A More Appropriate Determination of the Effectiveness of a Prekindergarten Initiative in Hawaiian Communities

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Abstract

Although many have praised the High/Scope Perry Preschool study for its alleged revelations about long-term effects of formal preschool, we seriously question whether such a study, which started 45 years ago and involved poor "borderline mental impairment" Black children, strongly generalizes today, and we are disturbed by the devastating fate of the control group. We have also noted other types of inappropriateness in published studies on the effects of prekindergarten early childhood education (ECE). In an effort to address these types of inappropriateness, we designed and conducted an evaluation (of a prekindergarten initiative in Hawai‘i) that (a) accommodated the project's allowing all children to participate in the main treatment if their family chose to enroll, (b) focused on nonformal/non-center-based preschool, (c) instead of using standardized achievement tests, used a data-collection instrument designed to specifically measure children's readiness for kindergarten, (d) regarded participant feedback as primary evaluation data, (e) analyzed the data focusing on effect size rather than statistical significance, and (f) was culturally appropriate.

Numerous effect-size analyses yielded the clear finding that SPARK-HI children outperformed non-SPARK-HI children on all six domains of the Hawai‘i State School Readiness Assessment. SPARK-HI children with some ECE experiences outperformed SPARK-HI children without any ECE experience. Despite our not using random assignment to treatment and our not collecting standardized achievement test data, we assert that our study is a compelling, valid evaluation of a preschool initiative. More importantly, the evaluation did not violate the ethical standards of the profession and the ethical and cultural standards of the community.

Background

In designing and carrying out an evaluation of a prekindergarten initiative, we noted major differences between our approach and many approaches reported in the professional literature on evaluations of and research on early childhood education (ECE) experiences. We accordingly examined some of the widely reported approaches and concluded that many of those efforts were seriously flawed, especially for the type of project we were evaluating.

We found major inappropriateness in what is perhaps the most often cited work in the field of preschool effectiveness. In addition we regard the approach we took as definitely more appropriate than a number of the approaches used in other recently published studies on early childhood education. We now cite four types of inappropriateness found (a) in the literature on the evaluation of preschool activities or programs or (b) in how some published studies are regarded today.

Inappropriateness Related to Published Early Childhood Education Studies

Inappropriateness of Regarding the High/Scope Perry Preschool Study as Still Strongly Generalizable

We start our critique by examining what is perhaps the most widely known and cited preschool experiment—the High/Scope Perry Preschool Project (a Google search on October 15, 2007 using "Perry" and "Preschool" yielded 120,000 hits). Although many researchers have cited the Perry Preschool study as strong evidence that formal early childhood education is effective in positively affecting young children throughout their lives (e.g., Schweinhart, 2007), we assert that studies of the that type and vintage do not necessarily strongly generalize today.

To help provide some historical perspective, we first note American society's attitudes in the 1950s and 1960s towards Black adults and poor "borderline mental impairment" Black children, the target population in the Perry Preschool study (Parks, 2000). Shortly after the Perry Preschool Project began in 1962 (Berruta-Clement, Schweinhart, Barnett, Epstein, & Weikart, 1984), interracial marriage (mainly between Blacks and Whites) was illegal in 19 states, including non-"Southern" states such as Delaware, Indiana, Maryland, and Wyoming (Barnett, 1964). In a Gallup Poll taken 4 years before the start of the Perry Preschool Project, 96% of Americans opposed interracial marriage (Kristof, 2004). And it had been only about 8 years earlier that the Brown v. Board of Education of Topeka decision (Brown v. Board of Educ., 1954) paved the way for the end of many states' laws that had established separate public schools for Black and White students. In view of the notable changes in racially related attitude since that time, it is questionable to presume that the effects of preschool for a poor borderline mentally impaired Black child in 1962 would likely be the same as they would be today. We also noted that those who cite the Perry Preschool study as evidence that preschools have long-term positive effects for all children do not, as far as we can tell, also mention that the children in the study had "borderline mental impairment."

Inappropriateness of Randomized Controlled Trials in Early Childhood Education Studies Such as the Perry Preschool Study

Another concern we had is based on the perception among much of the research field that the randomized controlled trial (RCT), as was used in the research/evaluation design of the Perry Preschool Project, is the gold standard for research or evaluation designs (Cordray, 2007). Some

professionals have proclaimed RCTs to be more than a gold standard; for example, Cordray (2007, para. 4) asserted that the randomized control trial "is the only class of research design capable of producing adequate evidence for making decisions about the effects of educational practices, about policies, about programs." That claim from Cordray, a professor of public policy and psychology and director of Peabody College's Experimental Education Research Training (ExpERT) program, is inappropriately disrespectful to many researchers as well as to the large number of thriving cultures and societies that have made or facilitated many wise decisions about education, policy, and programs without any assistance from an RCT.

