ACCELERATE

AUBURN-CAYUGA COUNTY EARLY LITERACY EDUCATION, RESILIENCE, AND TREATMENT PROJECT

Project Evaluation Report

Findings and Recommendations

OCTOBER 2007

Youth Policy Institute

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This Report was prepared by the:

Youth Policy Institute, Inc.

Hamilton, New York

Inquiries regarding the evaluation of the Partnership for Results' ACCELERATE Program should be directed to:

Youth Policy Institute
38 Payne Street
Hamilton, NY

ACCELERATE

Foreword

In late 2005, the Partnership for Results was awarded an 18-month Federal Early Learning Opportunities Act (ELOA) Discretionary Grant to incorporate a broad spectrum of evidence-based services in the daily activities of nine early childhood centers in Auburn, NY and the surrounding area in Cayuga County. The project was designed to promote the literacy and learning skills of pre-school children by introducing a proven cognitive enrichment program in every school, along with school- and family-based prevention and intervention programs to promote the social, emotional, and behavioral competency skills of children. The project was also designed to provide early childhood educators high quality professional development opportunities and ongoing technical assistance in implementing ACCELERATE's constituent programs.

The Cayuga County project was initiated in January of 2006. The Youth Policy Institute (YPI), an independent research and evaluation firm, was contracted to conduct an external evaluation of the program. The evaluation has relied primarily on four sources of data: (1) randomized social-emotional and cognitive assessments across all sites, conducted at the beginning and end of the school year; (2) pre- and post-intervention data for children and parents/caregivers receiving targeted intervention services; (3) interviews with project staff, pre-school leaders and pre-school staff; and (4) periodic reviews of project data maintained by the Partnership in its interagency database (CHARI – Children At-Risk Interagency database).

This Project Evaluation Report presents in-depth findings from these various evaluation activities, which were conducted throughout the program. The Report offers a set of recommendations that Partnership staff, pre-school leaders, and the Cayuga County Child Care Council can use to sustain and further strengthen the implemented programs.

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Introduction

Since January 2006, the Partnership for Results, Inc. (the "Partnership") has implemented the Auburn-Cayuga County Early Literacy Education, Resilience, and TrEatment Project (ACCELERATE). The project is funded by an Early Learning Opportunities Act Discretionary Grant, Administration for Children and Families, Administration on Children, Youth and Families Child Care Bureau. ACCELERATE was implemented in nine pre-school programs that are located in and near Auburn, NY. The centers fall into three roughly defined categories – a Head Start program serving 300 low-income children ages 3 and 4 (with a principal Auburn site and a small satellite site); a universal pre-kindergarten program with 40 students aged 4; and 7 other community-based early childhood centers with between 30 and 114 children each. All told, approximately 775 children ages 2 to 5 attend these programs.

The positive social, emotional, and cognitive development of children can, research indicates, be effectively fostered by using a multi-faceted approach. Recent work in the areas of literacy and early learning, continuum of care, and resilience indicates, as a general matter, that young children are more likely to learn in cognitively stimulating environments where academic activities of teachers are enhanced with evidence-based curricula that have well-articulated, age appropriate scopes and sequences. The capacity to learn is also a function of effective parent involvement in the intellectual and social-emotional development of their young children and in access to early intervention services, where needed, for young children and their caregivers. The goal of the Partnership's ACCELERATE project was to bring science to service, implementing a spectrum of evidence-based programs for preschool children attending all the center-based programs in the target area, as well as for their caregivers. To promote the academic development and emotional resilience of young children, ACCELERATE implemented: a pre-school literacy curriculum with a well articulated and age appropriate scope and sequence of activities; a school-based prevention program that supports the development of appropriate interpersonal skills; a parenting skills programs; and therapeutic interventions for children and families that are provided early in the onset of social/emotional problems and are offered in a natural setting which encourages participation.

The program's spectrum of evidence-based components, offered at every participating pre-school, is as follows:

- *Kindersay First Level Language* curriculum, which is designed to facilitate oral language acquisition and an understanding of the basic concepts and relationships necessary to succeed in reading;
- *Pre-School Second Step*, a curriculum that supports teacher educational efforts by promoting more manageable classrooms; it is designed inculcate self-control and nonviolence in early learning environments;
- *EPIC (Every Person Influences Children)*, a program which provides facilitated, strength-based workshops that serve to develop a range of parenting skills, including techniques which assist caregivers to promote literacy, maintain effective communication with their children and with pre-schools, and encourage an openness on the part of parents to accessing support services when they are needed;

- *Child Centered Play Therapy* provided by qualified therapists to address the social, emotional and behavioral problems of children who, based on a classroom observations by clinicians and DECA-C evaluations, are in need of counseling services;
- *Individualized and integrated service plans* for young children and their family members that address the full range of risks and resiliencies and include appropriate referrals to both non-therapeutic and therapeutic programs and services offered in the community; and
- *Filial therapy*, which, for parents confronting family dysfunctions (such as family violence, mental health issues, and affective management problems), providing family and play to reinforce the social and emotional progress being made in center-based therapy and to make parents effective allies in the child-centered intervention.

The process of implementing ACCELERATE's initiatives involved training in the constituent curricula, the delivery of ongoing technical assistance in those programs, and skill development in the recognition of, and appropriate responses to, developmental problems among young children. This was a design that was calculated to build the capacity of pre-school centers, establishing a framework for early childhood educators to implement, on a continuing basis, a wide range of curricular and other techniques for promoting the early literacy and social/emotional competency skills of students.

ACCELERATE's Implementation Process and Levels of Fidelity

The project's efficacy, the extent to which ACCELERATE achieves its intended outcomes, is directly affected by the manner in which programs were implemented. Success in program rollout, and, as result, in achieving positive outcomes for participating children and families, are contingent upon a number of process factors, including: (1) sufficient and appropriate training and technical assistance for pre-school staff and supervisors in ACCELERATE's prevention programs - Kindersay First Level Language, Pre-school Second Step, and EPIC; (2) identification and employment of appropriately experienced clinicians; (3) provision of effective training and technical assistance for clinicians in waiver and consent protocols, service integration procedures, use of the CHARI database, and Child Centered Play Therapy (CCPT) techniques; (4) procedures for ensuring the involvement of parents/caregivers in the assessment and service planning process, filial therapy, and parenting skills programs and (5) the extent to which the project's programs and services reached the target population. To explore these matters, the evaluating agency, YPI, employed a range of techniques, including reviews of credentials, interviews, site visits, and analyses of CHARI. In nearly all respects, as indicated below, ACCELERATE implementation was achieved at levels intended to promote effective program delivery.

