

## Parents as Teachers



### Goals

The goals of Parents as Teachers (PAT) are to provide the following: 1) information, 2) support, and 3) encouragement to parents so they can help their children learn, grow, and develop to their fullest potential.<sup>i</sup>

### Program Features

Parents as Teachers is a home-visiting model providing a broad context of parenting education and family support, and building protective factors, especially for families in vulnerable situations (source: PAT website). PAT parent educators use a relationship-based and parenting-focused approach. Parent educators conduct the home visits focusing on parent-child interaction, development-centered parenting, and family well-being.

The PAT model has four components that all affiliate programs are required to provide: 1) one-on-one personal (or home) visits, 2) group connections (or group parent meetings), 3) health and developmental screenings for children, and 4) a resource network for families. Affiliate programs offer families 10 to 12 home visits annually (at minimum). Programs must offer higher-need families 24 visits annually. In some cases, visit frequency may be gradually decreased as the family transitions out of PAT and into other services. Home visits by a trained parent educator last 60 minutes. Affiliate programs offer group connections (or meetings) monthly and determine the length of services. Some programs may choose to focus services primarily on pregnant women and families with children from birth to age 3 years; others may offer services from pregnancy through kindergarten entry.<sup>ii</sup>

For more information regarding Parents as Teachers use this link: [www.parentsasteachers.org](http://www.parentsasteachers.org).

### Target Audience

Parents of children birth to 5 years; programs may target specific groups, such as teen parents

### Parents as Teachers Snapshot

- **EC Profile Indicator:** : FS30 - Percent of children age 0-5 with an investigated report of child abuse/neglect; KEA10 - Kindergarten Entrance Assessment
- **Clearinghouse Rating**
  - SAMHSA National Registry of Evidence-Based Programs and Practices
  - California Evidence-Based Clearinghouse Rating of 3 (Promising Research Evidence)
  - Promising Practices Network rating of Promising
  - Home Visiting Evidence of Effectiveness
- **Research supports** use with parents of children birth to 5 years of age
- **Related Smart Start outcomes:**
  - Increase in parent knowledge
  - Increase in positive parenting practices
  - Parents increase use of services referred to in the community
  - Increase in parent's social support
  - More children on track for typical and/or enhanced development
- **Purveyor training required:** Yes
- **Staff qualifications:** Four-year degree or higher
- **Frequency:** Dependent on number of risk factors family has experienced
- **Dosage:** Each visit should last at least 60 minutes
- **Minimal service threshold:** Two years
- **Suggested Assessments:**
  - Life Skills Progression
  - Keys to Interactive Parenting Scale
  - PICCOLO
- **Implementation Guidance:** [www.parentsasteachers.org](http://www.parentsasteachers.org)

## Alignment with Smart Start Outcomes

	Type of Study	Parent Outcomes				Child Outcomes				
		Improved parent knowledge, attitudes, behaviors*	Reduced cases of abuse or neglect	Quality of parenting and the home environment**	Perceptions of social support and parenting satisfaction***	Improved literacy practices and literacy environment****	Improved child developmental outcomes*****	Increased school readiness	Higher third grade reading scores	Mastery motivation
Wagner, et. Al. (2002)	Experimental						✓			
Wagner, M. M. & Clayton, S. L. (1999) <sup>iii</sup>	Experimental		✓				✓			
Drotar, et.al. (2008) <sup>iv</sup>	Experimental						✓ For low SES children			✓
Zigler, E., Pfannenstiel, J. C., & Seitz, V. (2008) <sup>v</sup>	Quasi-experimental							✓	✓	
Owen and Mulvihill (1994) <sup>vi</sup>	Non-experimental with comparison groups	✓		✓	✓					
Wakabayashi, T., and Scharphorn, L. (2015) <sup>vii</sup>	Non-experimental					✓ With DPIL				

*This table contains outcomes found to be associated with the program or approach. Individual studies may contain additional outcomes that were tested and not found to be associated with the program or approach.*

\* Aligned with Smart Start outcomes *Increase in parent knowledge*

\*\*Aligned with Smart Start outcomes *Increase in positive parenting practices*

\*\*\*Aligned with Smart Start outcomes *Increase in parent's social support*

\*\*\*\*Aligned with Smart Start outcomes *Increase in frequency of parent and child shared reading, Increase in the adult's use of recommended reading strategies*

\*\*\*\*\*Aligned with Smart Start outcomes *More children on track for typical and/or enhanced development*

## Research Evidence for Parents as Teachers

- Positive effects for parents on parenting practices, home environment, and social support, though results were somewhat mixed.
- Evidence of impact on of child cognitive and language improvements, social development and school readiness have been found.
- Results were sometimes mixed, though several studies showed greater effects with children from low-income households.
- Length of PAT attendance was found to be associated with improved home literacy and preschool enrollment, which are predictors of school readiness and third-grade reading achievement.