Scriven (2005) and others have offered strong criticisms of the regarding of the RCT as the gold standard in producing new knowledge. While we resonate with many of Scriven's concerns, we have a more essential criticism; namely, any ECE evaluation design that incorporates random assignment to a treatment such as preschool experience and no preschool experience for a control group is profoundly inappropriate and unethical. The devastating fate of the control group in the Perry Preschool study should not be dismissed as merely an unfortunate side effect of an RCT. According to published articles, the persons in the project's control group (no preschool) have had higher levels of, for example, (a) convictions for criminal behavior, (b) teen pregnancy, (c) drug abuse, and (d) unemployment (Berruta-Clement et al., 1984).

We ponder what the informed-consent wording, even though informed consent was not a legal requirement at that time, should have consisted of—perhaps something like, "If your child is randomly assigned to the control group, then he or she will receive no formal early childhood educational experiences, which the research suggests is notably beneficial to preparing children for school and later life. Do you agree to allow your child to be randomly selected to be possibly in this no-preschool treatment and risk serious lifelong deficits in comparison to the children who get selected for the preschool treatment?"

The High/Scope Perry Preschool project is disturbingly parallel to the infamous Tuskegee Syphilis Study (Jones, 1981), in which many of the participants were deliberately not given adequate amounts of known-to-be-effective medication to combat syphilis. The exposure of the unethical behavior of those responsible for that study was influential in making informed consent a requirement for studies using human subjects. The following are true for both the High/Scope Perry Preschool and the Tuskegee Syphilis studies: (a) subjects were poor Black persons, (b) subjects and their families were not fully aware of the true nature of the study, (c) an effective or likely effective treatment to greatly mitigate the subjects' dire conditions was known but not administered to the control group, and (d) each control group ended up having devastating, long-term, negative outcomes.

It is not as if the educational field was unaware of the likely benefits of preschool when the Perry Preschool study started in 1962. Maria Montessori, whose success working with preschool-age children was widely known, had died 10 years before the start of the Perry Preschool Project (Standing, 1957). New York State had active commissions promoting preschools more than 40 years before the start of the Perry Preschool Project (Bureau of Child Development and Parent Education, 1957, revised 1968). Decades before the start of the Perry Preschool Project, "nursery schools" (the prevailing term used for what are today referred to as "preschools") had been developed at influential U.S. academic institutions, including Teachers College (Columbia) and the Universities of Iowa, Yale, Minnesota, and California at Berkeley (Pellegrini, 2005). At Columbia, Patty Smith Hill formed the National Committee for the Nursery School, which in 1929 became the National Association for Nursery Education and later the National Association for the Education of Young Children (Feeney, Christensen, and Moravcik, 1987).

Even more telling is a statement that appears on the High/Scope web site: "Weikart and his colleagues reasoned that just as it would have been better for these students to have begun school in kindergarten as their classmates did, so it would have been even better for them to have started school a year or two earlier than that" (Schweinhart, 2002). A logical corollary to that statement is that it would be relatively worse for students who were not allowed to start school a year or two earlier. In other words, Weikart and his colleagues willingly withheld early schooling from a sample of children even though he and his colleagues had reasoned that such early schooling would be beneficial to the children.

The Perry Preschool study would not meet a number of the current guiding principles and program evaluation standards of the American Evaluation Association (AEA) and the American Educational Research Association (AERA). For example, in *Guiding Principles for Evaluators*, Respect for People, the middle part of guideline D5 reads ". . .evaluators should seek to ensure that those who bear the burdens of contributing data and incurring any risks do so willingly, and that they have full knowledge of and opportunity to obtain any benefits of the evaluation" (American Evaluation Association, 2004). The Perry Preschool study also violates NAEYC Principle P-2.10: Do not "participate in research that could in any way hinder the education, development, or well-being of children."

Ethical standards in place during the early days of the Perry Preschool study were also not met. For example, the World Medical Association Declaration of Helsinki, first adopted in 1964, ends with ". . . The investigator or the investigating team should discontinue the research if in his/her or their judgment it may, if continued, be harmful to the individual. . . . the interest of science and society should never take precedence over considerations related to the well-being of the subject."

