to 6 grades) and secondary (7 to 12 grades) schools. Although many respondents worked with students across disability categories, 70 percent worked with students with mild to moderate disabilities. Interestingly, 70 percent of the respondents also indicated that they taught in self-contained placements.

Survey Instrument

Although the survey instrument included demographic and other items, we will limit our description in this article to the two most informative sections of the survey. The first section included 20 items that listed commonly cited problems from the literature on special education working conditions. Respondents used a 5-point Likert rating scale to indicate their perception of the seriousness of each condition or problem, ranging from 5 for *serious problem*, to 1 for *not a problem*.

The 20 survey items represented problematic issues that the national CEC organization identified, including: (a) perceived status of special education; (b) nature of the students and their disabilities; (c) time required for related paper work, instruction, and noninstructional activities; (d) caseload, class sizes, resources, and facilities; (e) working relationships with general education colleagues, paraprofessionals, administrators, parents, and interagency personnel; and (f) preparation, training, and professional growth opportunities. In the second section of the survey, respondents wrote open-ended, narrative comments to document their concerns about working conditions in the field of special education.

Table 1
Teacher Ratings of Problematic Working Conditions in Order of Seriousness

	Condition	Mean	SD
1.	Too much paperwork.	4.39	.96
2.	Too many regulations and guidelines.	4.16	1.13
3.	Requires too much noninstructional time; too many meetings, workshops, conferences.	3.91	1.26
4.	Caseload is too large.	3.75	1.27
5.	Behavior problems of students.	3.70	1.25
6.	Lack of funds for materials, resources.	3.63	1.28
7.	Lack of adequate facilities.	3.63	1.31
8.	Low status of special education.	3.56	1.29
9.	Class size is too large.	3.55	1.33
10.	Coordination of interagency/related services and personnel.	3.51	1.22
11.	Lack of interagency/related services and support.	3.28	1.26
12.	Lack of district level support.	3.21	1.24
13.	Lack of professional growth opportunities.	3.12	2.07
14.	Lack of school level administrative support.	3.02	1.36
15.	Disability of students.	2.94	1.33
16.	Conflicts with general educators.	2.89	1.27
17.	Lack of preparation or training.	2.69	1.33
18.	Lack of educational aide/ paraprofessional support.	2.68	1.32
19.	Conflicts with parents.	2.39	1.17
20.	Conflicts with educational aide paraprofessional.	2.03	1.23

Data Analysis

We used simple descriptive statistics (i.e., item means and standard deviations) to quantify responses to the 20 survey items. In addition, we conducted content analysis of respondents' narrative comments to identify major themes that characterized respondents' concerns about their own working conditions.

Results

Likert-Scale Ratings of the Seriousness of Problematic Working Conditions

Table 1 presents means and standard deviations for each of the 20 survey items. The five most serious problematic working conditions, as indicated by respondents who used the 5-point Likert scale with ratings of 5 representing *serious problem* through ratings of 1 representing *not a problem*, are listed here, and in Table 1, in order of magnitude with corresponding item means: (a) *too much paperwork*, $\underline{M}$ = 4.39; (b) *too many regulations and guidelines*, $\underline{M}$ = 4.16; (c) *too much noninstructional time*, $\underline{M}$ = 3.91; (d) *large caseload*, $\underline{M}$ = 3.75; and (e) *students' behavior problems*, $\underline{M}$ = 3.70. The two working conditions that respondents indicated were least problematic included: (a) *conflicts with educational aides or paraprofessionals*, $\underline{M}$ = 3.75; and (b) *conflicts with parents*, $\underline{M}$ = 2.39. Notably, the two smallest standard deviations among the 20 survey items were obtained for *too much paperwork* ($\underline{SD}$ = 0.96) and *too many regulations and guidelines*, ($\underline{SD}$ = 1.13). Thus, respondents *consistently agreed* that these two items were the most serious of the problematic working conditions. Similarly, respondents *consistently agreed* on the two least problematic working conditions, as evidenced by the SD values obtained for: (a) *conflicts with educational aides or paraprofessionals* ($\underline{SD}$ = 1.23; the fifth smallest SD among the 20 survey items); and (b) *conflicts with parents* ($\underline{SD}$ = 1.17; the third smallest SD among the 20 survey items).

Narrative Comments

We identified seven major themes through analysis of respondents' narrative comments. In order of most frequent to least frequent appearance, these themes included respondent concerns about: (a) the Individuals with Dis-

abilities Education Act (IDEA), state regulations and guidelines related to IDEA, paperwork, meetings, and teaching responsibilities; (b) student issues and instructional concerns; (c) training, certification, and qualifications for special educators; (d) mental health issues; (e) support and availability of resources; (f) economic issues, pay, and compensation; and (g) low status of special education.

Respondents mentioned frequently that IDEA revisions caused increased paperwork and responsibilities. Most respondents indicated that federal law and state guidelines require teachers to spend excessive time on paperwork, IEPs, meetings, and noninstructional tasks. Many respondents indicated that guidelines and procedures continue to be unclear and ill-conceived, particularly as they exist in Hawai'i. One teacher suggested that the people who actually do the paperwork should be responsible for designing the forms.

An overwhelming number of written comments reflected teachers' alarm and dismay at sacrificing instructional time to comply with required paperwork. Correspondingly, many respondents indicated that students do not receive proper services because special educators are too busy completing paperwork, general educators don't want students with disabilities in their classes, and counselors and related service providers fail to provide appropriate services. Several teachers indicated that it is nearly impossible to serve students with mixed and diverse disabilities in the same class, and a few teachers wrote that cross-categorical classes do not benefit students. One teacher proposed 'push-in' rather than 'pull-out' services to support students in inclusive settings.

Many respondents considered inservice training for special educators to be inadequate and cited the need for more and better training. They felt that some of their peers are ill-equipped to teach in special education classes and noted that special education teachers must be more qualified and receive more training than their general education counterparts.