### Review of Experimental and Quasi-Experimental Studies

<b>Citation</b>	<b>Wagner, M., Spiker, D., &amp; Linn, M. I. (2002). The effectiveness of the Parents as Teachers program with low-income parents and children. <i>Topics in Early Childhood Special Education, 22(2)</i>, pp. 67-81.</b>
<b>Population and Sample</b>	<ul style="list-style-type: none"> <li>• 665 families randomly assigned to one of three community PAT (n=275) or control (n=390) groups</li> <li>• Average age of mothers was 24 years with 58% African American, 29% White, 12% Hispanic/Other; 21% working full time, 45% not working or seeking work; 60% annual income of less than \$15,000</li> </ul>
<b>Methodology</b>	Experimental with random assignment to groups
<b>Purpose</b>	Findings are described from a multisite, randomized evaluation of the PAT program. The evaluation was designed to assess the effectiveness of the program with low-income families.
<b>Measures &amp; Assessments</b>	<ul style="list-style-type: none"> <li>• Knowledge of Infant Development Inventory – KIDI</li> <li>• Parenting Sense of Competence Scale – PSOC and Child Maltreatment Precursor Scale – CMPS</li> <li>• Home Observation and Measurement of the Environment Inventory – HOME and Nursing Child Assessment Satellite Training Scale – NCAST</li> <li>• Developmental Profile II –DP-II</li> <li>• Adaptive Social Behavior Inventory – ASBI</li> </ul>
<b>Study Implementation</b>	<ul style="list-style-type: none"> <li>• Recruitment of families occurred when children were less than 8 months old; participation was to continue until the children’s third birthdays.</li> <li>• Families in intervention and control groups received a \$20 gift certificate to complete a data collection visit annually. Parents were assessed at children’s first birthdays and children were assessed at their second birthdays only.</li> <li>• Intervention groups received monthly home visits from at PAT parent educator along with other PAT services (e.g., group meetings, developmental screenings, referral for other services as needed). Control group families did not receive any PAT services.</li> <li>• The evaluation ended at children’s second birthdays because too few families continued to participate beyond that time.</li> <li>• The three participating sites were certified by the PAT national center as implementing the model with high fidelity and quality.</li> </ul>
<b>Staff Qualifications</b>	<ul style="list-style-type: none"> <li>• Certified Parent Educators: most had associates, bachelors, or masters degree with training in child development and/or early childhood education; 1-12 years experience as home visitors</li> </ul>
<b>Key Findings</b>	<ul style="list-style-type: none"> <li>• Parent Knowledge: <ul style="list-style-type: none"> <li>○ Scores for parenting knowledge were lower for very low-income families than for families with more moderate incomes.</li> <li>○ There were stronger positive effects for very low-income families on 4 of 6 knowledge measures but none reached statistical significance.</li> </ul> </li> <li>• Attitude Toward Parenting: <ul style="list-style-type: none"> <li>○ Small to moderate negative effects were found on scale scores for all items for both income groups.</li> <li>○ There was a large statistically significant positive effect on parents’ happiness when caring for children between intervention and control groups for more moderate-income families.</li> </ul> </li> <li>• Parenting Behaviors:</li> </ul>

- Scores for parenting behaviors were lower for very low-income families than for families with more moderate incomes.
- Effects of PAT were mixed for both very low-income and more moderate-income families.
- The only items reaching statistical significance was between intervention and control groups of more moderate-income families on parental acceptance of child's behavior.
- Child Outcomes:
  - Scores for child outcomes were lower for very low-income children than for children in families with more moderate incomes.
  - For very low-income children, small positive effects were found for very-low income children on 3 of 5 DPII measures and a moderate effect on ASBI (with the exception of a small negative effect on self-help development).
  - For more moderate-income children, small negative effects were found for 3 of 5 DPII measures and a small positive effect on ASBI.