(1) *Training and technical assistance in ACCELERATE's prevention programs:* Once an initial training program in the Kindersay First Level Language curriculum was provided to over 80% of the target pre-school staff by the program's developer in December 2005, all Kindersay and Pre-school Second Step curriculum training and technical assistance was provided by Partnership staff. Both programs took several months to implement in a manner that made it possible for

staff and supervisors to have the skills and capacity to implement on a routine basis. Kindersay requires that, prior to implementation, pre-school staff assess the cognitive levels of children and assign them to developmentally appropriate peer groups. The program also requires that staff assemble an extensive array of program materials. While staff were thoroughly trained in program techniques and, overwhelmingly expressed satisfaction in the thoroughness and accessibility of the initial training, the quotidian demands on pre-school staff made it difficult for them to initiate Kindersay without additional supports. Partnership staff responded appropriately, assisting pre-school staff to assemble Kindersay materials and providing on-site assistance in the assessment and appropriate grouping of children. By September 2006, staff at all pre-school sites clearly understood Kindersay programming and were able to fully implement it. Partnership staff, moreover, was available on a routine basis to respond to ongoing questions and to aid supervisors in training new staff. This careful rollout process, coupled with monitoring and technical assistance several times a week, did not mean, however, that sites implemented the curriculum with equal consistency or fidelity to the program design. In fact, no site internalized Kindersay as an integral part of the educational curriculum during the course of the project. Three of the nine sites, representing approximately 40% of the students, implemented Kindersay on an intermittent basis, quite often selecting lesson plans for occasional use, rather than following the articulated scope and sequence. The other six sites implemented the curriculum minimally.

The incomplete or non-adoption of Kindersay stems from several factors that were gleaned from site visits and interviews. While the curriculum has been proven highly successful at improving the pre-literacy skills of children ages two to five, it was, from the perspective of the staff at the ACCELERATE sites, in need of updating. A common criticism was that the materials were not designed to attract the attention of children as were more recently designed materials available to instructional staff. To some extent this is a function of Kindersay's efforts to minimize costs of implementation. In addition, a majority of the sites had already made commitments to other early childhood education curricula, ones that were either developed locally or were designed by national agencies. While none of these curricula rises to the level of being an evidence-based program, the implementation of Kindersay was far from a foregone conclusion; including Kindersay required that each site decide whether to displace or modify the extant curricula, a difficult and time-consuming process for any pre-school program. The level of Kindersay implementation was therefore, to a great extent, a function of the emphasis placed on the program by the pre-school program director. Finally, not all the pre-school sites have the same focus on cognitive development; those who do are more likely to incorporate Kindersay, at least partially.

By contrast with Kindersay, Pre-School Second Step has been incorporated with fidelity to the curriculum design and as an integral part of most of the ACCELERATE sites. Site visits and interviews indicate that during the last academic year, teachers at three of the pre-schools, serving approximately 60% of the children in the project, taught Second Step units several times a week; two additional sites, representing 10% of the children served, implemented the curriculum with a high level of fidelity on at least a weekly basis; the remaining four sites implemented the program on a routine basis, both less intensively than the other sites. There were several reasons for this successful implementation of Second Step. As with Kindersay, training for Second Step was seen as accessible and helpful, and technical assistance was reported to be responsive, timely, and effective. Unlike Kindersay, however, Second Step materials are being continuously renewed and, from the perspective of staff, more compelling for

students. In addition, this violence prevention program, which enhances the ability of young children to develop positive social and emotional skills, addressed a relatively unmet curriculum area in the participating programs, while Kindersay was, in many cases, competing with extant curricula. Second Step, if properly implemented, can serve to support efforts of clinicians providing counseling services by helping create a stable classroom environment, one which helps children find alternatives to aggressive ways of responding to conflict or disagreement. ACCELERATE clinicians, recognizing the complementary nature of Second Step, did much to reinforce its implementation, often helping staff to improve their skills in this area by co-implementing units of the curriculum. This served both to ensure regular use of the program while also providing clinicians opportunities to reinforce critical social and emotional management skills among the pre-school staff.

Training, technical assistance, and monitoring of ACCELERATE's EPIC parenting skills program has been provided by EPIC of Central NY, a Cayuga County affiliate of the evidence-based program's parent organization. Early in the project, this agency, in consultation with the Project Director, decided to supplement the existing pool of EPIC presenters by training pre-school staff to co-facilitate sessions with experienced facilitators. This strategy was triggered by low EPIC enrollment and participation levels early in the project. With school staff knowledgeable about EPIC and engaged in program recruitment and delivery, it was hoped that parents would be more successfully recruited to participate in the parenting classes. During training sessions in March and April 2007, staff representatives from all the pre-school centers completed the EPIC facilitators' training. Enrollment levels of parents and other primary caregivers from the target pre-schools increased modestly during the last 6 months of the project as a result of this change in recruitment and service delivery strategies. As of this writing over 50 parents and caregivers have been or are involved in pre-school parenting skills workshops; this is significantly short of the goal of 250 participants, and the trend in enrollments shows no indication that enrollments will meet the targets originally set by ACCELERATE's implementers. Nonetheless, since the program facilitators are volunteers, it is expected that EPIC will be able to continue once project funds are expended. Given that EPIC enrollments are recent, there are no data available as of this writing regarding the percentage of parents participating for the full six weeks of sessions or the impact of the sessions on parenting skills, which are based on retrospective surveys distributed at the last session.

(2) *Clinical staffing:* The Partnership employed three clinicians to provide CCPT and filial therapy interventions for the ACCELERATE project. A credential review and interviews indicates that all three had far more than sufficient education in relevant fields and extensive, relevant experience. The two clinicians offering CCPT services were trained in the therapeutic modality at State University of New York, Oswego, which offers advanced training programs in the intervention; both of these clinicians have Masters level counseling degrees with specialties in early childhood intervention; each has at least two years of experience providing CCPT services to children.

