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AUTHOR Au, Kathryn Hu-pei  
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ABSTRACT

The purpose of this paper is to outline a set of principles to guide research on the early education of Hawaiian children. The paper discusses what R. Tharp and R. Gallimore term a "climax program," or combination of program elements which produces a desired social outcome. How research efforts can be structured to contribute to the development of the climax program is then examined. It is argued that four principles should guide research: (1) problem-orientation; (2) eclecticism; (3) comprehensiveness; (4) teacher-research collaboration; and (5) continued inquiry. Each principle, and its relevance to research in Hawaiian early education, is discussed in the context of the development of a primary grade reading curriculum at the Kamehameha Early Education Program (KEEP). (Author/APM)

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PRINCIPLES FOR RESEARCH ON  
THE EARLY EDUCATION OF HAWAIIAN CHILDREN

Kathryn Hu-pe'i Au

Kamehameha Educational Research Institute  
Honolulu, Hawaii

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The purpose of this paper is to outline a set of principles to guide research on the early education of Hawaiian children. Two assumptions are made in setting forth these principles. First, we assume that educational problems are extremely complex, hence more susceptible to solution if a concentrated and coordinated program of research is conducted, instead of a scattering of isolated studies. Second, we assume that the purpose of such comprehensive research efforts is to contribute to the development of effective educational programs. Although our remarks have a specific focus, we see no reason why these principles would not also apply to educational research programs with other populations of Pacific and Asian American children.

An effective educational program for Hawaiian children would be what Tharp and Gallimore (1979) term a "climax program," or combination of program elements which produces a desired social outcome. For example, the climax program might be a preschool curriculum, for Hawaiian children from ages 3 to 5, which achieves specified cognitive and affective goals. Of course, the outcomes targeted by the program should be those that members of the Hawaiian community, and not just social planners, view as important. As an example, school success is seen as important not only by planners but by Hawaiian parents as well (Alu Like, Note 1). Assuming clarity of purpose, how should research efforts be structured to contribute to development of the climax program?

We will argue that research programs on the early education of Hawaiian children should be guided by the following principles: 1) problem-orientation, 2) eclecticism, 3) comprehensiveness, 4) teacher-research collaboration, and 5) continued inquiry. Each principle, and its particular relevance to research in this area, will be discussed in the context of the development of a successful primary grade reading curriculum at the Kamehameha Early Education Program (or KEEP; for

an overview of test results and research related to the reading curriculum, see Tharp, Note 2).

Our orientation toward principles, rather than areas, of research is deliberate. According to Tharp and Gallimore, the climax program cannot be known in advance. Thus, although reasonable guesses can be made about areas of research likely to further its development, the process of making better guesses is probably more important in the long run than the precise starting points denoted by initial research areas. In our experience with the early stages of educational research and development, the selection of research areas is much more like gambling than is usually acknowledged. While required to make educated guesses, we should prepare to be proven wrong.

In the development of the KEEP reading program, a good example of a promising research area which failed to meet expectations was dialect interference. Studies were designed to search out dialect interference at the phonological, morphological, syntactic, and semantic levels (see Au, Note 3, for an overview). Results in general were negative, although it seemed possible that there might be some interference at the phonological level. As Tharp and Gallimore (1979) relate, however, the existing KEEP reading curriculum and/or other classroom conditions apparently corrected this problem, and no further intervention was warranted. Overreliance on specific lines of research to provide clues to program improvement can be hazardous, and hedging one's bets is a necessary precaution. Of course, specific lines have to be followed, but we must be ready to abandon them after a reasonable effort has been made. As researchers we may not always have the luxury of being as thorough as we would like, in the face of program development needs.