<b>Citation</b>	<b>Wagner, M. M. &amp; Clayton, S. L. (1999). The Parents as Teachers program: Results from two demonstrations. The Future of Children, 9(1), pp. 91-115.</b>
<b>Population and Sample</b>	<ul style="list-style-type: none"> <li>● <u>Salinas Valley PAT</u>: 497 families randomly assigned to participant (n=298; 83.6% Latino) and control (n=199; 76.9% Latino) groups; 44-46% limited English proficiency; average 25-26 years of age</li> <li>● <u>Teen PAT</u>: 704 teens under the age of 19 and either pregnant or with a child less than 6 months old were randomly assigned to four groups (PAT services, n=177; case management services, n=174; PAT plus case management, n=175; control group, n=178); 53-59% Latino; average 16.6 years of age</li> </ul>
<b>Methodology</b>	Experimental
<b>Purpose</b>	The article reports the results of evaluations of two randomized trials of PAT: (1) the Northern California (Salinas Valley) Parents as Teachers Demonstration, serving primarily Latino parents; and (2) the Teen Parents as Teachers Demonstration, serving adolescent parents in four counties in Southern California.
<b>Measures &amp; Assessments</b>	<ul style="list-style-type: none"> <li>● Knowledge of Infant Development Inventory (KIDI)</li> <li>● Home Observation for Measurement of the Environment (HOME) Inventory</li> <li>● Developmental Profile II (DPII); Salinas Valley also used Bayley Scales of Infant Development (BSID) and Peabody Picture Vocabulary Test (PPVT)</li> <li>● Immunization History</li> <li>● Parent Interviews</li> </ul>
<b>Study Implementation</b>	<ul style="list-style-type: none"> <li>● Salinas Valley Project:           <ul style="list-style-type: none"> <li><u>PAT group</u> <ul style="list-style-type: none"> <li>○ The PAT group was offered monthly home visits from a trained parent educator for as long as the families chose to remain in the program up to the children's third birthdays. Visits included a lesson from the national PAT curriculum, with materials often left to reinforce and supplement the lessons. Additional services included a) periodic screenings of children's hearing, vision, and general development and made referrals to community services as needed; and b) voluntary group meetings in English and Spanish for parents to discuss and receive social support..</li> <li>○ PAT program participants received an average of 20 visits over three years varying in length from 28 to 50 minutes depending on the parent educator. Less than 15% of participant group families attended any group meeting.</li> </ul> </li> <li><u>Control group</u> <ul style="list-style-type: none"> <li>○ Control group members periodically received developmentally appropriate toys to track families locations and to encourage completion of annual assessments. If the annual assessments indicated significant developmental delays or other problems, referrals to appropriate services were made.</li> </ul> </li> </ul> </li> <li>● Parent and child assessments for both Salinas Valley study groups were completed in families' homes at children's first, second, and third birthdays by trained field evaluators. Families also could take their children to the Monterey County Office of Education for annual developmental assessments by child psychologists.</li> <li>● Teen PAT Demonstration Project:           <ul style="list-style-type: none"> <li><u>PAT and Combined (PAT plus case management) Intervention Groups</u>:               <ul style="list-style-type: none"> <li>○ PAT and combined intervention groups were offered PAT services through their children's second birthdays.</li> <li>○ PAT intervention groups received an average of 10 visits during the 2-year period. Visits were expected to last about an hour but the actual length of visits was not collected. PAT group members averaged two group meetings and combined intervention group members averaged three over two years.</li> <li>○ Additional telephone contacts were made, with PAT averaging 6 calls over 2 years and the</li> </ul> </li> </ul> </li> </ul>

	<p>combined intervention group averaging 17 calls.</p> <p><u>Case Management and Combined Intervention Groups:</u></p> <ul style="list-style-type: none"> <li>○ Case management and combined intervention groups were offered comprehensive case management services modeled after California’s Adolescent Family Life Program. A minimum of quarterly face to face contacts were provided (more often if needed). Referrals or arrangements for services were made to address issues such as psychological functioning, health status, nutrition, environmental risks, and educational and vocational goals.</li> <li>○ The combined intervention group received case management contacts separate from PAT visit and received additional telephone contacts (average of 6 calls in two years)..</li> <li>○ Additional telephone contacts were made for participants in the case management group. averaging 8 calls in two years).</li> <li>○ Case management and combined intervention group participants received an average of 10 case management contacts in two years.</li> </ul> <p><u>Control Group:</u></p> <ul style="list-style-type: none"> <li>○ Control group participants received toys as an incentive to maintain contact and participate in annual developmental assessments.</li> </ul> <ul style="list-style-type: none"> <li>● Assessments of children and parents in all Teen PAT study groups were completed in their homes by field evaluators at or near the children’s first and second birthdays.</li> </ul>
<b>Staff Qualifications</b>	<ul style="list-style-type: none"> <li>● Six of 10 PAT-trained parent educators had bachelor’s degree or higher and six were Latinas who spoke both English and Spanish.</li> </ul>
<b>Key Findings</b>	<ul style="list-style-type: none"> <li>● <u>Salinas Valley:</u> <i>Parent Knowledge, Attitudes, Behavior, and Home Environment:</i> <ul style="list-style-type: none"> <li>○ There were no significant effects between the groups on parenting knowledge.</li> <li>○ Small and inconsistent changes for parenting attitudes.</li> <li>○ Negative significant effect on parent behavior/home environment measure of acceptance of children’s behavior (control group outperformed PAT group).</li> </ul> <i>Child Outcomes:</i> <ul style="list-style-type: none"> <li>○ PAT group showed significant improvement in child’s social and self-help development as compared to control group.</li> <li>○ PAT children showed small but not statistically significant effects for social development.</li> <li>○ No significant benefits were associated with PAT for child health and health care.</li> </ul> </li> <li>● <u>Teen PAT:</u> <i>Parent Knowledge, Attitudes, Behavior, and Home Environment:</i> <ul style="list-style-type: none"> <li>○ There were no significant effects between the groups on parenting knowledge.</li> <li>○ Small and inconsistent changes for parenting attitudes.</li> <li>○ Positive significant effect on parent behavior/home environment measure of acceptance of children’s behavior (PAT group outperformed control group).</li> <li>○ Negative significant effect on parent behavior/home environment measure for the availability of appropriate play materials (control group outperformed PAT group).</li> </ul> <i>Child Outcomes:</i> <ul style="list-style-type: none"> <li>○ Significantly greater gains in children’s cognitive development for the PAT plus case management group over control group.</li> <li>○ Significantly fewer opened cases of child abuse or neglect for PAT plus case management group.</li> <li>○ Significantly higher rate of full immunization for case management only group.</li> </ul> </li> </ul>

