OVERALL EVALUATION OF *READY FOR SCHOOL*

First Chance for Children, a not-for-profit community organization dedicated to coordinating and supporting early childhood services in Boone County, Missouri, received a Foundations for Learning grant from the U.S. Department of Education in 2005 to implement the DECA Program in six early childhood centers. The goal of the 18-month grant, called *Ready for School*, was to foster young children's resiliency by: (1) enhancing preschool teachers' knowledge and use of teaching strategies to promote social-emotional functioning; and (2) providing individualized family support services, including home visits. Boone County Educare provided the onsite support, and University of Missouri's Center for Family Policy and Research provided the evaluation services for this project. The effectiveness of *Ready for School* was assessed with both quantitative and qualitative research methods. These findings highlighted the positive effects of the program on children, teachers, directors, and families.

QUANTITATIVE FINDINGS

Method

Participants

A total of 176 children from 19 classrooms and 7 centers were rated across at least three time points. Table 1 shows demographic characteristics of these children, including the frequency of risk factors present in the sample. Nineteen lead teachers and 15 assistant teachers also participated. For the lead teachers, the average number of years in the field was 8.3 years, the average number of years of education was 14.0 years, the average number of college hours was 78.3, and the average number of college credits specific to early childhood was 20.8.

Table 1. Demographic Characteristics of Participating Children

Characteristic	%
Gender	
Male	57%
Female	43%
Risk group	
Low (0-1 risk factors)	63%
High (2 + risk factors)	37%
Specific risk factors (incidence for entire sample)	
Income $\leq$ 200% of federal poverty level	63%
Abuse, maltreatment, neglect	6%
Exposed to violence	21%
Has been homeless	9%
Exposed to parental depression or other mental illness	13%
Exposed to parental substance abuse	14%
Early behavioral and peer relationship problems	13%
Low birth weight	3%
Cognitive deficit/developmental disability	7%
Removed from an early childhood program due to behavioral problem OR at risk of being removed	6%

Measures

Devereux Early Childhood Assessment (DECA; LeBuffe & Naglieri, 1999). This standardized, norm-referenced instrument measures the frequency of 27 positive behaviors and 10 problem behaviors typically seen in preschool children (ages 2-5). Both teachers and parents rate children using the DECA. The instrument has four subscales measuring different aspects of socio-emotional development. Three of the subscales—Initiative, Self-control, Attachment—comprise the Total Protective Factors Scale, which reflects the social-emotional resiliency of preschoolers. The Behavioral Concerns subscale measures the frequency of emotional/ behavioral problems. For each item, children are rated on a five-point scale (0 = *Never*; 1 = *Rarely*; 2 = *Occasionally*; 3 = *Frequently*; 4 = *Very frequently*). Higher scores reflect more positive behaviors on all the Total Protective Factor subscales; we reverse-scored the Behavioral Concern scores so that higher scores reflect fewer problem behaviors. Raw scores from teacher and parent ratings are translated to T-scores, with a mean of 50.

DECA Training Knowledge Measure. This brief instrument, developed in conjunction with DECA consultants, measures knowledge about social-emotional development in young children (as presented in the DECA program). It contains eight short-answer questions, each worth two points. Responses were evaluated using a rubric with three levels: 0 points for blank or incorrect answers; 1 point for partially correct answers; and 2 points for correct answers. The minimum possible score is 0 and the maximum possible score is 16.

MO Quality Rating System (pilot version). The Quality Rating System (QRS) is a method to assess and continually improve the quality of early childhood and school-age/after-school programs. It has seven components: Administrator Education and Training; Staff Education; Education Specialization and Program Curriculum; Program Status; Learning Environment; Family Involvement; and Business and Administrative Practices. For each component, programs are evaluated using verified data that are gathered onsite by highly trained data collectors. For each component, scores can range from 1 to 5; overall star ratings also range from 1 to 5.