Inappropriateness of Focusing on Only Formal or Center-based Early Childhood Education

We found that most of the more recently conducted research on the effectiveness of early childhood education focused mainly on formal, or center-based, early-childhood experiences and did not address the simple, straightforward idea of whether specific early childhood experiences, including nonformal and noncenter-based ones, make children better prepared for kindergarten. For example, the Public Policy Forum's (2007) review of 26 research studies on early childhood education outcomes included a preponderance of studies of formal, center-based early childhood education and no explicit mention of any nonformal or parent-oriented ECE. Magnuson et al. (2004) focused only on center- or school-based preschool programs in their study investigating inequality in preschool education and school readiness.

McIntyre, Eckert, Fiese, DiGennaro, and Wildenger (2007, p. 83) noted the lack of prekindergarten studies focusing on parent involvement: "Preparing students for successful kindergarten transition has been identified as a national priority, yet the degree to which parents are involved in kindergarten preparation is rarely considered." Among the 250 or so recent early childhood education studies we reviewed, the few that focused on nonformal or noncenter-based early childhood experiences tended to be studies with an indigenous or minority-culture bent.

Some recent studies have uncovered negative effects of formal preschool; for example, Loeb, Bridges, Fuller, Rumberger, and Bassok (2005, p. i) found that "on average attending center care is associated with positive gains in pre-reading and math skills, but negative social behavior." More recently, Belsky et al. (2007) raised concerns about the potential for early childhood programs to produce modest negative effects on social and emotional development.

Using the data from the Early Childhood Longitudinal Study, Magnuson, Ruhm, and Waldfogel (2007) found that prekindergarten is associated with higher reading and mathematics skills at school entry but also with higher levels of behavior problems. Of even more concern is their finding that by the spring of Grade 1, the effects on academic skills have largely dissipated, but the behavioral problems persist.

Technical Inappropriateness in Prior Studies of Readiness for Kindergarten

Researchers have frequently used reading and mathematics skills in kindergarten and Grade 1 as measures of readiness (Magnuson, Meyers, Ruhm, & Waldfogel, 2004). Standardized tests have been used in the evaluations of Head Start (Rimer, 2003); however, there are major problems in using standardized achievement test scores as measures of learning, especially with young children (Kamii, 1990). The authors of a comprehensive review of "predicting children's competence in the early school years" concluded that there is empirical support for assertions that defining and assessing "readiness" in terms other than children's skills and abilities would add important information to current assessment practices (La Paro & Pianto, 2000).

In a summary of a review of 26 studies on early childhood education outcomes (Public Policy Forum, 2007), "statistical significance" is mentioned a few times, but there is no mention of "effect size," even though, the APA Publication Manual (2001, p. 25) says ". . .it is almost always necessary to include some index of effect size or strength of relationship. . ."

Our Effort to Address the Aforementioned Types of Inappropriateness

Our evaluation/research design addressed the aforementioned types of inappropriateness in published studies by (a) accommodating the project's allowing all children to participate in the main treatment if their family chose to enroll, (b) focusing on nonformal/non-center-based ECE treatments, (c) using a data-collection instrument designed to specifically measure children's readiness for kindergarten and not using standardized achievement tests, (d) regarding participant feedback as primary evaluation data, (e) analyzing the data focusing on effect size rather than statistical significance, and (f) ensuring cultural appropriateness. Despite not having random assignment to treatment and not having standardized achievement test data, we assert that our study is a compelling, valid evaluation. More importantly, our evaluation did not violate the ethical standards of the profession and the ethical and cultural standards of the community.

The project we evaluated, SPARK (Supporting Partnerships to Assure Ready Kids)-Hawai'i [SPARK-HI], is a school-readiness initiative funded by the W.K. Kellogg Foundation (WKKF) in eight states and implemented in Hawai'i by the Institute for Native Pacific Education and Culture (INPEACE). Program funding began in 2002 with planning grants, and the five-year implementation grant ends in May 2008. Each site designed a program applicable to its community within SPARK's five key objectives (W.K. Kellogg Foundation, 2000):
(a) strengthen connections among vulnerable children, their families, early care and education providers, and teachers; (b) improve quality of services and relationships between schools and families; (c) alter institutional policies and procedures, changing systems that serve the needs of children, to support early learning; (d) apply best practices and serve as a catalyst to stimulate local movement to strengthen the quality of early care and education; and (e) foster local, state, and national resolve to support children and schools that are best prepared to address the initiative's goals and child outcomes.