<b>Citation</b>	<b>Drotar, D., Robinson, J., Jeavons, L., and Kirchner, H.L. (2008). A randomized, controlled evaluation of early intervention: the Born to Learn curriculum. Child: care, health and development, 35, 5, 643–649.</b>
<b>Population and Sample</b>	The study randomly assigned 256 families to the treatment group, which received the Born to Learn curriculum, and 271 families to the comparison group. Stratification was used to ensure comparable socioeconomic characteristics. Twenty-nine treatment families and 39 comparison families did not receive the intervention. Demographic characteristics were comparable with regard to sex, ethnicity, and socio-economic status (SES).
<b>Methodology</b>	Experimental with random assignment
<b>Purpose</b>	The study team assessed whether or not the Born to Learn (BTL) curriculum would be associated with better child outcomes than a general parent education program. More specifically, the study team “hypothesized that children whose parents received the BTL curriculum would demonstrate more competent cognitive and language development, security of attachment (SAT), mastery motivation (MM), academic readiness skills and social competence than children whose families received a general parent education programme.” Further, the study team assessed whether or not the BTL curriculum had greater effects on children from lower-SES families, compared to children from

	higher-SES families.
<b>Measures &amp; Assessments</b>	<ul style="list-style-type: none"> <li>• Bayley Scale of Mental Development, Second Edition (BSMD)</li> <li>• Bayley Behavioural Rating Scale (BBRS)</li> <li>• Child Behaviour Rating Scale (CBRS)</li> <li>• Q-Sort measure of SAT</li> <li>• Mastery motivation, defined as persistent problem solving with novel tasks, was assessed at 12, 24 and 36 months of age</li> <li>• Systematic Analysis of Language Transcripts (SALT) was used to assess language development at 36 months of age</li> <li>• Bracken Basic Concept Scale – Revised</li> <li>• Test of Early</li> <li>• Reading Ability-2 (TERA-2)</li> <li>• Social Skills Rating System (SSRS)</li> </ul>
<b>Study Implementation</b>	<ul style="list-style-type: none"> <li>• The BTL curriculum included two home visits in the first month. After the first month, treatment group parents received monthly visits and group meetings.</li> <li>• Visits were conducted in the family home with trained parent educators, who were aware of the group assignments.</li> <li>• The study tracked program implementation on (1) home visit attendance; (2) coverage of curriculum material; and (3) performance.</li> <li>• Videotapes of visits were evaluated and the study team found that more than 90% of curriculum objectives were met.</li> <li>• The general parent education program included educational handouts describing child development at different ages and access to activities such as parent discussion groups. The comparison group did not receive any BTL curriculum content or structure.</li> </ul>
<b>Staff Qualifications</b>	<ul style="list-style-type: none"> <li>• Parent educators received training at the Parents as Teachers National Center</li> </ul>
<b>Key Findings</b>	<ul style="list-style-type: none"> <li>• The study used an intent-to-treat design and analyses controlled for: <i>SES, randomization blocking (low SES vs. middle/high SES), and included terms for group, age and the interaction between group and age.</i></li> </ul> <p><u>Cognitive development</u></p> <ul style="list-style-type: none"> <li>• The study team failed to find group differences in cognitive development at 12 and 24 months, using the BSMD. The team also failed to find group differences at 36 months, using the KAB.</li> <li>• There was a significant group differences by socio-economic status (SES) interaction at 24 months (<math>p&lt;.003</math>), wherein the effect of the BTL curriculum was significant for the low-SES subgroup. More specifically, children in the treatment group had higher mean scores (mean=89.67), than comparison group children (mean=82.16) (<math>p&lt;.01</math>).</li> </ul> <p><u>Security of attachment</u></p> <ul style="list-style-type: none"> <li>• The study team failed to find group differences at 18 months, using the SAT.</li> </ul> <p><u>Adaptive behavior</u></p> <ul style="list-style-type: none"> <li>• The study team failed to find group differences at 12, 24, or 36 months, using the BBRS.</li> <li>• The study team failed to find group differences on the CBRS factor scores.</li> </ul> <p><u>Mastery motivation</u></p> <ul style="list-style-type: none"> <li>• The study team failed to find group differences on in mastery motivation with the exception in which treatment group children had higher scores on task competence at 36 months (mean=847.98), compared to comparison group children (mean=841.74) (<math>p&lt;.05</math>).</li> <li>• The study team found a significant group SES interaction effect for task competence at 24 months, wherein children in low-SES families in the treatment group had higher scores (mean=584.49), compared to comparison group children (mean=556.21) (<math>p&lt;.02</math>).</li> <li>• The study team failed to find a significant group SES interaction effect for task competence at 24 months for high-SES families in the treatment group (mean=618.36), compared to families in the comparison group (mean=681.0).</li> </ul> <p><u>Language, conceptual development, school readiness and social skills</u></p> <ul style="list-style-type: none"> <li>• The study team failed to find group differences on language, as assessed using the SALT, TERA-2, or SSRS (parent and teacher report).</li> </ul>