Procedure

Eligible children were identified by three groups of people: (1) directors; (2) parents in participating programs who self-referred after receiving information regarding this grant; and (3) PAT educators after home visits. Children who entered the program after the beginning of the study, and before September ’06, were evaluated to determine whether they were eligible. Children, age 2 and 3 years old at the beginning of the study, were generally assessed at 5 time points. Children who were 4 years old and entering kindergarten the following fall, had a maximum of 3 assessments.

After attending the DECA training, teachers observed all the children in their classroom for four weeks prior to assessment. This baseline assessment occurred in November ‘05. During the same time period, a parent/family member completed the DECA for each child as well (93% of these ratings were completed by the mother). Subsequently, teachers and parents rated children on the DECA approximately every three months. In order to verify the effectiveness of the DECA teacher training, lead and assistant teachers completed the DECA Training Knowledge measure prior to their DECA training and immediately afterward.

Programs were evaluated using the pilot version of the Missouri Quality Rating System (QRS) twice: a pretest in October ’05 and a posttest in spring ‘07 (this evaluation was funded by another grant). In addition, at the end of the grant, the Educare Early Childhood Specialists rated the classrooms with respect to the extent to which the DECA program was being implemented. Using a five-point scale (0 = *no meaningful implementation*, 5 = *full implementation*), the

classroom ratings ranged from 0 to 4, with an average fidelity of implementation score of 2.0. This indicates that, overall, programs were somewhat successful in their implementation of DECA.

Results

Teacher Knowledge

To determine whether the DECA training was effective in increasing teachers' knowledge of social-emotional development, paired *t*-tests were used to compare pre- and posttest scores on the DECA Training Knowledge Measure. **Teachers made statistically significant gains in knowledge after training.** The pretest mean was 9.25 (SD = 4.21), the posttest mean was 12.50 (SD = 2.86), yielding a $t(24) = 4.27$, $p < .001$.

Children's Gains in Social-Emotional Development

Table 2 shows the percentage of children whose scores increased, stayed the same, and decreased, by risk group as well as for the entire group of children. **According to teacher ratings, more than half of the children increased their scores on all subscales by their last rating, and in some instances almost two-thirds of children made gains.** On the Total Protective Factors scale, 62% of children made positive gains; 61% displayed fewer problem behaviors as measured by the Behavioral Concerns subscale. Across all subscales, the low-risk children were more likely to increase their scores.

Similar results were found with the parent ratings. **With the exception of the Attachment subscale, more than half of children were rated higher by their parents, and in some instances almost two-thirds made gains**. The trend for low-risk children to make more gains was also evident in the parent ratings, but somewhat less so; high-risk children were more likely to make gains on the Self-control and Attachment subscales. On the Total Protective Factors scale, 63% of children made positive gains; 51% displayed fewer problem behaviors as measured by the Behavioral Concerns subscale.

Table 2. Change in DECA Scores by Risk Group

Subscale	Decrease			No change			Increase		
Teacher ratings	Low risk	High risk	Total sample	Low risk	High risk	Total sample	Low risk	High risk	Total sample
Initiative	21%	32%	25%	12%	12%	12%	67%	56%	63%
Self-control	27%	34%	30%	14%	14%	12%	59%	54%	56%
Attachment	31%	39%	34%	7%	11%	9%	62%	50%	57%
Total Protective Factors	26%	35%	30%	6%	11%	8%	65%	54%	62%
Behavioral Concerns	21%	48%	31%	9%	4%	8%	70%	48%	61%
Parent ratings									
Initiative	28%	34%	30%	6%	8%	7%	66%	58%	63%
Self-control	24%	19%	22%	16%	19%	17%	60%	62%	61%

Attachment	43%	40%	42%	19%	19%	19%	38%	41%	39%
Total Protective Factors	32%	34%	32%	3%	9%	5%	65%	57%	63%
Behavioral Concerns	33%	34%	33%	10%	28%	16%	57%	38%	51%

Note. For teacher ratings: low risk group *n* = 111, high risk group *n* = 65. For parent ratings: low risk group *n* = 89, high risk group *n* = 47.