Recruitment Appropriate for the Populations and Unashamedly not Random Assignment to Treatment

For SPARK-HI, the project design included choosing two communities with relatively high percentages of Native Hawaiian children and where schools had relatively high proportions of students who were eligible for free or reduced-cost lunch. Children and their families were recruited for Cohorts I, II, and III, those children who would begin kindergarten in 2005, 2006, and 2007, respectively. All who expressed wanting to participate were accepted.

Discussions with some of the project's community members revealed that the community would not regard any evaluation as *pono* or proper, for example, if one group ended up having major long-term benefits that the control or comparison group did not. Also strongly entrenched in Hawaiian culture is the desirability of not separating children from their parents or other family members for extended periods of time such as during a typical center-based preschool day. In addition, any study using random assignment to an ECE treatment would experience notable treatment contamination in these close-knit communities.

We did not randomly assign children to treatment/control, but we did obtain data from an equivalent comparison group, who attended the same schools as did the SPARK-HI children. We are confident that these comparison children sufficiently match SPARK-HI children. The area is remote, with only one road connecting the 16-mile-long community to the rest of the island. Because of the community's physical isolation, it is rare for families to access educational or social service opportunities outside their community. The demographics for the five schools used for comparison showed little variation from that of the project's Cohort 3 participants. Opportunities and experiences would be similar for most children within the community.

Treatment: Not Just Formal Preschool vs. No Formal Preschool

SPARK-HI is not a direct-service, formal preschool program. Each child was enrolled with a Learning Advocate (LA), typically a parent but frequently a grandparent or aunt/uncle, with whom the program communicated about school-readiness opportunities. SPARK-HI staff, known as Learning Advocate Coordinators (LACs), provided ongoing screening using the Ages and Stages Questionnaire (ASQ) and applied group results to tailor themes for workshops that were offered to the entire community. Workshops were held on positive discipline, pre-reading skills, healthy cooking, and general learning skills. Project staff sent SPARK-HI families mailings announcing the workshops and invited the general community through the use of flyers and advertisements in community newspapers, and inserts in shopping bags and fast-food meals containers. In addition to workshops, LACs provided families with resources available in the community and referred each SPARK-HI family to the "sister" program Keiki Steps, a culturally responsive parent-child interaction program that meets for 4 hours a day, twice a week.

We regarded, as primary, the data obtained through the Transition Interviews, which were not only culturally appropriate in that they valued the contribution of the community to the study, but they also imbued a sense of empowerment beyond school readiness issues. Use of the 60-month form of the ASQ helped to bring context to the child's development in regard to his or her chronological age when entering formal education. During the interviews, LAs were asked eight questions, including their estimate of how ready their child was for kindergarten, and later, having experienced a semester of kindergarten, how correct their estimate from the first interview was. Learning Advocates in general reported that their child was ready to begin kindergarten; several respondents from the Second Transition Interview opined that the children were more ready to start school than their parents were to have them go to school.

The most repeated Transition Interview comment about the workshops was that parents read more to their children as a result of participating in SPARK-HI workshops. LAs also commented on how participation in the workshops changed their behaviors and attitudes. Particularly poignant were comments about (a) no longer using corporal punishment and (b) recognition that each child had her/his own skills and abilities. Other comments helped to guide programming and to refine SPARK-HI activities. Because LAs responded so positively to workshops and information on an activity calendar, and they asked for ongoing information to build school-success skills, SPARK-HI is piloting a parent-involvement program at one school: Parents and other family members spend 30 minutes a day after school, four days a week (after school) in one of four activity centers learning and doing a different activity that supports what is presented in the kindergarten classroom. Activities can be repeated at home by other family members and with other siblings. Evaluation for this part of the program includes short feedback forms that are completed each day by the parent and by the child.

Measuring School Readiness Appropriately (Culturally and Technically)

The SPARK-HI evaluation design called for particular attention to cultural appropriateness for the Native Hawaiian population the project serves. It built on the evaluation framework developed by the Evaluation Hui, a consortium of Native Hawaiian and Māori evaluators, and described by Kawakami, Aton, Cram, Lai, and Porima (2008). Among the aspects of that framework that differ from most mainstream evaluation approaches are (a) the emphasis on storytelling by participants as well as by evaluators, (b) the community and elders have major input into various aspects of any evaluation, and (c) cultural significance is more important than statistical or even practical significance.