<b>Citation</b>	<b>Arnold, J.M. (2012). The Parents as Teachers program in Missouri and the resulting difference in academic effects for fifth- and sixth-grade students. Dissertation Thesis; Liberty University.</b>
<b>Population and Sample</b>	The study incorporated 178 fifth- and sixth-grade students. The study team matched 89 Parents as Teachers (PAT) students with 89 non-PAT students on gender, ethnicity, and socioeconomic status.
<b>Methodology</b>	Quasi-experimental with matched comparison group

<b>Purpose</b>	The study assessed whether or not there were significant differences between Developmental Indicators for the Assessment of Learning—Third Version (DIAL-3) and Missouri Assessment Program (MAP) Communication Arts third- and fourth-grade assessments. The study address three research questions: (1) Do currently enrolled fifth- and sixth-grade students who participated in the Eagle’s Parents as Teachers Program show a significant difference on the school readiness screening, the DIAL-3 composite score, when compared to fifth- and sixth-grade students who did not participate in the Eagle’s Parents as Teachers Program? (2) Do currently enrolled fifth- and sixth-grade students who participated in the Eagle’s Parents as Teachers Program show a significant difference on the 3 <sup>rd</sup> grade MAP Communication Arts test when compared to fifth- and sixth-grade students who did not participate in the Eagle’s Parents as Teachers Program? (3) Do currently enrolled fifth- and sixth-grade students who participated in the Eagle’s Parents as Teachers Program show a significant difference on the 4 <sup>th</sup> grade MAP Communication Arts test when compared to fifth- and sixth-grade students who did not participate in the Eagle’s Parents as Teachers Program?
<b>Measures &amp; Assessments</b>	<ul style="list-style-type: none"> <li>• Developmental Indicators for the Assessment of Learning 3 (DIAL-3)</li> <li>• Missouri Assessment Program (MAP) Test Communication Arts third- and fourth-grade assessments</li> </ul>
<b>Study Implementation</b>	<ul style="list-style-type: none"> <li>• All families with preschool-aged children in Missouri could participate in PAT, through their local school districts.</li> <li>• The study compared fifth- and sixth-grade students who parents did and did not participate in PAT.</li> </ul>
<b>Staff Qualifications</b>	<ul style="list-style-type: none"> <li>• Parent educators were trained in the PAT <i>Born to Learn Curriculum</i></li> </ul>
<b>Key Findings</b>	<p><u>DIAL-3 Composite Scores</u></p> <ul style="list-style-type: none"> <li>• The mean score for the treatment group was 57.91 and the mean score for the comparison group was 54.43. This was not a statistically significant difference (n=178). The study team found a small effect size: Cohen’s d=.27.</li> </ul> <p><u>Third-Grade Communication Arts Assessment</u></p> <ul style="list-style-type: none"> <li>• The mean score for the treatment group was 645.70 and the mean score for the comparison group was 638.18. This was not a statistically significant difference (n=178). The study team found a small effect size: Cohen’s d=.24.</li> </ul> <p><u>Fourth-Grade Communication Arts Assessment</u></p> <ul style="list-style-type: none"> <li>• The mean score for the treatment group was 667.28 and the mean score for the comparison group was 663.72. This was not a statistically significant difference (n=178). The study team found a very small effect size: Cohen’s d=.11.</li> </ul>

<b>Citation</b>	<b>Zigler, E., Pfannenstiel, J. C., &amp; Seitz, V. (2008). The Parents as Teachers program and school success: A replication and extension. <i>Journal of Primary Prevention, 29</i>, pp. 103-120.</b>
<b>Population and Sample</b>	<ul style="list-style-type: none"> <li>• 5,721 kindergarten children entering public kindergarten in Missouri with 82% of the original sample having third-grade test data 4-5 years later. Data for special education students were excluded from the analyses.</li> <li>• 45% of students were classified as being poverty-level based on free/reduced lunch data.</li> </ul>
<b>Methodology</b>	Quasi-experimental, structural equation modeling
<b>Purpose</b>	The study was a replication and extension of another, but with a larger sample, an improved measure of poverty that uses eligibility for free or reduced lunch, and new longitudinal data. The study used path analysis to test how Parents as Teachers (PAT) affects children’s school readiness and later third-grade achievement.
<b>Measures &amp; Assessments</b>	<ul style="list-style-type: none"> <li>• Missouri Assessment Program (MAP) Communication Arts Assessment</li> <li>• Parent Survey</li> <li>• School Entry Profile</li> </ul>
<b>Study Implementation</b>	<ul style="list-style-type: none"> <li>• Teachers completed a School Entry Profile for each student.</li> <li>• Parents/Guardians completed surveys asking about their child’s health and health care as well as participation in PAT and/or other early childhood education programs.</li> <li>• Matched 76% of the original sample of students with third-grade Communication Arts test data in the statewide database. Another 6% had data because they had taken the assessment a year later than expected based on their year of kindergarten entry.</li> </ul>
<b>Staff Qualifications</b>	<ul style="list-style-type: none"> <li>• Kindergarten teachers were trained to collect preschool and health care information from parents/guardians and use observation to assess children’s skills, knowledge, and social development.</li> </ul>
<b>Key Findings</b>	<ul style="list-style-type: none"> <li>• The new measure of poverty reduced the importance of minority group membership and increased the importance of poverty as a direct predictor of school readiness.</li> <li>• Length of PAT attendance was both a direct and indirect (through increased school readiness) predictor</li> </ul>