The ACCELERATE filial therapist has a Ph.D. in social psychology and over twenty years of experience providing clinical services to children and families. He was not, at the outset of the project, trained in filial therapy techniques; however, before implementing the intervention, Professor J. Mullen of the State University of New York, Oswego, provided him an intensive, individualized training program in CCPT and filial therapy.

(3) *Training and technical assistance for clinicians and consequent fidelity to the program model:* ACCELERATE's clinicians all received an intensive, one-week training in critical case management skills and protocols. This training was supplemented by weekly clinical supervision meetings provided by senior therapists and routine technical assistance provided on an as-needed basis by the Partnership's senior staff.

CCPT services require consent of a parent or primary caregiver, and the Partnership has established protocols and forms for obtaining a limited waiver of confidentiality and consent to assessment and treatment. A retrospective review of CHARI data indicates that in all cases where CCPT services were provided, a time-limited waiver and consent form was obtained and logged in the database in a timely form.

The ACCELERATE model also requires that all CCPT clients and their families be comprehensively assessed so that multi-disciplinary treatment and integrated service plans can be developed for each client. In all closed and completed cases, CCPT clinicians established treatment goals in three domains – family functioning, education, and mental health. Data in CHARI and interviews with the clinicians indicates that all CCPT clients and their families had their unmet service needs reviewed. In keeping with the program model, clinicians routinely addressed these needs to determine whether the school-based counseling services should be supplemented by referrals to other appropriate and available programs and services. A retrospective analysis by YPI of closed and completed CCPT cases in the CHARI database indicates that clinicians identified unmet service needs in 78% of the closed and completed cases, making an average of 1.3 referrals for additional services per case. Seventy percent of these referrals were for filial therapy to address parental/caregiver dysfunctions and to assist parents in becoming more effective allies in CCPT services. The remaining referrals were to physicians, occupational, speech, and/or physical therapists, ancillary mental health services, and special education committees.

Interviews with project staff and community providers indicate that the predominance of filial therapy in ACCELERATE service plans is an artifact of two factors. To a greater extent than is predicted by research in early childhood development research, parents and primary caregivers of children with social and emotional problems were themselves in need of either family or individualized adult mental health counseling services. In addition, there have been, throughout the project, long waiting lists for such adult services in Cayuga County, a result of fiscal retrenchment and a shortage of qualified therapists; as a result, filial therapy was not only an appropriate referral option in many cases, it was the only available one. That only 30% of all service referrals in CCPT cases were for unmet service needs of the pre-school client is, in part, a function of the paucity of available and appropriate support services for young children in Cayuga County. In addition, the ACCELERATE design relies on the DECA-C (Devereux Early Childhood Assessment – Clinical) as the principal assessment instrument used by the CCPT clinicians. The instrument is finely tuned to primarily mental health resilience and risk factors, which, coupled with the fact that both CCPT clinicians are mental health counselors, led a slight under-identification of service needs in other areas. Thanks to routine review of CHARI data by Partnership senior staff, this predisposition in service referrals was identified after six months of service delivery and addressed through clinical supervision and technical assistance services.

The project created a rigorous adherence to Child Centered Play Therapy (CCPT) techniques, as evidenced by interviews with staff and clinical supervisors, a retrospective review of CHARI data, and information gleaned from clinician responses to the *CCPT Fidelity of Implementation Checklist* developed by YPI and Professor J. Mullen of SUNY Oswego. This

fidelity to certain therapeutic strategies and techniques was in large part a function of a 16-hour intensive training in CCPT techniques provided by Professor Mullen at the outset of the project, coupled with ongoing training, technical assistance, and clinical supervision services provided by her and by senior Partnership staff.

The project also established a high level of fidelity to established filial therapy techniques, as evidenced by interviews with staff and the clinical supervisor, Professor Mullen. All the core elements of filial therapy were made an integral part of each intervention provided, including: a focus on the therapeutic value of play; efforts to improve the capacity of the caregivers to maintain nurturing relationships with their children; and the development of strategies for maintaining a home environment that is supportive of the social-emotional growth of young children. In each case, moreover, the filial therapist administered the Family Environment Scale (FES) at the outset of the intervention (permitting the therapist to identify and target family counseling needs) and at termination (providing reliable outcome measures).

(4) *Procedures for ensuring the parental involvement*: As an integral part of the project design, ACCELERATE staff employed a wide range of techniques to encourage involvement of parents and other primary caregivers (hereafter referred to as parents) in project programs and services. Initial contacts to discuss CCPT and filial services were conducted by the project clinician assigned to the case. These meetings occurred in places that were reasonably calculated to be the least threatening to parents, including homes, the pre-school centers, and other community settings. In all cases, parents were provided ample opportunities to ask questions and raise concerns about the intervention. Once a consent and waiver was signed, each parent was involved in the evaluation process, including the completion of a DECA-C for CCPT cases and the FES for filial therapy, and in the service planning process, where family members worked with the clinicians to identify unmet service needs in the household and to develop a plan for accessing available and appropriate services. A critical component of CCPT, moreover, is the integration of play therapy practices in the household to support the positive development of the young clients. In all cases, clinicians consulted with parents to inform them about particular techniques that would reinforce the CCPT intervention. Finally, for both CCPT and filial therapy, parents were all encouraged to participate in the development of discharge plans.

The rollout of EPIC parenting skills sessions also involved numerous strategies to encourage parental engagement. EPIC staff made presentations at each of the pre-school centers and distributed explanatory materials widely. EPIC sessions were scheduled at community sites across Auburn, particularly the pre-school centers themselves, with child care provided during the sessions. Teachers and administrators from the participating sites worked with Partnership and EPIC staff to encourage parental involvement. As noted above, pre-school staff were trained as EPIC facilitators, creating a greater ability to explain the benefits of the program and permitting more informed discussions at EPIC sessions of parental involvement in the education of their children and in effective techniques of communicating with pre-schools. Even though implementation was well formulated and executed, parental involvement in EPIC programming was limited during the entirety of the project. YPI can only speculate about the reasons for this general lack of interest in a high quality, accessible, and needed program. At least 30% of the caregivers in the participating sites are single parents, and time constraints may have limited their ability to participate. Studies of EPIC indicate a greater interest in these workshops among parents of elementary school students, when school communication and efficacy issues become more important. Finally, in the ACCELERATE project, EPIC had a target population of

approximately 700 families with young children, and it may be that the involvement of 50 of them in parenting skills sessions, representing a take-up rate of over 7%, may be the most that can be expected.