Many teachers expressed frustrations with securing mental health services for their students. In some cases, school counselors did not serve students with disabilities, and referrals to mental health agencies did not result in service provision, either due to agency backlog or systemic problems. One teacher emphasized the need for adequate residential facilities, and another proposed that
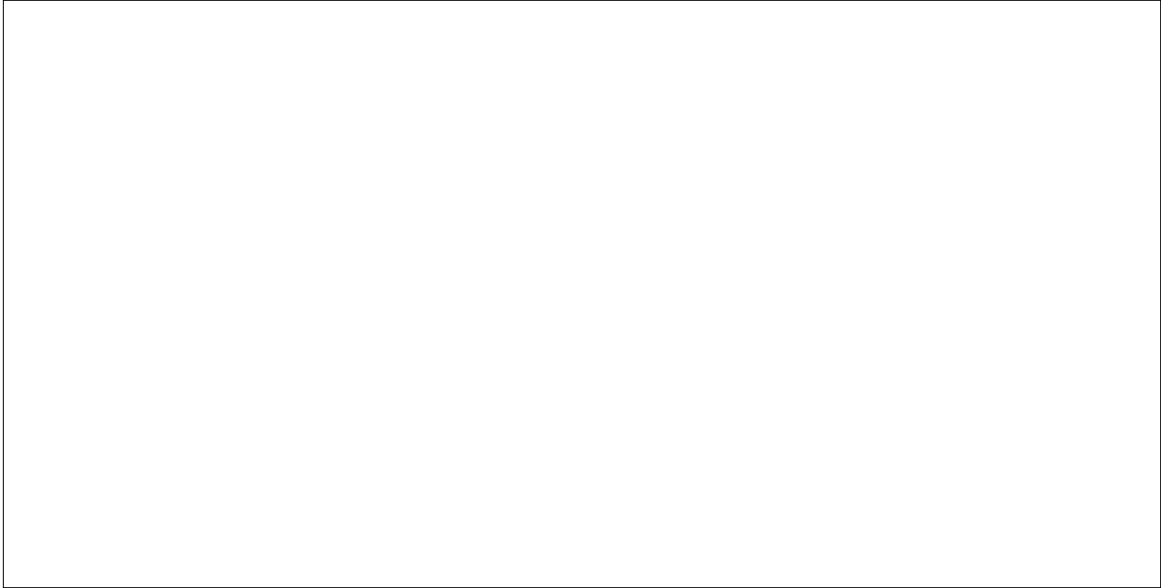
Zachary and Ms **Kubo** *counting the days in the calendar*
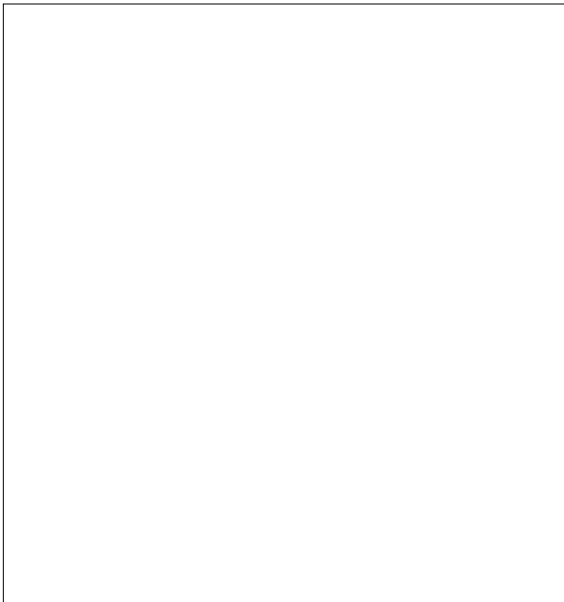
Educational Assistant **Beverly Chaves** *and students* **Joann** *and* **Leanna**
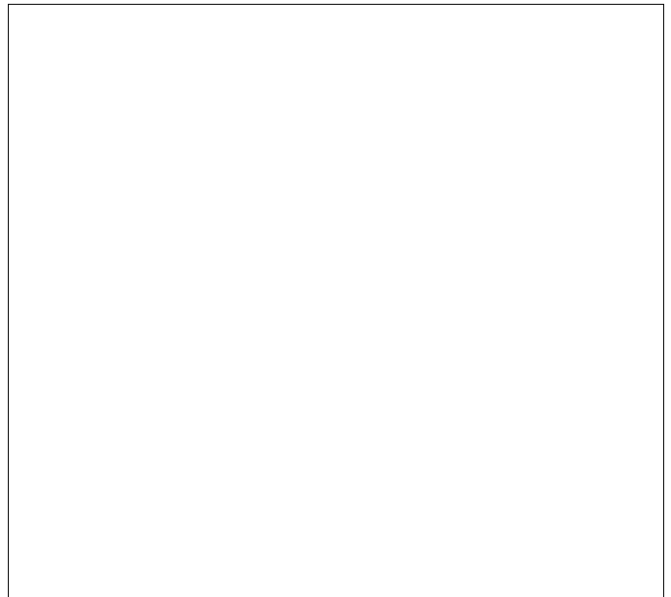
Student teacher **Marie Kubo** *and Pre-K children*
at Kailua Elementary School on Oahu

each school should have a school psychologist. One respondent expressed frustration with having to fight for services that students needed.

Many respondents indicated they were frustrated with lack of support from school administrators, district personnel, and state personnel. Several teachers expressed frustration with interdepartmental and intradepartmental problems and ill feelings among their general education peers. Some participants expressed a need for parental support and cooperation; others suggested that the teachers' union and State Board of Education have addressed inadequately special educators' concerns.

Several respondents believed that special educators are compensated insufficiently, especially for additional responsibilities that require non-school time and for out-of-pocket expenses. A few respondents noted that teacher salaries in Hawaiʻi compare unfavorably with teacher salaries in other states. One teacher noted the flight of special educators into general education programs and recommended a pay differential of $5000 to lure qualified, certified teachers into the field.

A final area of concern for many respondents was the perceived low status of special education. Some respondents opined that our society and schools treat students with special needs as "throw away" children. A few teachers commented that special education is perceived to be "easy" and that this perception lowers teachers' and students' expectations. They indicated that the low status attributed to special education by school administrators and general educators prevents students with disabilities from enjoying more inclusive or integrated opportunities in schools. Another teacher discussed the low morale of many special educators who feel they are not valued and who consider themselves to be just as alienated from the system as are their students.

Discussion

The findings of this survey suggest that several important working conditions merit corrective action in order to improve working conditions for special education teachers on Oahu. Three of the four top concerns expressed by special education respondents in this survey matched concerns identified frequently in other state and national studies of working conditions in special education. These major "matching" concerns included excessive paperwork, large caseloads, and inadequate time to instruct due to noninstructional duties and meetings.

Research on how special education teachers perceive their working conditions provides valuable information. This information facilitates identification of specific working conditions that stress teachers and contribute to burnout and attrition. Identification of these working conditions constitutes an important part of the State's effort to initiate systemic recruitment and retention plans, stem the tide of attrition, and close the gap between supply and demand. Such research also provides information helpful in designing preservice and inservice teacher training programs that prepare teachers to cope with professional demands in special education. Indeed, Hawaiʻi has implemented a series of initiatives and actions to (a) increase the supply of newly certified special educators, (b) promote retention of current special educators, (c) alter attrition and "teacher flight" from special education, and (d) improve working conditions in special education. These initiatives are described in multiple documents including the DOE's recruitment and retention plan (Hawaiʻi DOE, 1997), plans constructed by a joint DOE-UH task force (Author, 1997), and the Felix Action Plan (Hawaiʻi DOE, 1999).

The current survey, as well as many other surveys, identified various types of problematic working conditions. Classroom teachers and administrators can exert direct control over *alterable* conditions, but cannot exert direct control over fixed conditions or *givens*. For example, IDEA requirements are intended to ensure appropriate services for students with disabilities; all students who qualify for special education services must have a written Individualized Education Plan (IEP). These are *givens*. However, procedures that states and local school districts adopt to comply with federal law are sometimes implemented inefficiently. These procedures constitute one important *alterable* condition. A comprehensive study of the management and accountability of the Hawaiʻi DOE confirmed that: (a) the referral-to-service provision process for special education is cumbersome and overburdened by bureaucratic paperwork; (b) such procedures reduce contact time that teachers and related service providers, such as counselors, would otherwise invest in providing direct services to their students; and (c) this state of affairs exacerbates job stress (Schrag, Barber, Barber, McDougall, & Abang, 1998).