### 1. Problem-orientation

This principle refers to the importance of addressing research on the early education of Hawaiian children specifically toward development of elements in the climax program. Each element is related to a particular educational problem or need. For example, the KEEP reading curriculum was intended to reverse the pattern of poor reading achievement typically shown by Hawaiian children. Problem-orientation may be contrasted with discipline-orientation, certainly the norm in academic settings. The difference, we think, is one of emphasis; the two positions are related, not diametrically opposed. The problem-oriented researcher working with young Hawaiian children as his subjects asks, "How can I use the theoretical constructs and methods of my discipline to identify potent program elements?" In the same situation the discipline-oriented researcher asks, "How can I design studies to test the validity of theoretical constructs in my discipline, using acceptable methods, although my subjects are young Hawaiian children?" The difference lies in whether lines of inquiry are determined primarily by the educational problem and needs or the disciplinary perspective.

The problem-oriented researcher is not deliberately atheoretical or ignorant of principles of sound design and procedure. He should in fact be so well-versed in the theory and method of his discipline that he can see the limits of their proper application. It is inevitable, given the complexity of issues in the early education of Hawaiian children, that the discipline-oriented researcher will be forced to oversimplify problems, sometimes in an arbitrary manner, to make them researchable within the boundaries defined by existing constructs and methods. While there is no guarantee that the problem-oriented researcher will succeed, he will be less inclined to ignore perplexities and dismiss anomalous information, and more prepared to extend, adapt, correct, or discard existing constructs and methods.

The principle of problem-orientation applies to both research programs and to individual researchers. In the desired situation both the overall research program and the researchers responsible for its different aspects are problem-oriented. It seems reasonable to assume, however, that the other possible cases are much more common: first, where the research program is ostensibly problem-oriented but the individual researchers remain discipline-oriented; second, where the research program is discipline-oriented but certain individual researchers are problem-oriented; and third, where both are discipline-oriented. We think the first case often occurs when short-term funding becomes available for research on a particular problem, and the time allotted is insufficient to allow researchers to develop a problem orientation. The third case is certainly seen in the academic departments of universities, and perhaps the second case, as well.

Three of the four external conditions Tharp and Gallimore (1979) identify as necessary for development of the climax program are the following: 1) longevity, 2) stability of values and goals, and 3) stability of funding. These conditions make it more likely that a problem-oriented research program will in fact exist since such a program must be carried out by individual researchers who have the security to become problem-oriented. In the absence of such security, researchers will tend to remain discipline-oriented, a safer course to career success.

Discipline-oriented researchers can still contribute to a problem-oriented educational research program. Our opinion, however, is that the significance of their contributions to development of the climax program can only be assessed from a problem-oriented perspective. Discipline-oriented research may hint at individual program elements, but the emerging outline of the climax program itself very likely will remain hidden in the absence of problem orientation.

## 2. Eclecticism

Eclecticism grows naturally from problem-orientation. Perhaps problem-orientation leads to eclecticism. By eclecticism we mean the ability of researchers both to draw upon a variety of theoretical perspectives and methodologies within their own disciplines, and to work in an inter- or multidisciplinary manner. Eclecticism requires a certain tolerance for ambiguity appropriate to the study of complex educational problems. Both problem-orientation and eclecticism seem to be correlated with a stochastic as opposed to neo-positivist view of educational research (Scriven, 1980).

The piecing together of the understandings necessary to develop the elements in the KEEP reading curriculum was an entirely eclectic process. Even when the initial stages in the evolution of an element were guided by a single disciplinary perspective, subsequent refinement (of the element itself or of our understanding of it) was often provided by another. A prime example is seen in the motivational element of the reading program (Tharp, Note 4, Note 5). Hawaiian children are raised in a system of sibling caretaking and are accustomed to turning to other children, and not adults, for help, as anthropological studies indicate (e.g., Gallimore, Boggs, & Jordan, 1974). If the young Hawaiian child is to profit from direct teacher instruction, then, he must learn to orient to the adult teacher, and to school tasks. The means of helping him do so, incorporated as an element in the KEEP reading curriculum, are for the teacher to create many opportunities for him to be successful, and to praise his appropriate behavior. These procedures are consistent with social learning and behavior management theory. The effect is to increase academic engaged time, an important outcome in the eyes of educational psychologists who conduct field-based correlational studies (e.g., Rosenshine & Berliner, 1978). Thus the evolution of a program element, its refinement, and our



understanding of its place in the climax program will often be the result of an eclectic, multidisciplinary response to a specific set of issues.