Feedback/stories from participants were treated as primary, not supplemental, data. The following are representative verbatim comments taken from interviews:

- "I got more information from SPARK about school readiness; I'm more involved in the school."
- "[SPARK-HI] helped [me] to learn from teachers so I could do it everyday; made me realize it is important to teach my child & not leave it up to teachers."
- "I am volunteering my services to help the teachers in my grandson's class. I read more often to grandchild."
- "[SPARK-HI] made me more aware of my kuleana (responsibility) in my child's learning process. It also encouraged more ohana (family) activities."

Input from the Transition Interviews influenced program changes. After Learning Advocates mentioned a lack of nearby library services, SPARK-HI arranged for families to receive books as *makana* (gifts) at workshops and other events. Many LAs also expressed willingness to become more involved in their community and were invited to participate in grassroots activities. Some testified at the State legislature in support of children's programs.

Only recently has there been a research-based effort in Hawai'i to measure the readiness of children entering kindergarten (Grace & Brandt, 2006). That effort was based soundly on research and took much time and effort by researchers/test developers with strong relevant backgrounds; however, for practical reasons, the measure (the Hawai'i State School Readiness Assessment [HSSRA]) was used only at the group level, wherein teachers would rate their classrooms for an overall level of readiness. That group use of the instrument, however, was inadequate for conducting research on the readiness of an individual child after ECE experiences. Accordingly we obtained permission and used the individual version (I-HSSRA) of the test that

Grace and Brandt had developed but that had not been used widely in Hawai‘i’s schools (see Appendix A). Kindergarten teachers in five schools agreed to assess all students in their classrooms using the I-HSSRA. Teachers were provided a list of SPARK children in their classroom and were asked to place the names of these children on the I-HSSRA because we had their parents’ permission to collect personally identifiable information. Teachers were asked to leave off the names of non-SPARK children being assessed on the I-HSSRA and mark only gender, socio-economic group (free/reduced-cost lunch), and English as a Second Language Learner. We are confident that little-to-no scoring bias occurred. It appears that teachers either ignored the instructions on personally identifiable information or found it too cumbersome to differentiate between those with parental permission to collect personally identifiable information (SPARK) and those that were to be reported anonymously (non-SPARK). Kindergarten teachers were generally unfamiliar with SPARK-HI.

Analysis of Effect Sizes: Much More Appropriate Than Tests of Statistical Significance

We computed effect sizes *d* for all I-HSSRA (see Appendix B) comparisons by dividing differences in means by the pooled standard deviation of each group. Unlike analyses using tests of statistical significance, effect-size analyses focus on how large and meaningful differences are (Coladarci, Cobb, Minium, & Clarke, 2004). Because there were not enough prior related published studies to provide sound suggested interpretations of effect size, we used the conventions suggested by Cohen (1988): $d = .20$, small; $d = .50$, moderate; $d = .8$, large.

Under these conventions, when SPARK-HI children are compared with non-SPARK-HI children, effect sizes in all domains (Approaches to Learning, Literacy, Math, Behavioral, Social/Emotional, and Physical Well-Being) are small to moderate with all comparisons favoring the SPARK-HI children. For SPARK-HI girls, effect sizes in five of the six domains were moderate, with the effect size for Approaches to Learning having the only small effect size.

Having found these effect sizes, all favoring SPARK-HI groupings, we then compared, within SPARK-HI children only, those who had some ECE (mostly nonformal) with those who had no ECE experiences. We found additional small to moderate effect sizes, all favoring the groups of SPARK-HI children with ECE. SPARK-HI girls contributed more to these differences than did the SPARK-HI boys. The largest effect size found was .70 (“large” according to Cohen’s conventions) for the comparison between SPARK-HI girls with ECE experiences and SPARK-HI girls without ECE experiences.

We chose to not emphasize tests of statistical significance; however, for those want such analyses, we computed levels of statistical significance using independent *t* tests. Differences favoring SPARK-HI children over non-SPARK-HI children were statistically significant at the .05 level in all domains except the “Approaches to learning: Attitudes and habits that facilitate learning” domain. The *p* value for the “Approaches” domain was .10, favoring the SPARK-HI group. Other tests of statistical significance are presented in Appendix B.