Results of the current survey should be interpreted with caution because of limitations inherent in the convenience sampling method used in this study. It is likely that the respondents, as a group, possessed more years of teaching experience and greater levels of special education teacher certification than the overall population of special education teachers, on Oahu, and throughout the State. For example, 83% of the respondents in this study indicated that they were certified to teach special education. However, a study that employed stratified random sampling of special education teachers one year prior to our study, as well as a follow-up study one year later, indicated that only about one-half of the individuals employed as special education teachers in Hawai'i were fully certified to teach special education; the remaining individuals were in the process of seeking certification, or enrolled in emergency certification programs, or probationary teachers, or certified in general education but teaching out-of-field (Schrag & McDougall, 1997). Consequently, teachers without full certification to teach special education, as well as teachers with fewer years of experience, were underrepresented among the respondent group in our study. Nonetheless, the results of our study mirror, for the most part, results obtained in the aforementioned studies of special educators' working conditions in the State of Hawai'i.

By identifying alterable conditions, educators and employers can develop, prioritize, and implement viable strategies to alter changeable working conditions and improve teachers' job satisfaction. The working conditions that respondents identified as problematic in the current study are consistent with conditions identified in the research literature. The magnitude of these work-related issues suggests that many parties – state departments of education, state and local school boards, legislators, universities, parents, local communities, unions and professional organizations, general and special education teachers, and related service personnel – will have to serve collaboratively as change agents to improve working conditions in special education, in Hawai'i, and throughout the nation.

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Abstract

This study utilized a multiple-baseline across subjects research design to investigate the effects of a multi-component intervention on on-task behavior and academic performance of three elementary students with Attention Deficit Hyperactivity Disorder (ADHD). Intervention components included the Attention Training System (ATS) and self-graphing. Results indicated that on-task behavior and academic performance for each student improved substantially from baseline to intervention phases when students utilized ATS and self-graphing.

Effects of Visually Cued Response Cost and Self-Graphing on On-Task Behavior and Academic Accuracy of Students with Attention Deficit Hyperactivity Disorder

Many students with attention deficit hyperactivity disorder (ADHD) fail to produce the quantity and quality of academic work expected for their grade level (Kotkin, 1995). These students demonstrate hyperactivity, impulsivity, and low thresholds for boredom – factors that impede students' on-task behavior and academic performance. Academic difficulties of students with ADHD are usually a function of inattention, hyperactivity, and noncompliance (Barkley, 1990). These students often lack appropriate social skills, too. Peers view children with ADHD as significantly more aggressive, disruptive, annoying, and domineering than "normal" (Johnston, Pelham, & Murphy, 1985). Fortunately, effective treatments are available to assist students with ADHD in improving academic and social outcomes. These treatments include psychostimulant medications, instructional strategies and environmental modifications, behavior management, and multimodal treatments that combine the aforementioned treatments.

Psychostimulant Medications

Medications have been and continue to be one of the most common treatments for children with ADHD. Three common psychostimulant medications for ADHD are methylphenidate (also known as Ritalin), dextroamphetamine (also known as Dexedrine), and magnesium pemoline (also known as Cylert). Methylphenidate (MPH) is the most frequently used of these medications. About 90% of children who receive medication for ADHD take MPH at some point in their life. Rapport, Denney, DuPaul, and Gardner (1994) found that MPH alleviated the typical behavioral problems of up to 94% of a group of students with ADHD; 53% of the group demonstrated academic gains when they received MPH. Students not helped by one medication may improve their attention span, impulsivity, hyperactivity, or academic functioning with a different medication.

Many clinicians, teachers, and parents provide strong testimonials or anecdotal reports about the beneficial effects of these medications. However, behavioral changes typically are short-lived and persist only as long as the drug regimen continues. Moreover, some students experience unpleasant effects of medication such as tics, insomnia, and loss of appetite. Less common symptoms include nervousness, irritability, headaches, and upset stomach (Barkley, McMurray, Edelbrock, & Robbins, 1990). Thus, educators, clinicians, and parents should not consider use of medications to be a panacea for chronic ADHD. Research-supported non-pharmacological interventions such as instructional strategies, environmental modifications, and behavior management should be implemented, too.

Instructional Strategies and Environmental Modifications

Numerous studies have demonstrated the efficacy of instructional strategies and environmental modifications in improving outcomes of students with ADHD (e.g., see Gardill, Dupaul, & Kyle, 1996, for a review). Such treatments are designed to assist students with organizational and attention problems, or seek to minimize visual and auditory distracters, by modifying materials, instructional delivery, or classroom structure. Treatments that have improved on-task behavior include: (a) varying task pre-

sentations and materials through color coding of work and visual displays (Zentall & Dwyer, 1989); (b) interspersing active academic tasks with passive tasks so the amount of work seems manageable (Zentall & Meyer, 1987); (c) peer tutoring (King-Sears & Bradley, 1995); (d) using circular seating arrangements instead of rows and columns or clusters (Rosenfield, Lambert, and Black (1985); and (e) using the T-G-I-F model (teacher-directed instruction, guided practice instruction, independent practice activities, and final measurement) to help teachers focus on effective instructional strategies that improve student performance (Kemp, Fister, & McLaughlin, 1995).

Behavior Management

Behavior management interventions that have improved on-task behavior and academic performance of students with ADHD include manipulations of consequences and cognitive-behavioral interventions (Gardill, Dupaul, & Kyle, 1996). Effective consequence-based interventions have utilized reprimands (Abramowitz, O'Leary, & Rosen, 1987), token reinforcement systems (Ayllon, Layman, & Kandel, 1975), response cost (Rapport, Murphy, & Bailey, 1980, 1982), and home-based contingencies (DuPaul & Stoner, 1994). Although, consequence-based interventions have proven successful, research indicates that combining antecedent-based and consequence-based interventions increases classroom progress (Barkley, 1990; Maag & Reid, 1994). In addition, primary studies and systematic reviews of the literature indicate that cognitive-behavioral interventions, including self-management, improve academic and social outcomes, transfer responsibility for behavior management from teachers to students, and increase students' self-determination (McDougall, 1998).

Response cost systems. Behavioral interventions that employ response cost are among the most effective behavioral strategies used to treat children with ADHD (Barkley, 1990; Rapport, 1992). Rapport, Murphy, and Bailey (1980, 1982) compared response cost strategies to MPH in a within-subject comparison study and found that the two interventions were equally effective in improving children's attention and academic performance. Salend and Tindle (1988) also demonstrated that response cost systems improved students' on-task behavior and academic performance. Investigators sometimes combine response cost with token reinforcement whereby students earn reinforcers contingent upon demonstrating desired target behaviors, and students lose or fail to earn reinforcers contingent upon demonstrating inappropriate behaviors or insufficient levels of the desired target behaviors (Kazdin & Bootzin, 1972). The intent is to increase desirable behaviors and decrease undesirable behaviors. Response cost can suppress undesirable behaviors without the producing aversive side effects sometimes accompany punishment techniques (Kazdin, 1972).