(5) *The extent to which ACCELERATE programs and services reached the intended target population.* The universal prevention programs, Kindersay and Second Step, were implemented in all the target schools, although, as discussed earlier, the former was not employed to any measurable extent in several sites and, to the degree it was administered in some sites, it was done with less than the highest level of fidelity to the program model. As intended in the project model, CCPT was provided at all sites (including Stepping Stone, which closed mid-way through the project and recently re-opened under new management; **see Table 1**). An analysis of the 80 CCPT cases opened during the project from early January 2006 through October 16, 2007, (68 closed and 12 open) indicates that the utilization rate was greatest in the two schools with the highest percentage of low income students; 48 of the CCPT cases (60% of the total) were opened for Head Start and Neighborhood House students.

Table 1: CCPT Cases Opened at Each ACCELERATE Site, January 2006 to mid-October 2007 (N = 80)

	# of enrolled students ages 2-5	# of CCPT cases opened	% of total CCPT cases
BOCES	30	4	5%
Cayuga Community College	55	1	1%
Early Childhood Center	30	6	8%
Gavras Universal Pre-K	40	2	3%
Head Start (2 sites)	300	31	39%
Montessori	50	6	8%
Neighborhood House	65	17	21%
Stepping Stone	40	7	9%
Westminster	80	4	5%
YMCA	114	2	3%
Total	804	80	

All students receiving CCPT services were evaluated using the DECA-C instrument (Devereux Early Childhood Assessment – Clinical), with both teachers and parents serving as raters. The instrument has three protective factor subscales:

1. Initiative – the extent to which a child can use independent thought and action to have his/her needs met in a socially acceptable fashion;
2. Self-control – a child's ability to experience a range of feelings and express them in socially appropriate ways;
3. Attachment – the extent to which a child is establishing mutual, strong, and long-lasting relationships with significant adults;

and it has four behavioral concern subscales:

1. Attention Problems – the extent to which a child has difficulties focusing on a task and ignoring competing environmental stimuli;

2. Aggression – a measure of a child's use of hostile or destructive acts directed at persons or things;
3. Withdrawal/Depression – the extent to which the child is self-absorbed and often attends to his or her own thoughts or play, rather than engaging in reciprocal interactions;
4. Emotional Control Problems – a measure of a child's difficulties in modifying the overt expression of negative emotion.

A T-score of 40 and below on a protective factor subscale is an indication of "concern"; that is, that a targeted therapeutic intervention is probably needed to address the skills measured by the subscale. A T-score of 60 and above on a behavioral concern subscale also indicates that an intervention to address the problem is warranted. Of the 80 children screened, with teachers as raters, 69.6% had a T-score of 40 or below on one protective factor subscale and 45.7% on at least 2 of these subscales.[1] 91.3% had a T-score of at least 60 on one behavior control subscale, 80.4% on at least 2 of these subscales. Over 92% students receiving CCPT services had a T-score on at least one DECA-C subscale (protective or behavioral) which indicated a concern that needed to be addressed with a targeted intervention. In other words, regarding CCPT services, the ACCELERATE program generally reached its target population.

ACCELERATE's filial therapy program also served those it was intended to benefit. For the nine cases opened and completed during the course of the intervention, an FES was administered at the outset of the intervention. This instrument provides standardized scores on 10 subscales, defined as follows:

1. family cohesion – the degree of commitment, help, and support family members provide for one another;
2. expressiveness – the extent to which family members are encouraged to express their feelings directly;
3. conflict – the amount of openly expressed anger and conflict among family member (with subscales 1 – 3 comprise a composite "family relationship" scale);
4. independence – the extent to which family members are assertive, self-sufficient, and make their own decisions;
5. achievement-orientation – how much activities (such as school and work) are cast into an achievement-oriented or competitive framework;
6. intellectual-cultural orientation – the level of interest in political, intellectual, and cultural activities;
7. active-recreational orientation – the amount of participation in social and recreational activities;
8. moral-religious emphasis – the emphasis on ethical and religious issues and values; (subscales 4 – 8 comprise a composite "personal growth" scale);
9. organization – the degree of importance of clear organization and structure in planning family activities and responsibilities; and
10. control – how much set rules and procedures are used to run family life (subscales 9 and 10 comprise the "system maintenance" in the context of stress scale).

[1] LeBuffe, P.A., & Naglieri, J.A. (1999). Devereux Early Childhood Assessment Program (DECA). The Devereux Foundation. Lewisville, NC: Kaplan Press.

A standard score of less than 40 on any FES subscale is a strong indicator of a need for a targeted, therapeutic intervention.[2] For the families receiving filial therapy services during the course of the project, there were, on average, two subscales with standard scores below 40 on the intake FES, and each family had at least one such score on at least one subscale.

ACCELERATE's Outcomes

The ACCELERATE project's Child Centered Play Therapy (CCPT) services were performance based. In order to measure outcomes, the DECA-C was administered by parents (or other primary caregivers) and by teachers at the initiation and termination of the intervention. The assessment instrument has two sets of composite scores, *Total Protective Factors* (which is a cumulative score derived from three subscales defined on page 8 above – Initiative, Self-Control, and Attachment) and *Total Behavioral Concerns* (which is derived from four subscales, also defined on page 8 – Attention Problems, Aggression, Withdrawal/Depression, and Emotional Control Problems). For the 46 CCPT cases that were closed and completed and had both parental and teacher pre- and post-administrations of the DECA-C, a great majority of both categories of raters, parents and teachers, reported improvements in both composite scores as a result of the intervention:

- For Total Protective Factors –
  - 69% of parental scores were higher at the end of the intervention, with an average pre-post improvement of 10.2%; and
  - 70% of teacher scores increased, with an average pre-post change of 13.2%.
- For Total Behavioral Concerns –
  - 62% of parental scores were lower (indicating improvement in this area), with an average pre-post decline of 8.9% and
  - 74% of teacher scores decreased, with an average pre-post decline of 9.1%.

As seen in **Tables 2 and 3** below, for every DECA-C subscale and total scale there was improvement in mean T-scores as a result of the provision of CCPT services. In addition, while the average initial scores for behavior control were high and consistently above the level indicating the need for intervention (i.e. a T-score of 60), the post-intervention levels indicated average scores below the level of concern for teachers and at the threshold of concern or below the level of concern for parents and other primary caregivers.