Another example of eclecticism is seen in the efforts to gain a more complete picture of the daily experiences of children in the KEEP reading program (Au & Jordan, Note 6). One part of the work, addressed to the dynamics of the teacher-directed small group reading lessons, attended to sociolinguistic variables through the fine-grained analysis of videotape. The methods were those of micro-ethnography. The other part of the work, focused on the children's experiences at learning centers where they completed assignments without direct teacher supervision, involved live observation and field notes. Diversity of methods and levels of concern yielded a much richer picture of the children's experiences than would otherwise have been seen.

### 3. Comprehensiveness

By comprehensiveness we mean openness to exploring the full range of issues inevitably revealed once a problem-orientation is adopted, and which it sometimes becomes possible to address systematically because there is an eclectic attitude. While the entire spectrum of issues can never actually be explored, and new perspectives and methods take a great deal of time to work out, comprehensiveness should still be viewed as an important operating principle in the design of research programs in the early education of Hawaiian children.

Because the nature of the climax program cannot be predicted, a bent toward comprehensiveness will more likely lead to the identification of potential climax elements than a preference for the repeated, thorough investigation of one or two research areas. Limitations of time, money, and personnel will obviously influence the extent to which comprehensiveness is possible. We would certainly prefer to know a little about a few things but have some confidence in those findings, than know nothing about a lot of things because scant resources were too

widely disbursed. Still, the more different kinds of information available, the better the chances of hitting upon elements which survive evaluation to become part of the climax program.

Taking a comprehensive approach allows us to avoid a common pitfall in efforts to develop educational programs for minority children: the tendency to reach erroneous conclusions because the data base is far too restricted. A telling example is the deficit perspective assumed in the design of early childhood and other compensatory education programs of the sixties and early seventies (for a critique, see Baratz & Baratz, 1970). These programs were aimed at remediating what appeared to be the cognitive and linguistic deficits of poor and minority children. They stemmed in part from research efforts which did not explore the possibility that these children had skills and learning strengths not manifested in the limited circumstances in which their competence was assessed.

Following the principle of comprehensiveness will lead us to study many different aspects of the behavior of young Hawaiian children, in a wide variety of settings. In development of the KEEP reading program, Hawaiian children from ages 5 to 8 were studied both at home and in school; in naturalistic, quasi-experimental, and experimental settings; and in teacher-directed and independent learning situations. Data were gathered from video- and audiotapes, as well as live observation, through field notes, surveys, coding of teacher and student classroom behavior, experiments, and criterion-referenced and standardized tests. Both qualitative and quantitative data were obtained and analyzed according to procedures accepted in subdisciplines of psychology, education, anthropology, and linguistics.

An especially important aspect of comprehensiveness is that it forces us to look for Hawaiian children's learning strengths, not just weaknesses. Weaknesses are much more easily identified, because many instruments with norms developed for

other populations are readily available. In addition, Hawaiian children learn poorly in the conventionally run classroom, and instances of their incompetence in this setting are easily observed (e.g., Boggs, 1972). Adopting the general approach used by Cole and Scribner (1974), however, we should seek to adjust the circumstances surrounding poor classroom task performance until the parameters of the task and their relationships to the child's existing cognitive processes and previous experiences are understood. For example, successful teachers in the KEEP reading program were found to have adjusted the patterns of teacher-pupil interaction in small group lessons to resemble those in talk-story, an important speech event in Hawaiian culture (Au & Jordan, Note 6; Au, 1980). In these talk-story-like lessons the KEEP teachers seem able to draw upon the children's cognitive and linguistic skills not displayed in conventional lessons.