Researchers have used a machine-mediated, visually cued response cost system called the "Attention Training System" (ATS) or "Mr. Attention" to improve on-task behavior for students with ADHD (DuPaul, Guevremont, & Barkley, 1992; Evans, Ferre, Ford, & Green, 1995; Rapport, Murphy, & Bailey, 1980, 1982). Teachers can use ATS by first explaining to students how they can earn reinforcers with ATS if they remain on-task during a prescribed work period. Then the teacher places the ATS device within view of a student and activates the ATS at the beginning of the work period. When activated, the ATS displays the number "0". Then it displays counting numbers (i.e., 1, 2, 3...) on a 1-minute fixed-interval schedule. Each time the teacher observes that a student fails to remain on-task according to pre-determined criteria, the teacher signals the ATS via a hand-held remote control. The signal causes the ATS to display a silent red-light signal and to reduce by one the numeral on the ATS display. This reduction can be tied to a systematic response cost consequence (e.g., the student loses one minute of free time). If the student remains continuously on-task, the ATS displays the maximum number of minutes the student earns for remaining on-task.

Self-graphing. Research has demonstrated that students with ADHD can sometimes apply cognitive-behavioral modification (CBM) or behavioral self-management strategies (BSM), such as self-monitoring and self-graphing, to increase on-task behavior and academic performance (Christie, Hiss, & Lozanoff, 1984; Mathes & Bender, 1997). Researchers have recommended use of BSM strategies to increase the active involvement in the learning process among students with attention problems (Harris, Graham, Reid, McElroy, & Hamby, 1994). Although researchers have investigated extensively the effects of self-monitoring on on-task behavior (Prater, Joy, Chilman, Temple, & Miller, 1991) and academic performance (Hogan & Prater, 1983), reviews of the literature indicate that self-graphing is underutilized as a BSM intervention for stu-

dents with disabilities (McDougall, 1998).

Self-graphing interventions usually require students to graph their performance in the form of bar graphs or line graphs to assist students in monitoring their own performance. Graphs, as a public display of one's progress toward a goal, can be a powerful motivational tool for children (Graham, Harris, & Reid, 1993). In addition, graphing provides effective visual feedback to students and predicts the direction of subsequent performance. Moreover, graphing is a skill required in mathematics curricula. Some studies suggest that initial improvements in on-task behavior produced by self-monitoring are enhanced or maintained at high levels when students self-graph their performance (DiGangi, Maag, and Rutherford, 1991; McDougall & Brady, 1998). Use of graphs may motivate students to set goals and strive to surpass their previous performance levels (Carr & Punzo, 1993).

Multiple Component Interventions

Numerous studies have demonstrated the efficacy of multimodal treatments for students with ADHD, including those that combine medications and behavioral interventions (Abramowitz, Eckstrand, O'Leary, & Dulcan, 1992; Pelhem, Schnedler, Bologna, & Conteras, 1980). In a longitudinal study, Satterfield, Satterfield, and Schell (1987) observed significant reductions in teenage delinquency among boys with hyperactivity who received multimodal treatment when compared to boys with hyperactivity who received only psychopharmacological treatment. Given the limitations of medications (i.e., unpleasant side effects and loss of treatment gains when medication is terminated), many students with ADHD require concurrent behavioral interventions. In the current study, we sought to extend the research base on effective interventions for students with ADHD by combining ATS with self-graphing, and targeting on-task behavior and accuracy of math performance.

We investigated three research questions. First, to what extent does a multi-component intervention consisting of visually cued response cost and self-graphing increase on-task behavior and accuracy of math performance of students with ADHD? Second, to what extent are increases in on-task behavior and accuracy of math performance maintained after withdrawing intervention components? Third, to what extent are increases in on-task behavior relatively greater or less than increases in accuracy of math performance?

Method

Participants and Setting

Three elementary-aged males with ADHD participated in this study. Each student met the following selection criteria: (a) nomination by current teacher as having the lowest rates of on-task behavior compared to classmates; (b) medical or clinical diagnosis of ADHD by a licensed clinical child psychiatrist or a licensed clinical psychologist based on DSM-IV criteria; (c) able to perform specified math tasks presented during academic instruction and independent practice; and (d) history of demonstrating non-attending behaviors during academic periods. The first student, Moku, was a nine-year old fourth-grader diagnosed as having ADHD and Oppositional Defiant Disorder; he received Dexedrine Spansules once daily throughout the study. The second student, Ka'ima, was an eight-year old third-grader diagnosed with ADHD; he took Ritalin twice daily during the study. The third student, 'Olu, was a 12-year old fifth-grader; he took no medications during this study. Each participant attended a private school that specialized in providing therapeutic educational services for children with learning disorders and ADHD. Each participant attended a self-contained classroom with a total of 13 students who ranged from third to sixth grade. We conducted this study during the independent practice portion of daily math classes.

Materials

We used the following materials during the study:

Attention Training System (ATS) or "Mr. Attention". Each student used the ATS, as described previously in the response cost section of the literature review, during intervention phases of this study.

Self-graphing forms. Each student used a simple graph to record the number of minutes they earned (by staying on-task) during their daily, 20-minute, independent math sessions.

Math problems. Math problems for each subject included calculation problems (addition, subtraction, division, and multiplication) from worksheets and from texts. The classroom teacher selected specific problems for each student based on goals and objectives written in each student's Individualized Education Program (IEP).

Reinforcers. Reinforcers included tokens in the form of points which were exchanged daily for "free time" activities before recess or lunch. Students also saved and used these points to earn weekly free time activities on Friday afternoons. Free time activities included use of the classroom computer, origami, and personal time.

Dependent Variables

Primary dependent variable. The primary dependent variable, on-task behavior, was defined using inclusion and exclusion criteria. Inclusion criteria included: (a) contacting worksheet with pencil, (b) focusing eyes on worksheet, (c) using fingers or objects to count, (d) counting quietly to oneself, (e) looking at the ATS for less than 2 seconds, (f) receiving academic assistance from the teacher, (g) looking at the math board for assignment problems or examples, and (h) asking questions related directly to the assigned task.

Exclusion criteria included: (a) walking around the classroom, (b) talking to others or to self out loud, (c) singing, (d) repeated touching the ATS or handling objects unrelated to the math task, (e) laughing, (f) yelling, (g) throwing paper or other objects, (h) playing with objects in a manner unrelated to the task, and (i) staring into space. Behavior was recorded as off-task if a subject demonstrated one or more behaviors listed as exclusion criteria. Conversely, behavior was recorded as on-task if subjects demonstrated at least one of the behaviors listed as inclusion criteria.

The first author used a whole-interval observational recording system, observational recording sheets, and a timer to observe and record each subjects' behavior as on- or off-task. Each subject was observed for twenty 10-second intervals, during each 20-minute session, throughout the study.

Secondary dependent variable. The secondary dependent variable, academic accuracy, was operationally defined as the percentage of attempted math problems for which subjects wrote correct responses. Daily measures for academic accuracy were calculated by counting the number of math problems completed correctly, then dividing by the number of problems attempted, then multiplying by 100%.

Independent Variable

The independent variable was a multiple component treatment package which consisted of visually cued response cost plus self-graphing. The visually cued response cost component consisted of ATS and the token reinforcers described previously. Self-graphing consisted of students writing the number of minutes they earned during math sessions, as indicated by the digital readout on the ATS display, on individual graphs that were posted on the classroom wall.

Research Design

This study used a multiple baseline across subjects research design, a dismantling strategy in which intervention components were withdrawn one at a time, and a maintenance phase (Kazdin, 1982).