- of third-grade achievement.
- Home literacy and preschool attendance were important predictors of school readiness and third-grade achievement, and both were predicted by length of PAT attendance. Home literacy efforts also had a small direct effect on third-grade achievement.

## Review of Meta-Analyses

None

## Review of Descriptive and Non-Experimental Studies

<b>Citation</b>	Owen, M.T. and Mulvihill, B.A. (1994). Benefits of a Parent Education and Support Program in the First Three Years. <i>Family Relations</i> , Vol. 43, No. 2, pp. 206-212.
<b>Population and Sample</b>	<p>The study incorporated a Parents as Teachers (PAT) sample of 59 families. The study also incorporated a comparison group of 69 families, who were recruited from child birth preparation classes conducted at a hospital in a city that did have a PAT program. With one exception (a child who was eight months old), PAT children were 6 months old or younger. There were attrition rates of 28.8% in the PAT group and 20.3% in the comparison group over the three-year study period.</p> <p>The study team reported that the treatment and comparison groups “<i>did not differ in parental age, education, or occupation. Education levels for both groups of parents ranged from high school graduate to professionally degreed. The typical profile was of a middle-class first-time parent who had attended college. Mothers' mean age was 28 years at the time of their first child's birth; fathers' mean age was 30 years. Only 7% of the PAT participants and 8% of the comparison group were non-Caucasian. There were no single-parent families in the comparison group; 9% of the PAT group were single parents. Family socioeconomic status scores on the Hollingshead (1975) Four Factor Index of Social Status ranged from class 1 to class 5 (highest to lowest), but 85% of the PAT and 87% of the comparison families were in the upper two strata. There was no significant difference on SES scores between the groups.</i>”</p>
<b>Methodology</b>	Non-experimental with comparison groups
<b>Purpose</b>	<p>The study examined the benefits of the PAT program over a child’s first three years. The study addressed four hypotheses:</p> <ol style="list-style-type: none"> <li>(1) PAT participants would provide home environments that were more developmentally enriching to their children than would nonparticipants,</li> <li>(2) Children in the PAT program would achieve higher scores on standardized tests of mental and social development than children whose parents did not participate,</li> <li>(3) PAT parents would perceive more community and peer support than nonparticipant parents, and</li> <li>(4) PAT parents would report less stress associated with parenting and child rearing than nonparticipants.</li> </ol>
<b>Measures &amp; Assessments</b>	<ul style="list-style-type: none"> <li>• Bayley Scales of Infant Development</li> <li>• Kaufman Assessment Battery for Children</li> <li>• Receptive-Expressive Emergent Language Scale</li> <li>• Preschool Language Scale</li> <li>• Vineland Adaptive Behavior Scales</li> <li>• Parent Knowledge Questionnaire</li> <li>• Parent Attitudes Toward Childrearing</li> <li>• Parenting Stress Index</li> <li>• Inventory of Parenting Experiences</li> <li>• Home Observation for Measurement of the Environment</li> </ul>
<b>Study Implementation</b>	<ul style="list-style-type: none"> <li>• The pilot programs only served first-time parents. The comparison group also was only first-time parents.</li> <li>• State and site program directors conducted training for administrators and home visitors.</li> <li>• There were three pilot sites. Staff from each site met monthly. Staff also attended in-service training sessions.</li> <li>• The sites provided on-site supervision of staff.</li> <li>• The study team reported that “<i>On average, families received 24 home visits and participated in 12 group meetings over the course of their involvement with the PAT program.</i>”</li> <li>• The study team collected data at baseline and then when the first-born child was 1, 2, and 3 years old.</li> </ul>

## Staff Qualifications

- All parent educators were trained according to Parents as Teachers National Center guidelines.

## Key Findings

### Cognitive and language abilities.

- The study team failed to find significant main effects of group or time and no group by time interaction effects.

### Adaptive social behavior.

- The study team failed to find significant group, time, or group by time interaction effects, at ages 2 and 3.