QRS Scores

We hypothesized that participation in this initiative would increase overall program quality as measured by the QRS. Table 3 shows pre- and posttest ratings for the three programs that were able to complete the QRS process across the two time points during the grant timeframe. One of the centers raised their overall star rating from 2 to 3, another remained the same (2), and the third dropped from a 4 to a 3. Because of the small number of programs that were able to complete the process, we cannot draw any definitive conclusions regarding the effect of the program on overall QRS ratings.

Table 3. Pre- and posttest QRS Scores, by Component and Overall Star Rating

QRS Component	Center 1		Center 2		Center 3	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Administrator Education & Training	1	1	1	3	1	1
Staff Education	1	1	1	2	2	3
Education Specialization & Curriculum	2	2	3	5	5	5
Program Status	2	2	1	3	2	2
Learning Environment	3	3	5	4	5	4
Family Involvement	3	2	2	2	5	2
Business & Administrative Practices	1	1	1	5	5	5
Overall Star Rating	2	2	2	3	4	3

Growth Curve Modeling on DECA Scores

To assess the effects of the DECA program on children's level of social-emotional functioning, we used hierarchical linear modeling (HLM) growth curve analyses to examine the trajectories of eligible high-risk preschoolers and low-risk preschoolers on the DECA subscales. We originally planned on running a three-level model: time; child/family characteristics; and teacher/classroom characteristics. However, due to the relatively small number of classrooms, the models were not stable, so we ran two-level models (time and child/family characteristics). The child/family characteristics entered into the models included risk status (low/high risk group), gender, and income status (whether family's income was more or less than 200% of the federal poverty level). In addition, because of model estimation difficulties, we were not able to

run any cross-level interactions. Table 4 shows the parameter estimates for the models that were calculated on both teacher and parent DECA ratings.

Teacher ratings. In general, **both high-risk and low-risk children made statistically significant gains on all DECA subscales** (the effect was marginally significant for Initiative), as shown by the Time slope coefficients. **Both high-risk and low-risk children—as well as boys and girls—gained roughly equally; that is, the program as it was implemented was successful for all groups of children**. However, on the Self-control, Attachment, and Total Protective Factor subscales, children who come from families with incomes greater than 200% of the federal poverty level showed greater gain than their peers from families with incomes below 200% of poverty.

The statistically significant coefficients under Intercept effects provide information regarding differences among children at the beginning of the project. Low-risk children scored significantly higher at the onset of the project than their high-risk peers across all subscales. Boys scored significantly lower than girls at the beginning on the Self-control, Total Protective Factors, and Behavioral Concerns subscales. Interestingly, children from low-income families were rated higher at the beginning of the project than their peers from higher income families.

Parent ratings. No statistically significant gains were seen in parent ratings across time. However, on the Initiative subscale, the changes in scores approached significance. With respect to intercept effects, similar patterns were evident in the parent ratings as in the teacher ratings: low-risk children were rated higher than high-risk children at the beginning of the project; girls were rated significantly higher than boys on the same subscales; and children from low-income families started off higher on the Initiative subscale than their higher income peers.