Procedures

Soon collected data on on-task behavior and accuracy of math performance for the three students during baseline, intervention, and maintenance sessions. During baseline sessions, the teacher directed students to complete their math problems during the 20-minute, independent practice portion of daily math periods; the teacher provided minimal assistance to students at such times. Prior to the first session of initial intervention, the teacher described to students the use of the ATS device and encouraged them to achieve the highest possible score of 20 on the ATS display. The teacher informed students that they would earn free time in the amount of one-half of the number shown on the ATS display at the conclusion of their independent practice math period. Thus, if a student earned a score of 20 on the ATS, the student earned 10 minutes of free time activity. During the second intervention phase, the self-graphing component was withdrawn but the students continued to use the ATS. In the maintenance phase, we withdrew ATS and conducted probes to determine treatment gains would be maintained.

Table 1
Percentage of On-Task Behavior across Phases

		Baseline	ATS & Self-graphing	ATS Only	Maintenance
Moku					
	Mean	6.3	98.3	97.8	83.1
	SD	21.7	2.4	3.4	8.6
	Range	45-70	95-100	90-100	65-95
Ka'imi					
	Mean	85.0	97.7	100	91.1
	SD	11.9	3.9	0	7.4
	Range	65-100	90-100	-	75-100
'Olu					
	Mean	78.8	96.4	98.8	90.0
	SD	8.6	3.5	2.2	5.5
	Range	65-95	90-100	95-100	75-95

Table 2
Percentage of Math Problems Completed Accurately Across Phases

		Baseline	ATS & Self-graphing	ATS Only	Maintenance
Moku					
	Mean	58.0	80.2	83.2	68.8
	SD	19.1	10.8	7.9	24.4
	Range	31-81	63-100	73-94	17-92
Ka'imi					
	Mean	74.2	84.0	96.0	90.6
	SD	10.5	15.1	0.8	10.7
	Range	59-88	48-98	95-97	63-100
'Olu					
	Mean	69.3	85.6	92.5	84.2
	SD	15.5	15.7	4.8	11.8
	Range	36-94	50-100	87-100	58-100

Instruction of ATS and Self-Graphing

When introducing the ATS and self-graphing procedures to students, Soon: (a) explained the importance of being continuously engaged and minimizing off-task behaviors during independent work; (b) contrasted the unpleasant consequences of incomplete and inaccurate work with the pleasant consequences of complete and accurate work; (c) described examples of on-task behaviors and off-task behaviors; (d) asked students to name some on-task behaviors and off-task behaviors; (e) asked students to explain what would happen if they were off-task, for two or more consecutive seconds, during the 20-minute independent work period; and (f) verified that students could graph data.

Interobserver Agreement

We used two methods to calculate interobserver (IO) agreement for on-task behavior. First, we used a traditional formula (Kazdin, 1982). Then we used Kappa (Cohen, 1965) to account for chance levels of agreement which inflated IO agreement when the traditional formula was used. The first author (primary observer) and a research assistant (secondary observer) collected IO agreement data during 8 of 35 (23%) sessions in which observations of on-task behavior were conducted. Traditional IO agreement was calculated by dividing the number of agreements on occurrences of on-task behavior by the number of agreements plus disagreements on occur-

rences of on-task behavior, then multiplying by 100%. IO agreement for on-task behavior was 100% for four of the eight sessions in which IO agreement data were collected. During sessions 5, 13, and 34, two disagreements occurred and resulted in 96.6% IO agreement (58/60). On session 44, three disagreements occurred and resulted in 95.0% IO agreement (57/60). Thus, traditional IO agreement for individual sessions ranged from 95% to 100% with an overall mean of 98.1% (471/480). Using the more conservative Kappa calculation, we obtained a value of .86 (86%).

Results

On-Task Behavior

Table 1 presents means, standard deviations, and ranges across phases for on-task behavior (i.e., the percentage of observations during which subjects demonstrated on-task behavior). Means for on-task behavior increased from baseline to the initial intervention phase for Moku (from 56.3% to 98.3%), Ka'ima (from 85.0% to 97.7%), and 'Olu (from 78.8% to 96.4%). These gains in on-task behavior were sustained when the self-graphing component was discontinued (i.e., when subjects used only ATS). During the maintenance phase when ATS was withdrawn, means for on-task behavior decreased to 83.1% for Moku, 91.1% for Ka'imi, and 90.0% for 'Olu, but remained above baseline means. Notably, each subject increased the consistency of their on-task behavior during the initial inter-

vention phase, as evidenced by marked reductions in standard deviations from baseline to the initial intervention phase.

Academic Accuracy

Table 2 presents means, standard deviations, and ranges across phases for academic accuracy (i.e., the percentage of attempted math problems for which subjects wrote correct responses). Mean accuracy increased from baseline to the initial intervention phase for Moku (from 58.0% to 80.2%), Ka'ima (from 74.2% to 84.0%), and 'Olu (from 69.3% to 85.6%). Mean accuracy for Moku (83.2%), Ka'ima (96.0%), and 'Olu (92.5%) continued to improve during the next phase when the self-graphing component was discontinued. During the maintenance phase, subjects' mean accuracy decreased to 68.8%% for Moku, 90.6% for Ka'imi, and 84.2% for 'Olu, but remained above baseline means. In addition, the consistency of students' academic accuracy increased during the ATS only phase, as evidenced by mark reductions in the standard deviations from the initial intervention to the ATS only phase. However, academic accuracy became much more variable during the maintenance phase for each student.

Discussion

Results of this study indicate that an intervention, which combined behavioral components (i.e., a visually cued response-cost system in the form of ATS and token reinforcement) and a BSM component (i.e., self-graphing), increased on-task behavior and academic accuracy of elementary students with ADHD, during independent math tasks. Effect size indices (ES) that we calculated suggest that this multi-component intervention produced relatively large increases in: (a) on-task behavior from baseline to intervention for Moku (ES = 1.94), Ka'imi (ES = 1.07), and 'Olu (ES = 2.05); and (b) academic accuracy from baseline to intervention for Moku (ES = 1.11), Ka'imi (ES = 0.93), and 'Olu (ES = 1.05). Patterns of student performance across the various phases of this study merit further discussion.

First, increases in on-task behavior and accuracy of math performance were strongest for all three students during the initial intervention phase when the students utilized all of the intervention components. These increases represented meaningful educational improve-

ments. For example, Moku's improvement in academic accuracy from the baseline phase (M = 58.0%) to the initial intervention phase (M = 80.2%) represented an improvement in letter grades for these math assignments from "F+" during baseline to "B-" during the initial intervention. Corresponding letter grades also improved for Ka'imi ("C" to "B") and 'Olu ("D+" to "B").

Students' on-task behavior and academic accuracy tended to improve, albeit slightly, when subjects no longer self-graphed but continued to use ATS. That is, on-task behavior increased slightly for two of three students (i.e., 2.3% for Ka'imi; 2.4% for 'Olu), and decreased very slightly for Moku (-0.5%). Academic accuracy increased slightly for each of the three students (3.2 % for Moku, 12.0% for Ka'imi, and 6.9% for 'Olu). Practically, these increases in academic accuracy represented an improvement of one letter grade for Ka'imi and Moku. Thus, students did not seem to require continued use of self-graphing, during the ATS-only phase, in order to maintain performance levels they achieved during the initial intervention phase.