[2] Moos, R.H., & Moos, B.S. (2002, 3rd ed.) Family Environment Scale Manual: Development, Applications, Research, Mind Garden, Inc.

Table 2: CCPT: Pre- and Post-Intervention Mean DECA-C T-Scores (Teachers as Raters)

DECA-C subscale Post- vs. Pre-intervention	Mean	N	Std. Deviation	Std. Error Mean
Initiative (post)	51.46	46	8.961	1.321
Initiative (pre)	44.72	46	9.986	1.472
Self Control (post)	44.85	46	9.009	1.328
Self Control (pre)	40.98	46	10.008	1.476
Attachment (post)	47.91	46	7.685	1.133
Attachment (pre)	44.46	46	10.392	1.532
Total Protective Factor (post)	47.22	46	7.650	1.128
Total Protective Factor (pre)	41.70	46	9.874	1.456
Withdrawal/Depression (post)	54.93	46	7.526	1.110
Withdrawal/Depression (pre)	59.72	46	8.909	1.313
Emotional Control Problems (post)	57.89	46	10.305	1.519
Emotional Control Problems (pre)	61.59	46	12.968	1.912
Attention Problems (post)	58.93	46	9.315	1.373
Attention Problems (pre)	64.26	46	8.739	1.289
Aggression (post)	57.26	46	10.350	1.526
Aggression (pre)	60.04	46	9.596	1.415
Total Behavior Control (post)	58.41	46	9.542	1.407
Total Behavior Control (pre)	64.09	46	9.079	1.339

Table 3: CCPT: Pre- and Post-Intervention Mean DECA-C T-Scores (Parents as Raters)

DECA-C subscale Post- vs. Pre-intervention	Mean T-Score	N	Std. Deviation	Std. Error Mean
Initiative (post)	46.29	45	10.533	1.570
Initiative (pre)	42.00	45	8.878	1.323
Self Control (post)	47.27	45	10.556	1.574
Self Control (pre)	43.42	45	10.480	1.562
Attachment (post)	46.31	45	10.431	1.555
Attachment (pre)	42.76	45	7.423	1.107
Total Protective Factor (post)	49.84	45	12.036	1.794
Total Protective Factor (pre)	46.27	45	9.928	1.480
Withdrawal/Depression (post)	46.29	45	10.533	1.570
Withdrawal/Depression (pre)	42.00	45	8.878	1.323
Emotional Control Problems (post)	57.44	45	11.289	1.683
Emotional Control Problems (pre)	60.40	45	10.246	1.527
Attention Problems (post)	59.67	45	11.449	1.707
Attention Problems (pre)	66.53	45	5.775	.861
Aggression (post)	60.31	45	10.546	1.572
Aggression (pre)	63.47	45	8.841	1.318
Total Behavior Control (post)	57.36	45	11.270	1.680
Total Behavior Control (pre)	61.36	45	9.190	1.370

As indicated in **Tables 4** and **5** below, the changes in DECA-C mean T-scores from pre- to post-intervention assessments were significant across all the subscales ($p < 0.05$). It is evident, from the perspective of parents and teachers alike, that ACCELERATE's CCPT services had a substantial positive effect on children's resilience (the capacity to thrive socially, emotionally and academically in the face of adversity) and an equally strong effect on the capacity of children to improve their social and emotional competency skills, especially in pre-school classroom settings.

Table 4: CCPT: Changes in Mean DECA-C T-Scores (Teachers as Raters)

	Paired Differences				t	df	Significance
	Change in Mean T-Score	Std. Deviation	95% Confidence Interval of the Difference				
			Lower	Upper			
Initiative	6.739	8.352	4.259	9.219	5.473	45	.000
Self Control	3.870	9.595	1.020	6.719	2.735	45	.005
Attentiveness	3.457	10.066	.467	6.446	2.329	45	.012
Total Protective	**5.522**	**9.285**	**2.764**	**8.279**	**4.033**	**45**	**.000**
Withdrawal/ Depression	-4.783	9.211	-7.518	-2.047	-3.522	45	.001
Emotional Control	-3.696	11.789	-7.196	-.195	-2.126	45	.020
Attention	-5.326	7.789	-7.639	-3.013	-4.638	45	.000
Aggression	-2.783	9.026	-5.463	-.102	-2.091	45	.021
Total Behavior	**-5.674**	**9.606**	**-8.526**	**-2.821**	**-4.006**	**45**	**.000**

Table 5: CCPT: Changes in Mean CCPT DECA-C T-Scores (Parents and Other Primary Caregivers as Raters)

	Paired Differences				t	df	Significance
	Change in Mean T-Score	Std. Deviation	95% Confidence Interval of the Difference				
			Lower	Upper			
Initiative	3.844	8.517	1.286	6.403	3.028	44	.002
Self Control	3.556	8.920	.876	6.235	2.674	44	.005
Attentiveness	3.578	9.896	.605	6.551	2.425	44	.010
Total Protective	**4.289**	**8.264**	**1.806**	**6.772**	**3.481**	**44**	**.000**
Withdrawal/ Depression	-2.956	9.943	-5.943	.032	-1.994	44	.026
Emotional Control	-6.867	10.569	-10.042	-3.691	-4.358	44	.000
Attention	-3.156	9.594	-6.038	-.273	-2.206	44	.017
Aggression	-4.000	10.260	-7.083	-.917	-2.615	44	.006
Total Behavior	**-6.067**	**9.785**	**-9.006**	**-3.127**	**-4.159**	**44**	**.000**

It is an indication of the efficacy and consistency of the CCPT services that the positive effect of the intervention, as measured by the mean changes in protective factor and behavioral concern T-scores, did not vary by the school attended or by the ethnicity of the child. The effects of the CCPT intervention did by gender, as indicated in **Table 6** below, although the variation

was not statistically significant. From the perspective of parents and teachers alike, the average improvement in Total Behavior Concern scale mean T-scores was greater for boys than girls. In addition, when teachers were DECA-C raters, and not parents, boys receiving CCPT services had a greater increase in mean Total Protective Factor T-scores than did girls. Interviews with project and school staff, coupled with site visits, does not indicate that these different outcomes were in any way the product of gender specific conduct by implementers. In addition, there is not evidence in the validating research for Second Step, Kindersay, and CCPT that any gender differentiation occurs with the implementation of these programs. Rather, these data indicate that the implemented programs are creating a progression to a mean regardless of gender. Boys in the ACCELERATE project tend to have lower DECA-C protective factor scores and higher behavioral concern scores than girls at the outset of the CCPT interventions. By the end of the intervention, the gap in scores has narrowed. Boys benefited more from the intervention because that had more room to benefit.