Table 4. Estimated Coefficients for the Growth Curve Models by DECA Subscale

	Teacher ratings					Parent ratings				
	Initiative	Self-Control	Attach-ment	Total Protective Factors	Behavioral Concerns	Initiative	Self-Control	Attach-ment	Total Protective Factors	Behavioral Concerns
Intercept effects										
Intercept	50.88*** (1.18)	53.98*** (1.21)	53.61*** (1.15)	53.56*** (1.20)	50.81*** (1.19)	50.58*** (2.19)	52.25*** (2.35)	52.06*** (1.40)	50.89*** (1.18)	43.20*** (1.18)
Risk group (1 = High risk; 0 = Low risk)	-7.52*** (1.39)	-5.76*** (1.40)	-2.98* (1.33)	-4.97*** (1.39)	-5.23*** (1.39)	-7.02*** (1.39)	-5.65*** (1.43)	-6.86*** (1.65)	-7.88*** (1.41)	-5.10*** (1.40)
Gender (1 = male; 0 = female)	-2.27 (1.20)	-5.04*** (1.22)	-1.87 (1.16)	-4.68*** (1.21)	-5.59*** (1.21)	-2.20 (1.20)	-2.75** (1.22)	-1.87 (1.41)	-2.58* (1.20)	-2.40* (1.20)
Low income (1 = ≤ 200% of poverty; 0 = >200%)	2.80* (1.41)	3.77** (1.42)	3.77** (1.35)	4.56** (1.41)	1.42 (1.40)	2.82* (1.38)	0.52 (1.44)	1.06 (1.68)	1.70 (1.42)	0.44 (1.41)
Slope effects										
Time	0.82† (0.42)	1.46*** (0.43)	2.14*** (0.51)	2.02*** (0.43)	1.15** (0.41)	0.70† (0.43)	0.40 (0.37)	0.22 (0.51)	0.63 (0.40)	0.41 (0.37)
Risk group (1 = High risk, 0 = Low risk)	0.11 (0.55)	0.09 (0.52)	-0.25 (0.62)	-0.19 (0.53)	-0.49 (0.49)	0.04 (0.45)	-0.19 (0.49)	0.70 (0.65)	0.26 (0.53)	0.40 (0.48)
Gender (1 = male; 2 = female)	0.01 (0.44)	0.57 (0.44)	-0.21 (0.53)	0.32 (0.45)	0.36 (0.41)	0.12 (0.44)	0.03 (0.39)	-0.83 (0.53)	-0.26 (0.42)	0.00 (0.39)

Low income (1 = ≤ 200% of poverty; 0 = >200%)	0.38 (0.50)	-1.17* (0.49)	-1.40* (0.50)	-1.29** (0.49)	-0.55 (0.46)	0.38 (0.50)	0.52 (0.44)	0.26 (0.60)	0.63 (0.48)	0.13 (0.45)

Note. Standard errors (SEs) are in parentheses below the coefficients. Shaded cells represent those with statistically significant results.
$^{\dagger}p < .10$ $^{*}p < .05$ $^{**}p < .01$ $^{***}p < .001$

QUALITATIVE FINDINGS

During a 14-month span, 48 persons involved in the Ready for School project participated in a total of 13 interviews and focus groups. Participants included: early childhood program directors and teachers; parents of children enrolled in the programs; home visitors who worked with parents; and, early childhood specialists who worked with teachers in the classroom. Research respondents participated in one or more groups as follows: parents at the beginning of the project, at mid-point, and at the end; teachers and directors, at the mid-point and end; and, early childhood specialists and home visitors at the end.

All focus groups were taped, transcribed, and streamed into NVivo7, a software program designed to assist in coding and analyzing qualitative data. Sixty-two nodes, or categories, were formed to accommodate the various topics that were addressed by participants. An analysis of the data revealed the emergence of several broad themes. The quotes that follow provide a synopsis of the respondents' perceptions, impressions, and experiences.

Overall, according to the participants, Ready for School was well-received and beneficial in some of the programs in which it was implemented. Program directors, teachers, parents, home visitors, and early childhood specialists all had positive comments regarding one or more aspects of this project and the resulting changes.

School-home Connection

> *[My relationship with the center staff] has improved greatly. Especially between the teachers but I do think the director too. I have thanked her on more than one occasion. . . because we look forward very much to the times that [the home visitor] comes to our house. . . .I would say it's a more friendship-partnership type of level now, not just teacher, parent, separate.*
> *Parent*

> *I'm not. . .right there where he's at all day. I want to know what's going on . . . What is it that they're supposed to be learning from this unit? He's having problems at school. What is the source of the problem? How are we going to work together to get him to a more positive reaction? It's just been phenomenal the support and help. . .to me.* *Parent*

> *[P]arents. . .finally would admit to knowing that there are problems at home and at school. And fixing it at both places instead of putting the blame on one or the other.* *Teacher*

Home Visitor

I've become more involved since I've had a home visitor. And I've gotten a lot of information from her. Questions that I had and a lot of personal stuff she's helped me out with--my ex and issues with parenting for my child. Because of her I got into a program where I can talk to other people. . .and get some help with being a parent. *Parent*

Classroom Environment

I think the classroom environment, the routine, is more smooth from one period to the next. *Teacher*