#### 4. Teacher-researcher collaboration

By teacher-researcher collaboration we refer to those circumstances where the teacher serves as a colleague in the research, not only as the object of study or as an experimenter. If the point of research on the early education of Hawaiian children is to produce climax programs, this principle is not a nicety but a must. The obvious advantage of teacher-researcher collaboration is that almost all elements in the climax program must be those agreeable to teachers, who have the most influence over students and the degree to which program elements are actually implemented. This condition holds whether or not the elements are under direct teacher control. For example, a major component of the KEEP reading program is a system of criterion referenced testing. In this system, largely designed by teachers on the KEEP staff, aides supervised by reading specialists administer and score the tests and record the results. Teachers then have accurate information about their students' progress in meeting the various objectives in the reading curriculum. When this component was first introduced, some

teachers did not refer their students for testing on a regular basis. However, once they became aware of the usefulness of test results in the diagnostic-prescriptive process, they promptly referred students for testing. Had the system made less sense to teachers, it could easily have fallen into disuse and invention of another would probably have been required.

Researchers who collaborate with teachers are generally seeking to accomplish one of two goals: to bring about a closer match between the questions viewed as important by classroom teachers and their own research questions, or to influence teachers to use practices consistent with research results. Both are legitimate goals for the problem-oriented researcher working toward development of the climax program.

But although teacher-researcher collaboration is often advocated, an unsolved problem in education is how the gap between researchers and teachers, or between research and practice, can be bridged. The barriers are many. Teachers often do not have much time to participate in research, a distant second concern compared to the immediate demands of the classroom. They may resent the intrusions of researchers who appear ignorant of the realities of classroom life. Researchers, too, may find collaboration a chore. Communication on research issues usually cannot be in the specialized vocabulary used with other researchers, and a great deal of explaining may be required. Researchers may be irritated by teachers' preoccupation with the details of classroom management, instructional materials, and the personalities of specific students. Perceptions of which research questions should have priority may be vastly different.

It seems important, then, to consider how the research program can be organized to facilitate collaboration. Following the principles of problem-orientation, eclecticism, and comprehensiveness would all, we believe, contribute to teacher-researcher collaboration, by encouraging researchers to take more

account of classroom conditions, to realize that existing theories generally account poorly for classroom phenomena, and to value the personal knowing of teachers as a vital source of information.

At a more mundane level, teacher-researcher communication, if not collaboration, can be encouraged in the design of the research organization's physical plant. The heart of the KEEP plant is a classroom building with an observation deck and a large staff room. Surrounding the classroom building are smaller buildings which provide office space for both teachers and researchers. The classroom building, which houses the laboratory school, serves as a point of convergence for teachers and researchers. Many opportunities for informal contact occur in the staff room, which serves both as work area and lounge. Researchers may look into classrooms from the observation deck without interfering in the instructional process. In this way they can track classroom events unobtrusively and later talk to teachers about what they have seen.

The obligation to collaborate can, to a certain extent, be written into job descriptions. Researchers at KEEP feel more directly responsible for the learning of students in the laboratory school and field sites because student achievement is partly a function of researcher decisions about what the current pool of program elements should be. Teachers at the KEEP laboratory school realize that cooperation with researchers is an integral part of their jobs. Working committees assigned to develop or improve specific program elements, such as the reading or kindergarten curricula, include both teachers and researchers. There is general acknowledgment that teachers and researchers are in partnership to achieve a common purpose, the climax program.

Different models of teacher-researcher collaboration are possible. Examples of intensive and relatively long-term collaboration are described by Florio and Walsh (in press) and Smith and Geoffrey (1968). In these cases, although other

researchers may have been involved more peripherally, investigations were basically carried out by an individual researcher working with an individual teacher. The model seen in the development of the KEEP reading program involved a group of researchers working with a group of teachers (with some crossover of individuals from teacher to researcher roles), although individual alliances were formed from time to time. Solutions to the problem of what an effective reading curriculum would look like were simultaneously sought in two arenas. Classroom teachers and reading specialists attempted to identify and refine practices which seemed to work with disadvantaged Hawaiian students, and researchers, conducting studies both in and out of the classroom, tried to pinpoint variables affecting the students' learning to read. Although by no means perfectly synchronized, the cumulative efforts of teachers and researchers produced a reading program which has consistently, over the past four years, shown superior results (Tharp, Note 2; Klein, Note 7).