### Parent knowledge.

- The study team found that, when the study began, *“there was a significant difference between the PAT and comparison group mothers and fathers in parent knowledge about child development, with PAT mothers and fathers scoring higher.”*
- The study team found, for mothers, a significant group effect over both times of measurement ( $p < .01$ ) and a significant time effect ( $p < .05$ ). More specifically, the study team reported *“The PAT group mothers had higher parent knowledge scores than comparison mothers, (with mean scores of 26.07 for PAT and 24.13 for Control), and all parents increased in parent knowledge from baseline (mean score 24.38) to child age 3 (mean score 25.48).”*
- The study team failed to find a group by time interaction effect.

### Parent attitudes.

- The study team found that the treatment and comparison groups *“were highly similar in parent attitudes at baseline, and there were no significant effects of group, time, or group X time found in the repeated measures MANOVA.”*

### Quality of parenting and the home environment.

- The study team found that the treatment and comparison groups both had relatively high scores (i.e., the top quartile) on the HOME, as measured at each assessment.
- The study team found a significant main effect for group ( $p < .01$ ), wherein the mean score for the treatment group was 42.76 and the mean score for the comparison group was 41.28, as assessed using the HOME. Further, the team reported that *“The differences across time were small but consistent in their direction. There were no significant time or group X time effects on this measure.”*
- The study team also reported that *“Significant effects of PAT participation on the HOME scores were again found even after controlling for effects of initial parent knowledge.”*

### Parenting stress.

- The study team reported that both the treatment and comparison groups *“scored in the low- or moderate-risk range of the Parenting Stress Index, indicating little parenting stress.”*
- The study team failed to find significant effects of group, time, or group by time on parenting stress.

### Perceptions of social support and parenting satisfaction.

- The study team found a significant group effect for Community Support, as perceived both by mothers ( $p < .05$ ) and fathers ( $p < .05$ ). The study team reported that *“PAT mothers and fathers both reported more satisfaction with neighborhood involvement and support from community groups than the comparison group parents (for PAT and Control groups, respectively, mothers' mean scores were 4.70 and 4.23, and fathers' mean scores were 4.43 and 4.08).”*
- The study team found a significant effect for time, both for mothers ( $p < .0001$ ) and fathers ( $p < .0001$ ). The study team found that *“parents in both groups expressed increasingly greater satisfaction with support from the community as their children got older (at ages 1, 2, and 3, respectively, mothers' mean scores were 3.55, 3.64, and 6.14, and fathers' mean scores were 3.29, 3.44, and 5.99). The increase occurred primarily between child ages 2 and 3.”*
- The study team failed to find a significant group X time interaction effect.
- The study team found that, with fathers, there was a significant decline over time in expressed satisfaction with parenting ( $p < .001$ ). The study team reported that the decline was *“evident between age 2 and age 3 (mean scores obtained at child ages 1, 2, and 3 were 1.57, 1.65, and 1.20, respectively).”*
- The study team failed to find a significant group or group by time effects in parenting satisfaction for mothers or fathers.
- The study team failed to find significant group or group by time effects with regard to increasing satisfaction with support from intimate relationships over time, although all parents reported increasing satisfaction.
- The study team failed to find group, time, or group by time effects with regard to parents' satisfaction with support from their friends.

### Parent satisfaction with PAT.

- The study team reported that PAT parents had high levels of satisfaction with the PAT program.
- The study team reported that *“Forty- three percent of mothers and 27% of the fathers were unsure whether their child had increased abilities as a result of their participation in PAT.”*