Challenges to Recruitment, Enrollment, Treatment, and Reporting: Enlightening Qualitative Stories are Integral Parts of the Evaluation

Unanticipated events or circumstances during implementation must be considered when one looks at SPARK-HI programming, evaluation methods, and outcomes.

One site had a complete turnover of staff shortly before the end of Year 1 (during the recruitment period for Cohort 1). In Year 3, all but one of the new staff members at that site moved on to other positions within the grantee organization.

The Hawai‘i Department of Education (HDOE) went to a mandatory year-around school schedule at the beginning of Year 4. In Year 3, HDOE pilot-tested a Junior Kindergarten program, which went statewide in Year 4, changing the birth date cutoff for entrance to kindergarten. Further complicating this issue, most schools did not have enough children to justify a self-contained Junior Kindergarten class, so these students were placed in regular kindergarten classrooms and provided with varying degrees of age-appropriate curricula.

The larger of the two sites partnered with the community's largest health-care provider to recruit participants, to provide services, and workshops. The liaison between the clinic and SPARK-HI staff changed 4 times in 3 years.

During Year 2, an unusually high number of brush fires in one of the SPARK-HI communities dramatically affected everyone's ability to move in, out, and within this community. The area also saw a large increase in its homeless population during the summer of 2006 when over 200 individuals were displaced from parks elsewhere and ended up along the 16-mile stretch of this SPARK-HI site, where the latest report "… estimates 714 people, including 155 children 17 or younger, live …" in tents and make-shift shelters (Shikina, 2006).

Discussion

Our evaluation of a prekindergarten early childhood education initiative differed notably from approaches used in many published studies. We delineated the major problematic areas in published studies and offered a method that is more appropriate, methodologically as well as ethically. Having integrated findings from interviews and other qualitative evaluation procedures with data from a research-based instrument specifically designed to measure readiness for kindergarten, we are confident in our finding that SPARK-HI had a noteworthy positive effect on the kindergarten readiness of the participants. Our focus on nonformal preschool experiences also differed from the field's prevalent focus, which has been mainly on the effects of formal, center-based preschool.

Numerous effect-size analyses yielded a clear finding that SPARK-HI children outscored non-SPARK-HI children in all six domains of the Individual Hawai‘i State School Readiness Assessment. In addition SPARK-HI children with some ECE experiences outscored SPARK-HI children without any ECE experiences, with SPARK-HI girls with ECE experiences exhibiting a large effect-size advantage in mathematics over SPARK-HI girls without ECE experiences.

We recommend that those conducting ECE studies question the generalizability and ethicality of the High/Scope Perry Preschool study and design and implement evaluations that (a) do not use randomized controlled trials in which some children do not receive services that are known to be likely effective, (b) consider nonformal and family-based ECE experiences and do not focus only on formal or center-based early childhood education, (c) use instruments carefully designed to specifically measure school readiness, (d) do not use standardized achievement tests, (e) treat feedback from participants as primary rather than supplemental evaluation data, (f) analyze data focusing on effect size rather than on tests of statistical significance, and (g) respect participants and their communities.

We have shown that our evaluation approach is more appropriate from a technical design viewpoint but more importantly also from an ethical and cultural viewpoint. We recommend that others conducting evaluations of or research on ECE initiatives incorporate aspects of the methodology we have espoused in this paper.

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Children Ready For Success
Preschool and Kindergarten
Four and Five-Year Olds Individual Assessment

Young children are ready for successful learning experiences in school when there is a positive interaction among the child's developmental characteristics, school practices and family and community support.

Readiness definition adopted by the State of Hawaii

This instrument assesses key skills and characteristics that are considered necessary for a successful learning experience upon entry to kindergarten. It is specifically designed for **center-based preschool programs for four-year-olds** and for **kindergartens.**

Please complete the child information below. All background information is confidential and will be coded to ensure anonymity.