Students' performance levels tended to decrease when ATS was removed during the last phase of this study. That is, means for on-task behavior decreased by 14.7% for Moku, 8.9% for Ka'imi, and 8.8% for 'Olu during the maintenance phase. Similarly, means for academic accuracy decreased by 14.4% for Moku, 5.4% for Ka'imi, and 8.3% for 'Olu. Although these decreases in academic accuracy represented, on average, a decline of one full letter grade from the prior phase, subjects' academic accuracy and on-task behavior remained well above baseline levels. These slight and consistent decreases in performance suggest that students with ADHD might require on-going behavioral structure to maintain performance. Future studies might examine effects of gradually withdrawing or fading behavioral components to determine if students with ADHD can maintain performance at intervention levels.

Our final research question examined the extent to which the multi-component intervention produced relatively similar or different improvements in student performance on two types of outcome measures – a more general measure of on-task behavior and a more specific measure of academic performance. A comparison of effect sizes for the two dependent variables targeted in the current study (see first paragraph of Discussion), sug-

gests that increases in on-task behavior were relatively greater than increases in academic accuracy for each of the three subjects. These results are consistent with prior research that suggests: (a) improvements in on-task behavior are usually associated with improvements in more specific academic performance indicators (e.g., written production of correct answers); and (b) although measures of on-task behavior and academic performance usually yield positive correlations, improvements in academic performance tend to be weaker than concurrent improvements in on-task behavior (McDougall, 1998).

In the current study, we used a relatively crude system to measure academic accuracy. In calculating the percentage of correctly completed math *problems*, we recorded answers to individual math *problems* as "correct" or "incorrect." A more precise measurement system could have calculated the percentage of correctly completed *digits* in the math problems. Thus, we advise future investigators to use more precise measurement systems that provide more accurate data upon which researchers can evaluate, more reliably, differential effects of interventions on multiple dependent variables, as well as relations between dependent variables, such as on-task behavior and more specific academic outcomes.

In conclusion, results of the current study extend the research base on the efficacy of ATS for students with ADHD. While prior studies tended to target behaviors for reduction (Evans, Ferre, Ford, & Green, 1995), we sought to increase target behaviors with functional academic outcomes. Finally, the current study and prior ATS studies were conducted in relatively segregated settings that included only students with disabilities. Future ATS studies could investigate the efficacy of ATS among students with disabilities in more integrated settings, such as inclusive regular education classrooms, and in the homes of these children and youth.

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Leanna and *Zachary* sliding at full speed ahead

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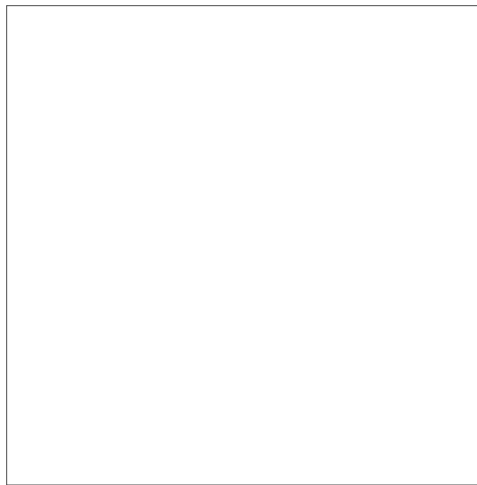
Abstract

This article describes three new programs designed to increase the number of qualified special education teacher candidates in Hawai'i. These programs, initiated via a memorandum of agreement between the Hawai'i Department of Education and the Special Education Department, in the College of Education, at the University of Hawai'i, include: (a) a modified Master's in Education Program, (b) a Post-Baccalaureate Program, and (c) a Dual-Certification Program in Special Education and Secondary General Education. Program descriptions include academic components, eligibility criteria, conditions of participation and completion, target populations for which each program is designed, and estimates of the number of graduates from each program.

Overcoming Shortages of Qualified Special Education Teachers via Development and Expansion of Teacher Education Programs

Overcoming Shortages of Qualified Special Education Teachers via Development and Expansion of Teacher Education Programs

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and
Quinn Avery

In response to evolving demands for qualified teachers over the last decade, the College of Education (COE), at the University of Hawai'i at Mānoa (UH), has developed and modified teacher education programs to meet state and national needs. For example, in 1991, the COE's Department of Special Education assisted the Hawai'i Department of Education (DOE) in developing the Alternative Basic Certification Program in Special Education (ABC-SE). This program represented a shift from a traditional preservice training model to a state or local education agency training model (Edelen-Smith & Sileo, 1996). To date, six cohorts have completed this program of study. The COE also revamped many of its teacher education programs, during the early-mid 1990s, by shifting to a field-intensive, cohort model. Most recently, the COE's Department of Special Education has dramatically expanded its teacher education programs to address massive in-State shortages of qualified special education teachers, while maintaining a focus on national standards and initiatives.

In the past year, UH has developed three new teacher education programs via support of a memorandum of agreement (MOA) between the DOE and the COE's Department of Special Education. The MOA specifies that the DOE will provide funds to COE; in turn, the COE will increase production of newly certified special education teachers via implementation of new programs and expansion of existing programs. The MOA will: (a) assist COE by providing critical resources and faculty to initiate new programs; (b) improve educational outcomes for K-12 students by increasing the number and percentage of qualified special education teachers that assume special education teaching positions in the public schools; (c) assist DOE in meeting goals specified in recruitment and retention plans (Hawai'i DOE, 1997); (d) help the State of Hawai'i to meet its obligations as specified in the <u>Felix vs. Cayetano</u> Consent Decree and the Felix Action Plan (1999).

The major purpose of this article is to describe three new programs supported via the aforementioned MOA. These programs include (a) a modified Master's in Education Program, (b) a Post-Baccalaureate Program, and (c) a Dual-Certification Program in Special Education and Secondary General Education. These new programs will increase the number of newly certified special education teachers beyond current levels in two previously established programs in the Department of Special Education – the Dual Certification Program in Elementary General Education and Special Education, and the Master's of Education Program in Special Education. The former program was piloted with one cohort (approximately 25 students), in 1994-1995, and will expand to three during 1999-2000. The latter program has met national standards and is accredited by the Council for Exceptional Children. The Special Education Department utilized this existing Master's Program as the foundation for developing three new programs. The existing Master's Program was modified to accommodate the specific needs of potential teacher education candidates for whom enrollment in prior programs might prove problematic.

The following sections describe specific features of each new program.