Child Behavior

You can just see [the child] thinking. . .He had his fist drawn like he was going to do something and then he just thinks it through and he's like, I don't like that. He'll just stop everything and tell the child how he feels instead of showing it physically. *Teacher*

Teacher Knowledge

I feel like my knowledge has increased. And my grab bag of information to share with [parents] has increased. *Teacher*

Teacher Behavior

I think I understand a little bit more about what's going now—as far as [the children's] emotions and how to help them deal with them. I'm able to step back and figure out. . .how can I help them figure out how to cope, teach some of the coping strategies they need, instead of just taking care of it myself? *Teacher*

Teacher Accountability

I think now [the teachers] are held more accountable because they have someone that they're showing the [lesson plans] to more frequently. Someone that's in the classroom that's saying to them, "Ok, you've talked about what you were going to do and you made this lesson plan out. . .now, give me feedback on what works, what didn't work, what can we improve on, what can we change." *Director*

Lesson Planning

I think [RFS] helps with lesson planning. How they're setting up their lesson plans and they're more interactive with the children. And I think the children are enjoying more of what they're doing daily. *Director*

Attitude toward Children

I think the attitude toward the children has really changed. I think that the teachers, and myself included, it kind of gave you the reminder and the tools to just look beyond their

behavior and to really look at the causes of their behavior. And what strategies can be implemented. . . *Director*

Understanding of Socio-emotional Development

Just knowing it's not all about making sure the kid knows their colors and their numbers . . . It's knowing that they can get through the day without having a meltdown. . .and knowing if they do have a meltdown why. Using the [DECA] program explains why kids do what they do. *Teacher*

I think an outcome of this has been [teachers are] learning about each child's protective factors. This is different than a behaviorist approach. It's different than external rewards. There really is value in teaching children a lot of social skills and ways of dealing with feelings that they have. I think that's a part of curriculums that has really been missing. . . understanding that young children don't have to be taught how to respond. They have to be taught about feelings and how to respond to those feelings. *EC Specialist*

Parent Self-efficacy

The one parent in particular finally [understood] that there is a problem and knowing that she can help fix it. Instead of just blaming it all on one person or the other, knowing that there is a problem that needs to be fixed before [her child] gets any older. *Teacher*

Throughout the course of the study, I saw parents' belief that they could have a role in their children's educations increase. It seemed like they, themselves, were reliving traumatic childhood care experiences, and the probing of the teachers, parent-teacher conferences, and liaison work through the [home visitor] worked to empower the parent. *Home Visitor*

Participants also mentioned several obstacles and challenges to effectively implementing Ready for School, including turnover; personal challenges of both teachers and parents; demands on directors and teachers; and, misunderstanding about the expectations and roles of the various persons involved in the project.

Turnover

I think with my center that I was involved with we had turnover from the children, the teachers, the directors and even the district manager in the time I was there. It's very. . . hard to get commitment from people that don't understand what's going on . . .
EC Specialist

Each time [there was turnover], the leaving of a very good teacher was preceded by erratic and problematic behavior by certain children, and followed by tumultuous regrouping and crisis-mode dealing with the situation, and a good deal of disruption for the children.
Home Visitor

Personal challenges and unmet needs

[G]etting past the adult [teachers'] needs was huge in this project. Just huge. And it really kept us from being able to work together with them on the children's needs. *EC Specialist*

Some of [the teachers] were unable to attend the training for personal or family reasons, and a good many of these were holding their families together by a shoestring, barely making it to work each day, and fulfilling their parental duties after work. *Home Visitor*

I felt like part of what I was doing when I would go in is convincing people not to quit. Just helping them stick to their jobs. So how can I do my DECA mentoring when I'm having to say, wait, wait, wait. It'll get better. I know that the center's in chaos. Stick it out. *EC Specialist*

With most of the families I worked with, it seemed to me that the parents felt a great deal of responsibility toward their child's healthy development. Many, however, had so many unaddressed financial and personal needs, and operated in constant crisis mode, leaving that home environment catch as catch can, and the children to fend for themselves (with the help of the television set). *Home Visitor*