<b>Citation</b>	<b>Wakabayashi, T., and Scharphorn, L. (2015). Results of the Innovative Approaches to Literacy Project. Evaluation conducted by The Center for Early Education Evaluation HighScope Educational Research Foundation.</b>
<b>Population and Sample</b>	The study incorporated 1,326 families and 1,557 children. Of these, 1,031 children remained in the evaluation at the end of the project. Participants were recruited from 59 Parents as Teachers (PAT) affiliates, operating in 59 high poverty school districts in nine states. Of these 59 affiliates, one affiliate left the study. The study focused on high-risk families. Focal and non-focal children were included in the study.
<b>Methodology</b>	Non-experimental
<b>Purpose</b>	The study was a two-level evaluation of PAT Innovative Approaches to Literacy (IAL). The first level was an “overall evaluation,” and incorporated all participating families. The second level was a “focal evaluation” and targeted children in five focal states, who were going to be between 48 and 59 months of age at the end of the project.
<b>Measures &amp; Assessments</b>	<ul style="list-style-type: none"> <li>• Home Literacy Checklist (HLC)</li> <li>• Literacy-related Personal Visit Records (Lit PVR)</li> <li>• Woodcock- Johnson Tests of Achievement-III (WJ-III) Extended Oral Language subtests</li> </ul>
<b>Study Implementation</b>	<ul style="list-style-type: none"> <li>• The focal evaluation incorporated children from five focal states (Georgia, Michigan, North Carolina, Pennsylvania, and South Carolina).</li> <li>• PAT was partnered with Imagination Library for the IAL initiative.</li> <li>• For the focal evaluation, the study team evaluation home literacy experiences as well as child skills, using the Woodcock- Johnson Tests of Achievement-III (WJ-III) Extended Oral Language subtests.</li> <li>• The study team reported that project parent educators completed 24,856 personal visits over approximately 15 months with participating families. The team reported that: <i>“On 49% of the visits, parent educators spent between 21 and 60 minutes on literacy-related activities, and on more than 70% of the visits the parent educator conducted multiple literacy-related activities and shared literacy-related resources with the family.”</i></li> <li>• The study team reported that more than 35,000 books were distributed, through a combination of the Imagination Library and PAT.</li> </ul>
<b>Staff Qualifications</b>	<ul style="list-style-type: none"> <li>• Not addressed</li> </ul>
<b>Key Findings</b>	<p><u>Increased number of children’s books</u></p> <ul style="list-style-type: none"> <li>• The study team reported that <i>“At the end of the project, over half of children owned a small personal library of between 26 to 75 books. There was a 35% increase in the percentage of families with 26 or more books in the home (54% at the beginning of the project and 89% at the end of the project).”</i></li> </ul> <p><u>Increased connections to libraries and literacy resources</u></p> <ul style="list-style-type: none"> <li>• The study team reported that <i>“Of families remaining in the project, the percentage of families reporting that they own a library card steadily increased over the length of the project. At the end of the IAL project, there was a 19% increase in the number of families that reported owning a library card (an increase from 55% at the beginning of the project to 74% at the end of the project).”</i></li> </ul> <p><u>Increased home literacy behaviors.</u></p> <ul style="list-style-type: none"> <li>• The study team reported that <i>“children showed increases in the frequency of their literacy behaviors, such as looking at books alone.”</i> More specifically, <i>“There was a 29% increase in the number of children looking or pretending to read books once or more a day.”</i></li> <li>• The study team reported that <i>“Parents also increased the frequency with which they used literacy behaviors with their child (i.e., reading books to their child), as well as positive literacy engagement approaches, such as asking their child questions about the book they are reading together. There was a 22% increase in the number of families reading together once or more a day. The majority of parents and children read the Imagination Library books together once a week or more frequently and the majority of children looked at the Imagination Library books by him/herself once a week or more frequently.”</i></li> <li>• The study team also reported that over half of parents reported <i>“they always read books, magazines, or newspapers”</i> and many parents <i>“read the literacy handouts or practiced the adult-child literacy activities given to them by their parent educator.”</i></li> </ul> <p><u>Increased oral language</u></p> <ul style="list-style-type: none"> <li>• The study team compared children pre- and post-assessment scores to the standard scores of a national representative sample. The study team found that <i>“At both pre- and post-test, children participating in the IAL project had comparable scores to the national mean (<math>\mu = 100</math>, <math>SD = 15</math>).”</i></li> <li>• The study team reported that, in the focal evaluation, children <i>“showed significant increases in their oral language skills at age four. The percentage of the 174 children assessed who increased their score</i></li> </ul>

*on at least one of the four measures of oral language was 94%.” The study team also reported that “While the increases in oral language skills for the focal evaluation group were not significantly different from those of the normed sample, the focal evaluation sample had higher overall levels of risk (low income, low educational attainment of the mother, single parent families, minority) than the group on whom the scores were normed.”*

- The study team examined oral language skills for the lowest performing children and found that “At pretest, a number of children’s standard scores on each subtest of the WJ-III (Story Recall, Understanding Directions, Picture Vocabulary and Oral Comprehension) were more than 1 standard deviation below the mean (a score of less than 85). At post-test, scores had improved to an average score (85 or above) on each subtest for more than 50% of the children.”

## End Notes

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<sup>i</sup> Parents as Teachers National Center. (2010). Parents As Teachers. [Website]. Retrieved from: [www.parentsasteachers.org](http://www.parentsasteachers.org).

<sup>ii</sup> Administration for Children and Families. (2011). Implementing Parents as Teachers (PAT) Program Model Overview. Retrieved from: <http://homvee.acf.hhs.gov/document.aspx?rid=3&sid=16>.

<sup>iii</sup> Wagner, M. M. & Clayton, S. L. (1999). The Parents as Teachers program: Results from two demonstrations. *The Future of Children*, 9(1), pp. 91-115.

<sup>iv</sup> Drotar, D., Robinson, J., Jeavons, L., and Kirchner, H.L. (2008). A randomized, controlled evaluation of early intervention: the Born to Learn curriculum. *Child: care, health and development*, 35, 5, 643-649.

<sup>v</sup> Zigler, E., Pfanenstiel, J. C., & Seitz, V. (2008). The Parents as Teachers program and school success: A replication and extension. *Journal of Primary Prevention*, 29, pp. 103-120.

<sup>vi</sup> Owen, M.T. and Mulvihill, B.A. (1994). Benefits of a Parent Education and Support Program in the First Three Years. *Family Relations*, Vol. 43, No. 2, pp. 206-212.

<sup>vii</sup> Wakabayashi, T., and Scharphorn, L. (2015). Results of the Innovative Approaches to Literacy Project. Evaluation conducted by The Center for Early Education Evaluation HighScope Educational Research Foundation.

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