Table 1
Comparative Overview of New Special Education Programs at University of Hawai'i

Program	Components	Eligibility	Participant Conditions	Design
MAFT	42 hours 5 semesters (See table 2 for course sequence)	Grad. Admission GPA (≥ 3.0) BA, GRE, Vita Letter or rec.	5 yr. commitment internship/student teaching options Plan A or Plan B Paper	Partial tuition waiver Start date: Fall, '98 Orientation mtg. Conditional status Courses through Outreach After work courses Part-time employment
PB	30 hours 3 semesters (See Table 3 for course sequence)	Grad. Admission GPA (≥2.75) Eligibility for licensure BA in Education Praxis	3 yr. commitment internship/student teaching options	Full tuition waiver Start date: Fall '98 Orientation mtg. Conditional status Courses through Outreach Part or full time employment
Dual Certification Special Education & Secondary General Education	52 hours 4 semesters (See Table 4 for course sequence)	BA in content area GPA (≥2.75) Praxis	3 yr. commitment internship/student teaching options	Partial tuition waiver Start date: Spr '99 Courses through Outreach After work courses Part-time employment

Table 2
Course Sequence and Field Experiences for the Master's in Education Fast Track Program

Semester:	Fall 1998	Spring 1999	Summer '99	Fall '99	Spring 2000
Courses:	404 (Intro)	611 (Meths)	613 (Asses)	640 (Sem)	642 (Resrch)
	485 (Mngmt)	625 (Soc.S.)	621 (Lang.Arts)		
	461 (Meths)	603 (ABA)	635 (Early)		
	600 (Founds)		*or* 652 (Sec)		
	605 (Collab)	626a (Field)	626b (Field)	627 (Prac)	627 (Prac)
Hours:	15	12	12	9	3

Description of Special Programs

The UH Department of Special Education piloted three new programs in 1998. These programs included the: (a) Master's Fast-Track in Special Education (MAFT), (b) Post-Baccalaureate Program in Special Education (PB-SE), and (c) Dual Licensure in Special Education and Secondary General Education (DL-SES). The design of these special programs incorporated course offerings during "after work hours," the needs of candidates for part-time and full-time employment, financial incentives, student-teacher internship options, and a quickly paced, comprehensive sequence of coursework.

Table 1 provides an overview of these three programs. Program features reflect specific program outcomes and the differing needs of the various pools of teacher education candidates that the respective programs targeted.

Master's Fast Track (MAFT). This program supports individuals who wish to obtain national licensure and a master's degree in special education. Candidates acquire competencies through completion of a carefully crafted sequence of experiences that range from undergraduate foundations prerequisites to master's level coursework.

In addition, candidates are required to complete a Plan A (i.e., thesis) or Plan B (i.e., paper, project, or comprehensive exam).

Table 2 summarizes critical features of this five-semester program. Students can opt for student teaching or an internship to demonstrate competencies in the field. Students who accept financial incentives to support completion of the program are obligated to fulfill a contractual commitment to the DOE by serving as special education teachers, in the State of Hawai'i, for five years.

Development of this program required innovative planning, design flexibility, and coordination between the DOE, COE's Office of Student Services, COE's Department of Special Education, the UH's Outreach College. Student registration was established through the Outreach College, rather than the COE, in order to: (a) increase flexible use of program funds; (b) expedite financial assistance (e.g., tuition waivers); (b) streamline the registration process; and (d) permit scheduling of courses during after-work hours and throughout the summer.

Students' application were reviewed carefully to determine who met admission criteria, which qualifying included completion of a Bachelor's degree with a grade point average of at least 3.0 on a 4.0 scale. Some applicants who failed to meet the aforementioned criteria were granted conditional admission to the program if they demonstrated specific strengths (e.g., experience in special education or related fields) and commitment to spe-

Table 3
Course Sequence and Field Experiences for the Post Baccalaureate Program in Special Education

Semester:	Fall 1998	Spring 1999	Summer 1999
Courses:	404 (Intro)	461 (Meths-MM)	425 (Family)
	485 (Mngmt)	462 (Meths-Sev)	Elective
	400a (Field)	400b (Field)	491 (Student Tchg)
Hours:	9	9	12

Table 4
Course Sequence and Field Experiences for Dual Program in Secondary and Special Education

Semester:	Spring 1999	Summer 1999	Fall 1999	Spring 2000
Courses:	404 (Intro)	461 (Meths.MM)	462 (Meths.Sev)	[EDUC 406]
	487 (elec.)	485 (Mngmt)	400b (Field)	[EDUC 405]
	[EDUC 401]	425 (Family)	[EDUC 402]	
	[EDUC 402]	400a (Field)	[EDUC 403]	
			[EDUC 404]	
SpEd Hrs:	6	12	6	(15)
EDCU Hrs:	5	0	8	(15)

cial education as indicated by their goal statement, vita, or admission interview.

Finally, as one example of design flexibility, MAFT cohort was provided with additional non-credit seminar hours and activities, which included writing individualized education plans, conducting IEP meetings, developing and implementing instructional plans, and information about hiring and job placement.

Immediately following initiation of the MAFT program in fall of 1998, the Department of Special Education commenced the Post-Baccalaureate Program. As part of its on-going commitment to implement new programs and increase the number of newly certified special education teachers for the State, the Department of Special Education identified further programmatic and student needs, and incorporated relevant design features to meet these needs via two additional programs. In the following sections, we describe the two programs and highlight differences between the programs.

Post-Baccalaureate Program in Special Education (PB-SE). The PB-SE leads to a university certificate and eligibility for national licensure in special education. All individuals who enter this program must possess a bachelor's degree in education and eligibility for licensure in general education. The majority of candidates in this program possess classroom teaching experience prior to admission into the program (e.g., as teachers in general education, or as substitute teachers). Another distin-

guishing characteristic of this cohort is that the DOE had employed some of these individuals as teachers in special education settings prior to their admission to the program - a sign of the chronic shortages of qualified special education teachers in Hawai'i.

The PB-SE program, accomplished in three semesters, is outlined in Table 3. Some courses in this program are also prerequisites to the MAFT Program. Students have the option of completing field experiences at the school where they are employed. A full tuition waiver is provided to students. After completion of requirements leading to eligibility, students are obligated to fulfill a contractual commitment to the DOE by serving as special education teachers in Hawai'i for three years.

Similar to the special program design of the MAFT, the PB-SE Program is administered through UH's Outreach College. This program targets individuals employed full-time, especially those teaching special education without adequate certification. Courses are conducted after public school hours. Because most PB-SE students already teach part-time or full-time, field experience guidelines and handbooks were adapted to reflect the needs of these candidates.

Table 5
UH Special Education Graduates from Existing (E) and New (MOA) Programs

Program	1998-1999	1999-2000	2000-2001	2001-2002
Post-Bac:				
SecDual-E	8	8	8	8
SecDual-MOA	6	12	6	(15)
Maui-E	0	0	25	0
Sped Only-MOA	12	0	0	0
M.Ed:				
E	15	15	10	10
MOA	0	26	25	25
Elem.Dual. B.Ed.				
E-Oahu	20	25	25	25
E-Kauai	22	0	0	0
MOA-Oahu	0	0	25	25
Totals	77	95	118	118

Dual License in Secondary and Special Education (DL-SES). The DL-SES program supports individuals who wish to obtain a university certificate that leads to national licensure in secondary general and special education. Participants must possess a bachelor's degree in a content area such as Science, Social Studies, English, or related discipline. This four-semester program provides students with foundation and other coursework in secondary general education and special education foundations, and field experiences in general and special education programs. Candidates can be employed full-time by the DOE while enrolled in DL-SES courses. After completing program requirements, students are obligated to fulfill a contractual commitment to the DOE by serving as special education teachers in Hawai'i for three years.

Special program design features enable candidate in the DL-SES program to work full-time as teachers, in the DOE, and to complete student teaching requirements at their school of employment. Another special feature of this program includes guidance and supervision by both special education and general education faculty. As with the MAFT and the PB-SE programs, UH's Outreach College coordinates DL-SES with the assistance of the Department of Special Education.