If both teachers and researchers are problem-oriented, directing their efforts toward development of the climax program, then they are set apart only by their roles in the inquiry process, not by the fact of their participation or non-participation in the process. Tharp and Gallimore (1979) divide ways of knowing the developing program into four categories: 1) experimentation, 2) qualitative/personal knowing, 3) data guidance, and 4) program evaluation. In the development of the KEEP reading program, the personal knowing of classroom teachers was critical, for example, in the decision to change the emphasis in the curriculum from phonics to comprehension. Teachers, with their more intimate knowledge of classroom conditions, may figure importantly in hypothesis generation, although hypothesis testing will largely be left to researchers.

The future of teacher-researcher collaboration at KEEP is bright because the personal knowing of teachers has been shown to be a rich source of ideas, offering

at times a convergence between classroom practice and theory which was not at first evident to researchers. An example mentioned earlier was the evolution of talk-story-like reading lessons. Another example was the discovery of the experience-text-relationship (ETR) teaching strategy, recurrently found in reading comprehension lessons given by the KEEP teachers (Au, 1979). The success of this strategy, which involves helping children to comprehend text by invoking their background knowledge of the topic, is consistent with the tenets of schema theory, although this realization emerged only after the fact.

##### 5. Continued inquiry

We advocate continued inquiry as a principle of research programs in the early education of Hawaiian children in keeping with Tharp and Gallimore's (1979) recommendation that selection pressures from all forms of knowing be maintained on the appropriate elements, until the climax program reveals itself. According to these authors, because the climax program cannot be known in advance, evaluation and selection pressures on the surviving program elements must continue until the combination proves a stable one. Before this happens we cannot conclude that the final stage in program development has been reached. The process is evolutionary and can be orchestrated only imperfectly. While potentially responsive to changes in social, economic, and political conditions, rapid or drastic changes may block attainment of the climax program, as Tharp and Gallimore point out.

We take continued inquiry over a considerable period of time to be the inevitable end product of problem-orientation, eclecticism, comprehensiveness, and teacher-researcher collaboration. All of these lead us away from pat answers, toward more and more sophisticated questions, and eventually closer to the climax program, but we should anticipate that progress will be slow. Even after ten years, researchers at KEEP find new questions about the education of 5 to 8 year old Hawaiian children greeting them at every turn. We can guess that research

with children younger still, in the age range from birth to five, will be even more difficult. Only recently has the behavior of very young children been the object of much systematic study, in either psychology or linguistics, and measurement is already known to pose special problems (e.g., a typical finding is that test results lack reliability and in any case are not highly correlated with school success).

#### Summary and conclusions

Research programs in the early education of Hawaiian children should be geared toward development of climax programs, stable associations of program elements which meet desired social goals. In this context, attention must be given to principles which should guide the research process, and not only to areas of research. The following research principles were advocated: 1) problem-orientation, as contrasted with discipline-orientation; 2) eclecticism, both theoretical and methodological; 3) comprehensiveness, or the willingness to explore a wide range of issues, especially in searching for learning strengths; 4) teacher-researcher collaboration; and 5) continued inquiry, the only means to arrive at the climax program, or to know that the final stage in program development has been reached. These principles were explicated with examples from the Kamehameha Early Education Program (KEEP).

There may well be a number of structural permutations for comprehensive research programs in the early education of Hawaiian children, all consistent with these five principles. For example, is it possible to fund investigators to conduct individual studies, at different sites involving different institutions, with the results still tying in closely to development of the climax program? This and other forms of organization are researchable topics in themselves. But because the KEEP model (basically, single site, single institution) is known to yield positive results, it merits special and perhaps primary consideration.



The principles we have recommended for research on the early education of Hawaiian children implicates an inquiry process with the following apparent disadvantages: it is costly, it is slow, and it appears vague. In our opinion these are simply facts of life in educational research with young Hawaiian children. We would not wish to spend less and end with a program no more effective than any other, or to move faster and end without appreciating the many abilities of Hawaiian children, or to appear certain when about to reach the wrong conclusions. Given time, following the research principles advocated here would probably lead to the development of other programs effective with young Hawaiian children. There does not seem to be an easier way.

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