Table 6: CCPT: Changes in Mean DECA-C T-Scores by Gender

		DECA-C Administered by Parents or Other Primary Caregivers				DECA-C Administered by Teachers			
	Gender	N	Change in Mean T-Score	Std. Deviation	Std. Error Mean	N	Change in Mean T-Score	Std. Deviation	Std. Error Mean
Total Protective	F	16	4.1250	8.01561	2.00390	17	4.4706	12.02662	2.91688
	M	29	4.3793	8.53737	1.58535	29	6.1379	7.40523	1.37512
Total Behavior	F	16	-5.6250	8.59360	2.14840	17	-5.0588	9.31713	2.25973
	M	29	-6.3103	10.52244	1.95397	29	-6.0345	9.91565	1.84129

At the termination of each completed case, CCPT clinicians made a summative evaluation of the extent to which a client has (or has not) made strides in meeting his/her therapeutic goals. The pattern of these summative evaluations parallels the pattern of CCPT outcomes as measured by pre- and post-intervention administrations of the DECA-C. For the 46 closed and completed cases, the clinicians established 290 goals to address problems and disorders in three domains: family (108 goals); education (111); and mental health (71). Overall, in only 5% of the goals, there was no change and in 2% there was some level of regression or failure to cooperate. For the overwhelming majority of goals, clinicians recorded progress in meeting the goal: for 38% of the goals, minor progress was made; for 46%, moderate progress; 8% significant progress; and in 2% of the cases, the goal was met. This general pattern did not vary by the category of goal set (family, education, and mental health).

For each of the filial therapy cases closed and completed during the project, a pre- and post-intervention assessment was conducted with the family using the Family Environment Scale (FES). However, notwithstanding 36 referrals to the program, only nine cases were initiated, a number too small to conduct an analysis of the intervention's outcomes. Based in interviews with project clinicians and school staff, this low take-up rate (of 25%) was the result of several factors. Many of the households had only one parent who could not easily schedule filial therapy sessions given pressing family and work responsibilities. In some instances, parents refused to acknowledge the need for support services on their part or that of their young child(ren). Most typically, parents rejected the intervention because of a stigma associated with mental health

services. What little can be gleaned from the 9 sets of FES is indicative of some improvement as a result of the intervention. In 6 of the 9 cases, there were more FES subscales indicating strength (a T-score $\geq$ 60) at the termination of the cases than at the beginning of the intervention.

ACCELERATE's Impacts

To assess the general changes in social and emotional competency of children as a result of the ACCELERATE project, the Youth Policy Institute selected the Devereux Early Childhood Assessment (DECA) to be used in a randomized assessment of children in the Fall and Spring of the 2006-2007 school year. The DECA has high levels of reliability (internal, test-retest, and inter-rater) and validity (content-related, criterion-related, and construct related). Early childhood educators in the target pre-schools administered it to a systematic random sample of children in their classrooms (ages 3-5). The assessments were conducted and recorded in a manner that protected the identity of all sampled children.

The DECA has three protective factor subscales (Initiative, Self-Control, and Attachment), an aggregate protective factor subscale (Total Protective Factors) and a risk subscale (Behavioral Concerns). The DECA protective, or resilience, subscales measure the capacity of children to cope with adverse events, whether individual, in their community, at school, or in their family. **Table 7,** below, provides definitions for each of the subscales. The DECA Behavioral Concerns scale is a composite measure of a wide range of challenging and problem behaviors including aggression, withdrawal, inattentiveness, and extreme emotional swings. High scores are associated with emotional and behavioral problems that are not, for the most part, developmentally appropriate.

Table 7: Definitions of DECA Protective Factors

Initiative is a measure of autonomy and self-efficacy. Children with high scores generally display the ability to purposefully use independent thoughts and actions and are active learners who initiate or organize activities with other children.
Self-Control is a measure of the child's capacity to use words and actions to express a range of feelings normatively. High scores are associated with the ability to handle frustration and other negative emotions in socially appropriate manners and to be cooperative and respectful.
Attachment is a measure of whether there is a mutual, strong, and long-lasting relationship between a child and a significant adult, such as the teacher or caregiver. High scores are associated with the ability to be effective in gaining positive attention from adults and other children.
Total Protective Factors provides an overall indication of a child's resilience. High scores are associated with an enhanced ability to handle risk and negative experiences.

The social and emotional status of pre-school students in ACCELERATE schools changed slightly during the 2006-2007 year. The average Total Protective Factor percentile score increased by 2 percent. One protective subscale, Initiative, increased by a modest amount (3.9 percent), while the average percentile score for Self-Control and Attachment declined by small amounts. The average percentile score for Behavior Control was slightly higher at the end of the project, indicating some decline in self-regulatory skills. None of these changes in mean subscale

percentile scores was statistically significant. By the end of the project, the mean percentile scores were, according to nationally normed standards, reflective of average levels of risk and resilience.