Some Additional Program Commonalties

Across all special education programs, UH faculty seek innovative ways to promote and encourage professional development among program candidates. Programs provide financial and temporal support for student participation at DOE inservices, meetings, and Felix-related workshops. Recent examples of professional development events for program candidates include the Pacific Rim Conference, the International Conference on Mental Retardation and Developmental Disabilities, the Learning Disabilities Association of Hawai'i Conference, Discrete Trial Training, symposiums sponsored by UH, meetings of the Autism Society of Hawai'I and workshops and parent meetings of Hawai'i Families as Allies. In addition, UH faculty encouraged program candidates to join professional organizations, especially through membership in the Student Council for Exceptional Children. Departmental fundraising activities provide financial support for students to attend conferences.

Summary and Future Directions

These three new programs, the MAFT, PB-SE, and DL-SES, were made possible via special funding provided to UH Mānoa by the Hawai'i DOE. DOE's funding has provided essential resources that enable UH to expand training of newly certified special education teachers. These resources include new faculty members and student tuition waivers. Now UH must provide dividends for DOE's investment in the form of increased quantities of qualified special education teachers.

Table 5 includes the projected number of graduates from these three new programs, as well as projections for other programs at UH. While seeking to increase the quantity of newly certified special education teachers, all parties must not lose sight of quality issues. The design and implementation of the three programs described here aim to provide students with experiences, which offer both breadth and depth in teaching philosophy and practices, in an expedient manner. Integrated coursework and field experiences provide immediate opportunities for candidates to apply ideas, pedagogical concepts, and techniques. Evaluation of quantity outcomes (i.e., the number of graduates produced annually) and quality outcomes (i.e., teaching performance) is on-going.

Implementation of these new programs has spurred ad-

(l-r) ***Kawai, Leanna, Zachary, Tatiana, Samantha, Amber*** *and* ***Joshua*** *of Mrs.* ***Joanne Yamashita's*** *special education pre-K class, Kailua Elementary School, Oahu*

ditional developments consistent with the overall goal of increasing the State's supply of fully qualified special education teachers. For example, dramatic increases in the number of programs and total number of candidates in new and pre-existing special education programs, at UH, has triggered: (a) an increase in the frequency of pre-requisite course offerings; (b) expanded access to courses delivered in alternative formats such as distance-site learning, interactive television, and web-based courses.

Clearly, one major task for the Department of Special Education and UH's COE is to assist the State in meeting educational needs. We hope that individuals prepared through new programs, such as the ones described in this article, contribute effectively—immediately and over the long-term—in efforts to address the needs of diverse student populations, in Hawai'i. With this in mind, representatives of COE and DOE continue to discuss (a) revision and refinement of new programs, (b) collaboration and coordination of licensing requirements, and (c) innovative ways to support teachers' professional development.

Additional program developments beyond the three programs described in this article, merit discussion. For example, the COE will initiate a second Master's cohort

similar to the MAFT. In addition, the Dual Preparation Program in Elementary and Special Education, at the undergraduate level, will expand to include two new cohorts in addition to one existing cohort. Efforts to expand teacher preparation programs to outer islands are underway. Such efforts are supported via faculty submission of grant proposals such as "The Neighboring Island Post-Baccalaureate Special Education Program" (Salas, 1999). These efforts and programs seek to increase program accessibility for potential applicants, especially those on neighbor islands, with the goal of meeting Hawai'i's immediate need for qualified special education teachers. Increased attention has been directed towards use of interactive television (e.g., Hawai'i Interactive Television System-HITS) and development of online coursework. Creative application of resources directed toward the common goal of achieving a full supply of qualified teachers also might improve relations between UH, DOE, and the public which these institutions serve - relations that, admittedly, have been strained at various points in time.

A joint committee of UH Mānoa faculty and DOE representatives has been meeting to develop more effective mechanisms for licensing and placement of qualified in-
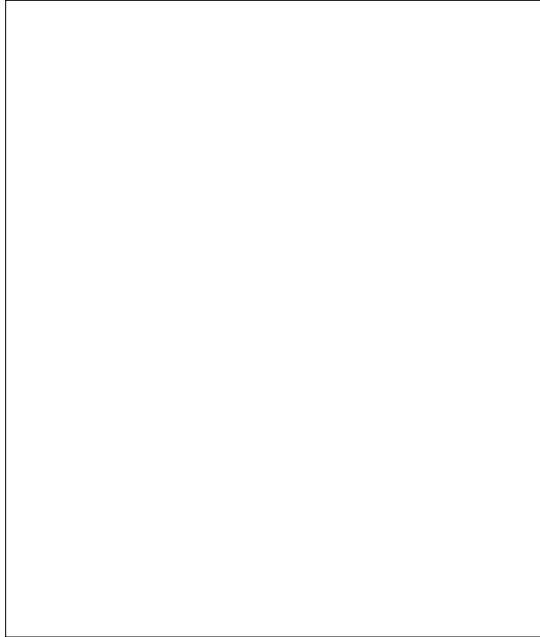
Kawai and *Tatiana* reaching for the sky

dividuals in the schools on Oahu and neighbor islands.

One important issue in placement of new graduates is to recognize that graduates have developed specific skills and interests in working with students with disabilities. Awareness of program outcomes, student competencies, and job placement needs are being identified to assist the COE and DOE in establishing a "good fit" between graduates' competencies and job requirements. This communication between DOE and UH is a clear indication of the commitment to promote recruitment and retention of qualified special educators, and to stem the tide of attrition by avoiding placement of nascent teachers in positions ill-suited to their qualifications.

The COE, Department of Special Education, and DOE must hold steadfast to their commitments to: (a) increase the State's supply of qualified special educators; (b) pro-

mote the transition of candidates-in-training to professional educators; and (c) provide on-going support, conducive working conditions, and professional development for teachers in the field. By jointly defining needs and resources (see, for example, *Recommendations from the Joint UH/DOE Task Force*, 1997), the Hawai'i DOE and UH will increase the supply of fully qualified special educators – a factor which some have identified as the major barrier to provision of adequate education and related services, in Hawai'i (Schrag, Barber, Barber, McDougall, & Abang, 1998).

Research studies document the critical impact of hiring fully qualified versus partially qualified teachers in classrooms. In *Doing What Matters Most: Investing in Quality Teaching*, researchers report that hiring fully trained teachers produces the greatest payoff per expenditure (i.e., the largest gains in students' academic achievement) when compared to equivalent expenditures aimed at changing a host of other conditions, including reducing class size or increasing years of teaching experience (California Institute for Educational Reform, 1998). In addition, research suggests the need to provide on-the-job support for professionals who are at-risk for burnout (Cooley & Yovanoff, 1996). The challenge of providing such support is magnified in Hawai'i, a state in which teacher shortages are compounded by relative isolation from mainland resources, very diverse populations, and budget constraints emanating from economic stagnation.

We close with three recommendations. First, teacher supply and student outcomes will improve if we continue to improve relations among DOE, UH, other agencies, community members, and other stakeholders interested in providing quality services to individuals with disabilities and their families. Second, we must evaluate *objectively* the impact of teacher education programs and student outcomes, rather than assume that our well-intended programs constitute a panacea. Specifically, we should monitor the quality of teaching and short-term and long-term retention and of graduates from all teacher education programs, including those described in this

article, traditional and non-traditional teacher education programs, and alternative or emergency certification programs. Finally, we must be diligent in effort to address both the pre-service "supply-side" needs and the needs of our graduates upon entering and remaining in the field of special education (i.e., mentorship, professional development, and retention).

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Leanna showing off her new spider hat

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