Preschool or Kindergarten Child Information

Date of Assessment ____/____/____School _____

Teacher Name _____

Child's Name _____

Child's Sex: Male _____ Female _____

Home Language of Child: English Yes ____ No ____

For Program Director or Kindergarten Teacher to Complete

Child qualifies for tuition subsidy (preschool) or
free or reduced lunch (kindergarten): Yes ____ No ____

Socio-Economic Status (SES) of Child
High SES _____ (Parent is a professional, usually college educated; income around $75,000 or higher)
Middle SES _____ (Parent holds a skilled occupation, usually has some college, income around $50,000 or higher)
Low SES_____ (Parent holds a semi-skilled job or is unemployed; child qualifies for tuition subsidy or free or reduced lunch)

Directions for Preschool or Kindergarten Teacher

Please read each item on pages 3 and 4 (items 1 - 24) before rating the child's skills and characteristics. Then please rate the child using the following:

Not Yet If the child is not yet displaying the skill or characteristic, please circle the **1**

Beginning If the child has just begun to display the skill or characteristic and displays it infrequently, please circle the **2**

Sometimes If the child displays the skill or characteristic sometimes but is not consistent, please circle the **3**

Almost Always If the child displays the skill or characteristic consistently and reliably, please circle the **4**

Not Observed If the classroom curriculum and activities do not provide situations for the child to show the skill or characteristic, please place a check [√] under **"not observed."**

Examples of Ratings

How consistently does the preschool or kindergarten child display the skill or characteristic?					
	Not Yet	Beginning	Sometimes	Almost Always	Not observed
1. Helps you without being asked.	1	**2**	3	4	
2. Separates from caregiver without problems.	1	2	3	**4**	
3. Recognizes name in print.	1	2	3	4	√

Explanation

1. This preschool or kindergarten child is just **beginning** to help the teacher without being asked. This means that the child helps infrequently and needs reminders and assistance to do so.
2. This preschool or kindergarten child is able to separate from her caregiver without a problem each morning and has done so **consistently** over a period of time.
3. Because the curriculum activities do not provide such situations, the teacher placed a √ by this skill, "*recognizes name in print."*

Please do not skip any of the items on the following pages. If you are unsure, please take time to observe the child. This survey should take you between 5 to 10 minutes.

Hawaii Children Ready for Success Individual Assessment

Circle the rating that **best describes** the child's skill or characteristic.	Not Yet	Begin-ing	Some-times	Almost Always	Not Ob-served
1. Comes to school well rested, fed, and alert.	1	2	3	4	
2. Practices personal hygiene such as washes hands after toilet and before eating.	1	2	3	4	
3. Is independent in caring for self and own belongings.	1	2	3	4	
4. Needs minimal support to adjust to new people and new places.	1	2	3	4	
5. Works and plays well with others.	1	2	3	4	
6. Shows satisfaction in accomplishments.	1	2	3	4	
7. Expresses emotions through appropriate actions & words.	1	2	3	4	
8. Is respectful of others.	1	2	3	4	
9.Is able to listen for about 15 minutes to group discussions & stories read aloud.	1	2	3	4	
10. Is able to follow classroom routines.	1	2	3	4	
11. Shows eagerness to learn by observing, asking questions and/or exploring new things.	1	2	3	4	
12. Tries hard and persists.	1	2	3	4	
13. Appears interested in the world around him or her (curious).	1	2	3	4	
14. Communicates ideas and describes things using phrases and sentences.	1	2	3	4	
15. Shows familiarity with how books work (e.g. holds book right side up; turns pages front to back; etc.).	1	2	3	4	
16. Shows interest in books and print (e.g., chooses to look at books; asks to be read to, etc.)	1	2	3	4	
17. Knows names and sounds (more than 3) of some letters.	1	2	3	4	
18. Uses symbols, scribbles or letter-like forms to "write" words or ideas.	1	2	3	4	
19. Can count *a set* of 5 objects.	1	2	3	4	
20. Is able to sort and classify objects.	1	2	3	4	
21. Knows names of some (more than 3) numerals (e.g., "2" is called "two).	1	2	3	4	
22. Recognizes and can duplicate simple patterns.	1	2	3	4	
23. Shows large muscle control (e.g., can walk without stumbling, jumps, hops, etc.)	1	2	3	4	
24. Shows small muscle control (e.g., use of pencils, drawing & art tools.)	1	2	3	4	

THANK YOU

Means, Standard Deviations, Effect Sizes, and t Tests for the Individual Hawai'i State School Readiness Assessment