Table 8: Mean DECA Percentile Scores for ACCELERATE Students, 2006-07

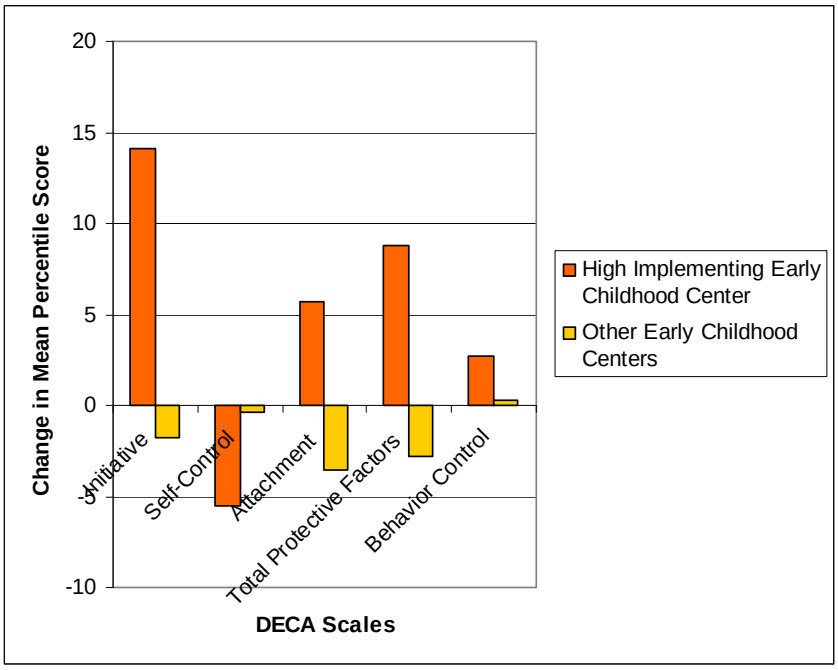
	Fall 2006 N=132	Spring 2007 N=126	Percent Change
Initiative	37.63	41.49	+3.9%
Self-Control	61.97	58.89	-3.1%
Attachment	24.65	24.17	-2.0%
Total Protective Factors	38.98	39.92	+2.0%
Behavioral Concerns	50.89	52.57	+3.3%

While mean DECA percentile scores did not change substantially over the course of the school year, it is clear that there is a strong relationship between level of implementation of ACCELERATE programs and services and outcomes. Using interviews of project staff, site visits, and data regarding activity levels, YPI ranked each school participating in ACCELERATE by two implementation criteria, the degree to which program activities were conducted on a routine basis throughout the school and the fidelity of those activities to the program model. Three of nine schools were distinct in terms of their high levels of implementation of Second Step, EPIC, Kindersay, and referrals of appropriate children for CCPT services. The enrollments in the three high implementing schools represented roughly 40 percent of all children affected by ACCELERATE. The other six schools, while they participated in the project, implemented some or all of the ACCELERATE projects less extensively or routinely, and with lower levels of fidelity. As indicated in **Table 9** and **Figure 1**, below, in the schools that were ACCELERATE's high implementers, children showed statistically significant, positive improvements in three of four protective subscales – Initiative, Attentiveness, and Total Protective – while children in the other schools had decreasing percentile scores in those scales.

Table 9: Changes in Mean DECA Percentile Scores: High Implementing Schools v. Other Schools

	Change in Mean Percentile Score	t	df	Significance
High Implementing Schools				
Initiative	14.10	2.49	98	.007
Self Control	-5.54	-0.80	98	.21
Attentiveness	5.70	1.28	98	.10
Total Protective Factor	**8.81**	1.57	98	**.05**
Behavioral Concern	**2.69**	0.36	98	**.36**
All Other Schools				
Initiative	-1.80	-0.36	156	.36
Self Control	-0.37	-0.08	156	.47
Attentiveness	-3.55	-0.80	156	.21
Total Protective Factor	**-2.76**	-0.56	156	.28
Behavioral Concern	**0.24**	0.04	156	.48

Figure 1: Changes in Mean DECA Percentile Scores: High Implementing Schools v. Other Schools

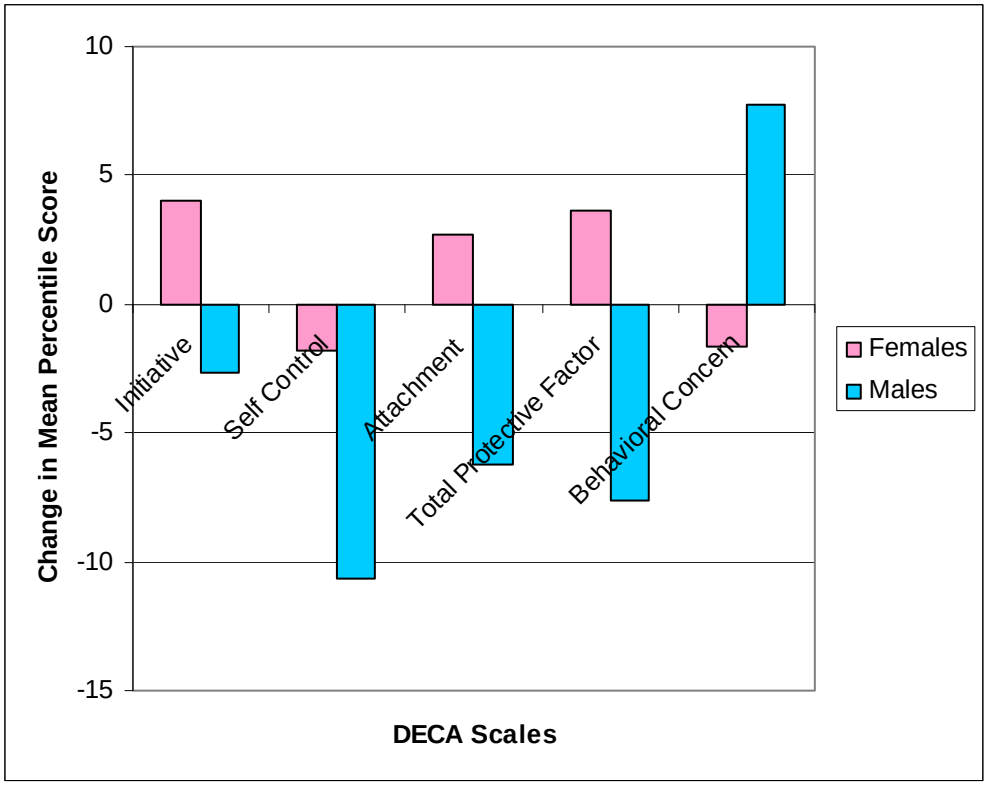


With the targeted intervention of CCPT, boys showed more gains than girls, but both benefited from the intervention. That is not the case with ACCELERATE's activities for all children, as measured by the randomized administration of the DECA in the Fall and Spring of the 2006-07 school year. As is clear from **Table 10** and **Figure 2**, girls are more likely to develop social and emotional competency skills and acquire greater resilience in this program than boys. It is important to note that, aside from Self Control for girls, these changes in mean scores were not statistically significant. These gender differences are far less apparent in high implementing centers than in the others, an indication that, without substantial efforts to promote positive social and emotional development, there will be a divergence in the development of boys and girls, both in terms of resilience and of behavioral problems,