Demands on directors and teachers

[T]here's so many demands on our teachers already. You know, they have lesson plans. . . the DECA's deadlines and chasing the parents down and trying to get them to take time to. . . fill out this one more questionnaire. And I have to fill out one more form. . .it's important, I'm not saying that. But. . .it seems there's a lot. . .on them. [T]hat kind of does bother me. *Director*

I would say the paperwork probably would be [an obstacle]. You know they're all so busy anyway. And they have so much work to do. The. . .paperwork is more than they need, I guess. *EC Specialist*

Misunderstanding of expectations and roles

I never got in a comfortable place of sharing information with the director. I think. . .her expectations from the beginning was that I would come in, fix the classroom, help them with the behaviors and that was what this is. But when things pointed towards needing her support for some changes that was always very awkward. *EC Specialist*

As a director, [I] have so much paperwork. . .I don't have time to go in there. . . .And so this is nice to have an extra pair of hands. Someone that's knowledgeable that will go in and they will be there for the teachers, oversee for you. *Director*

[M]y program. . .would have liked someone to be there more often. And yet when I increased time and visits, I became more an extra teacher in the classroom. And I think the teachers appreciated that, wanted that, but it wasn't conducive to what our goal was to be there. *EC Specialist*

The teachers of the unsuccessful schools responded to me with some evasion, and sometimes just didn't seem to get it at all, even after receiving the training. *Home Visitor*

Suggestions regarding Ready for School pertained to various aspects of the Ready for School program. They included (a) requiring a higher level of education for the child care staff; (b) obtaining director buy-in prior to implementation; (c) being certain classrooms have a basic foundation of quality on which to build; (d) clearly defining and communicating the roles, relationships, and expectations of all persons involved (i.e., program director and teachers, parents, home visitors, and early childhood specialists); and, (e) ensuring adequate funding for incentives throughout the grant's duration.

In sum, because of various obstacles, Ready for School was not successfully implemented at some programs. For others, however, very positive changes occurred, as is evident from the respondents' statements below.

With DECA being involved with our school, I think that's helped overall. Between teachers and parents and the communication between us is much better I think. I think it's more thorough. *Parent*

I felt like I always had good directions, good support, good follow through and [RFS] works, basically. It's really worked well in our classroom. We've seen a lot of good growth in the areas of kids' emotional, positive development. *Teacher*

I think [DECA] is very beneficial to the children. It seems very easy for the teachers to implement in the classroom. So overall I think it's been a really wonderful program. *Director*

The teachers from the successful programs seemed very charged up and encouraged by the program, the strategies, and their contact with me and the EC Specialist. *Home Visitor*

I just think it's an excellent project and I think where it has worked, it's worked well. *EC Specialist*

Conclusions

Both quantitative and qualitative evaluations yielded results attesting to the positive impact of the DECA program on children, families, and teachers. Teachers reported in focus groups that the program increased their knowledge of socio-emotional development and provided them useful strategies in teaching children to develop resiliency. These anecdotal reports are buttressed by the fact that teachers made significant gains in their knowledge of social-emotional development. Teachers, directors, parents, as well as the Early Childhood Specialists, reported seeing positive changes in children's behavior; these changes are clearly reflected in the quantitative results showing that children demonstrated increasing social-emotional resiliency and fewer problem behaviors over time, as shown by the high percentages of children making gains in both parent and teacher ratings (see Table 2), as well as by the

results from the growth curve models. Families who received home visits expressed their appreciation for the information, support, and expertise provided by home visitors, as well as all staff, including center staff, associated with the project.

Despite the successes, it is also important to note the challenges experienced in implementing this project. High teacher turnover, coupled with typically low education levels of most teachers, impeded the full-scale implementation of DECA in all centers. In addition, as has been noted with many other early childhood initiatives, director buy-in as well adequate funding for teacher and family incentives are needed to insure the continuing success of such programs.

Reference

LeBuffe, P. A. & Naglieri, J. A. (1999). *Devereux Early Childhood Assessment technical manual*. Lewisville, NC: Kaplan.