SPARK-HI vs. Non-SPARK	SPARK-HI	Mean	S.D.	Non-SPARK	Mean	S.D.	Difference	Effect Size	*t* Test
Approaches	n = 118	3.1	0.9	n = 448	3.0	0.8	0.1	0.12	
Literacy	n = 118	3.0	0.9	n = 448	2.7	0.9	0.3	0.33	*
Math	n = 118	3.1	0.9	n = 448	2.7	1.0	0.4	0.41	*
Behavioral	n = 118	3.3	0.7	n = 448	3.0	0.8	0.3	0.38	*
Social/Emotional	n = 118	3.3	0.7	n = 448	3.0	0.8	0.3	0.38	*
Physical Well-Being	n = 118	3.5	0.6	n = 448	3.3	0.7	0.2	0.29	*
Girls SPARK-HI vs. Non-SPARK	SPARK-HI	Mean	S.D.	non-SPARK	Mean	S.D.	Difference	Effect Size	*t* Test
Approaches	n = 44	3.3	0.7	n = 208	3.1	0.8	0.2	0.26	*
Literacy	n = 44	3.2	0.8	n = 208	2.8	0.9	0.4	0.45	*
Math	n = 44	3.3	0.7	n = 208	2.8	1.0	0.5	0.52	*
Behavioral	n = 44	3.5	0.6	n = 208	3.1	0.8	0.4	0.52	*
Social/Emotional	n = 44	3.5	0.6	n = 208	3.1	0.7	0.4	0.58	*
Physical Well-Being	n = 44	3.7	0.4	n = 208	3.3	0.7	0.4	0.61	*
Boys SPARK-HI vs. Non-SPARK	SPARK-HI	Mean	S.D.	non-SPARK	Mean	S.D.	Difference	Effect Size	*t* Test
Approaches	n = 74	3.0	0.9	n = 240	2.9	0.8	0.1	0.12	
Literacy	n = 74	2.9	0.9	n = 240	2.6	0.9	0.3	0.33	*
Math	n = 74	3.0	1.0	n = 240	2.6	1.0	0.4	0.40	*
Behavioral	n = 74	3.1	0.7	n = 240	2.9	0.8	0.2	0.26	*
Social/Emotional	n = 74	3.1	0.7	n = 240	2.9	0.8	0.2	0.26	*
Physical Well-Being	n = 74	3.4	0.6	n = 240	3.3	0.7	0.1	0.11	
SPARK-HI ECE vs. no ECE	ECE	Mean	S.D.	no ECE	Mean	S.D.	Difference	Effect Size	*t* Test
Approaches	n = 49	3.2	0.9	n = 68	3.0	0.8	0.2	0.24	
Literacy	n = 49	3.2	0.9	n = 68	2.9	0.9	0.3	0.33	
Math	n = 49	3.3	0.8	n = 68	3.0	0.9	0.3	0.35	*
Behavioral	n = 49	3.4	0.7	n = 68	3.1	0.7	0.3	0.43	*
Social/Emotional	n = 49	3.4	0.7	n = 68	3.2	0.7	0.2	0.29	
Physical Well-Being	n = 49	3.6	0.5	n = 68	3.5	0.6	0.1	0.18	
SPARK-HI Girls ECE vs. no ECE	ECE	Mean	S.D.	no ECE	Mean	S.D.	Difference	Effect Size	*t* Test
Approaches	n = 20	3.5	0.5	n = 24	3.2	0.8	0.3	0.44	
Literacy	n = 20	3.4	0.7	n = 24	3.1	0.9	0.3	0.37	
Math	n = 20	3.6	0.6	n = 24	3.1	0.8	0.5	0.70	*
Behavioral	n = 20	3.7	0.4	n = 24	3.3	0.8	0.4	0.62	*
Social/Emotional	n = 20	3.6	0.4	n = 24	3.3	0.7	0.3	0.51	
Physical Well-Being	n = 20	3.8	0.3	n = 24	3.6	0.5	0.2	0.47	
SPARK-HI Boys ECE vs. no ECE	ECE	Mean	S.D.	no ECE	Mean	S.D.	Difference	Effect Size	*t* Test
Approaches	n = 29	3.0	1.1	n = 44	2.9	0.8	0.1	0.11	
Literacy	n = 29	3.0	1.0	n = 44	2.8	0.9	0.2	0.21	
Math	n = 29	3.1	0.9	n = 44	2.9	1.0	0.2	0.21	
Behavioral	n = 29	3.2	0.8	n = 44	3.0	0.7	0.2	0.27	
Social/Emotional	n = 29	3.2	0.8	n = 44	3.1	0.7	0.1	0.13	
Physical Well-Being	n = 29	3.4	0.6	n = 44	3.4	0.7	0.0	0.00	

*$p < .05$