Table 10: Changes in Mean DECA Percentile Scores by Gender

	Change in Mean Percentile Score	t	df	Significance
Female				
Initiative	4.03	0.75	127	.16
Self Control	-1.8	-0.35	127	.06
Attentiveness	2.70	0.55	127	.51
Total Protective Factor	**3.62**	0.68	127	**.38**
Behavioral Concern	**-1.63**	-0.26	127	**.27**
Male				
Initiative	-2.68	-0.48	98	.89
Self Control	-10.62	-1.52	98	.25
Attentiveness	-6.24	-1.43	98	.13
Total Protective Factor	**-7.66**	-1.37	98	.99
Behavioral Concern	**7.74**	1.09	98	.67

Figure 2: Changes in Mean DECA Percentile Scores by Gender



To assess the general changes in the cognitive abilities of children as a result of the ACCELERATE project, the Youth Policy Institute selected the Boehm-3 Preschool to be used in a randomized assessment of children in the Fall and Spring of the 2006-2007 school year. The Boehm-3 has high levels of reliability (internal, test-retest, and inter-rater) and validity (content-related, criterion-related, and construct related). Project and evaluation staff administered the assessments it to a systematic random sample of children in their classrooms (ages 3-5). The assessments were conducted and recorded in a manner that protected the identity of all sampled children.

Boehm-3 percentile scores are age standardized in increments of 6 months, permitting exact comparisons of knowledge of basic concepts with age-level peers. As seen in **Table 11,** below, there were dramatic improvements in the cognitive abilities of children as a result of the ACCELERATE project. In the Spring of 2006, the average Boehm-3 score was at the 50th percentile; by the end of the school year, children in the target early childhood centers were performing at the nearly the 63rd percentile, a 24% improvement.

Table 11: Boehm-3 Preschool Percentile Scores, 2006-07 School Year

	N	Mean	Std. Deviation
Fall '06	139	50.63	30.747
Spring '07	129	62.63	28.743

There is an inconsistent relationship between level of implementation of ACCELERATE projects and the change in mean percentiles. One of the three high implementing schools saw no change in the students' mean Boehm-3 percentile score; the other two had the highest increases of all the schools, 31% and 39%. Both boys and girls benefitted from ACCELERATE programs and services at a significantly significant level, as is indicated in **Tables 12** and **13** below. The increase in grasp of basic concepts was, as measured by mean percentiles, 59% greater for boys than girls. As a result, ACCELERATE projects narrowed the gender achievement gap.

Table 12: Boehm-3 Preschool Percentile Scores, 2006-07, by Gender

	N	Mean	Std. Deviation
Female			
Fall '06	75	56.75	30.908
Spring '07	75	66.15	30.055
Male			
Fall '06	54	42.04	29.077
Spring '07	53	56.96	31.012

Table 13: Changes in Mean Boehm-3 Percentile Scores by Gender

	Change in Mean Percentile Score	t	Significance
Female	9.40	2.00	.02
Male	14.93	2.57	.06

Conclusions

This Youth Policy Institute evaluation report indicates that the ELOA-funded ACCELERATE project was an effectively implemented and had a profound impact on the positive social, emotional, and cognitive development of children in the target early childhood centers.

Implementation process and levels of fidelity: The Partnership for Results provided sufficient and appropriate training and technical assistance for pre-school staff and supervisors to implement the ACCELERATE prevention programs. When modifications needed to be made in training and technical assistance, such as for EPIC and Kindersay, the Partnership and its collaborators proved able to collect relevant data and make informed adjustments. Clinicians employed to provide play and filial therapy had high levels of specialized education and extensive experience working with children and families, a critical pre-requisite to effective implementation. They were comprehensively trained in project protocols, an inter-agency database to track cases, and in evidence-based intervention techniques. All the procedures to involve parents in ACCELERATE programming were thoroughly implemented, and, critically, the intended targets of each program were served.

Not all programs were implemented to the extent intended, particularly Kindersay, EPIC, and filial therapy, but the evaluation indicates that was not due to ineffective strategic planning, a

lack of diligence, or insufficient training or technical assistance. Kindersay, while affordable and effective, is somewhat dated, and some of the participating schools had laready invested considerable energy implementing alternative programs. EPIC parenting skills programming and filial therapy have reached fewer families than intended, but, as the report indicates, that may be the result of insuperable issues, including the lack of availability of single parents who make up a significant proportion of the target parents. It may be, with more aggressive support from center staff for these two programs, that more parents will participate in the future. Pre-School Second Step, by contrast, was implemented to the extent intended and has become an inextricable part of the centers' prevention programming.

There is little doubt that ACCELERATE programs, after they were implemented, generally maintained rigorous levels of fidelity to program models. This was particularly the case for CCPT, filial therapy, EPIC, and Second Step. High levels of fidelity were largely the result of effective and ongoing training and technical assistance, the commitment of project staff to adhering to proven program models, and assiduous monitoring by the Partnership staff. As evidence from project assessment instruments indicates, the programs served those most likely to benefit from them. The evidence-based design for ACCELERATE's targeted interventions, which includes comprehensive evaluation, integrated service planning to address unmet service needs, and family involvement in assessment, service planning, and treatment, multi-disciplinary treatment goals, was consistently and effectively implemented by project clinicians.

Outcomes and Impacts: There were too few cases to systematically analyze the outcomes from filial therapy. CCPT, however, was quite active during the project, serving 80 children. An analysis of DECA-C and other clinical data indicates that, in closed and completed cases, the resilience of children was significantly improved and the levels of behavioral problems substantially reduced. There is some, limited data that filial therapy also had a salutary effect, but more cases are needed for this conclusion to be definitive.

An analysis of randomly administered DECAs indicates that ACCELERATE had a significant and positive impact on the social and emotional development of children in those early childhood centers where the project initiatives were implemented extensively and with fidelity. This is evidence that the project's comprehensive approach can, if programs are put into place as intended, promote the positive social and emotional development of all children in an early childhood center, even if they do not receive a targeted intervention such as CCPT. ACCELERATE also had a dramatic impact on the cognitive development of young children in Auburn, improving their grasp of basic concepts significantly in all but one school.