

**Evaluation of “Paths to QUALITY,” Indiana’s
Child Care Quality Rating and Improvement System:
Final Report
(Technical Report #3)**

James G. Elicker, Ph.D.

Carolyn Clawson Langill, Ph.D.

Karen M. Ruprecht, Ph.D.

Joellen Lewsader, M.Ed.

Treshawn Anderson, M.S.

Department of Human Development & Family Studies

Center for Families

Purdue University

September 30, 2011

Acknowledgments

Funding for this project was provided by contract with Purdue University from the Indiana Bureau of Child Care, Division of Family Resources, Indiana Family & Social Services Administration. The Indiana Paths to QUALITY program is directed by Melanie Brizzi, State Child Care Administrator with the Bureau. The contents of the report are solely the responsibility of the authors and do not represent the official views of the funding agency, nor does this publication in any way constitute an endorsement by the funding agency.

The authors wish to thank members of the Paths to QUALITY Evaluation Advisory Committee for their useful recommendations: Ted Maple, United Way of Indiana; Peggy Apple, Ivy Tech Community College and Indiana University-Purdue University-Indianapolis; Vanessa Wagler, Oakhill Baptist Child Care; Deborah Chubb, Imagination Station Early Childhood Learning Center; Wendy Flowers, Good Shepherd Home Day Care; Chuck Hert, The Consulting Consortium; and Michelle Thomas, Bureau of Child Care.

We would also like to thank our data collectors: Suzanne Ankenbruck, Darcie Hume-Thoren, Anne Davis, Jeanie Neal, and Marlene Mayfield.

The Purdue Center for Families provided assistance with the final report preparation and dissemination.

We also thank the many child care providers, children, and parents who gave of their time to participate in the PTQ Evaluation research. To the extent that Paths to QUALITY and this evaluation benefits child care in Indiana, those in child care centers, homes, and ministries are the most important contributors and beneficiaries.

Table of Contents

EVALUATION OF PATHS TO QUALITY: INDIANA’S CHILD CARE QUALITY RATING AND IMPROVEMENT SYSTEM.....	5
What is Paths to QUALITY?	5
<i>Evaluation of Paths to QUALITY by Purdue University</i>	6
DO PATHS TO QUALITY RATINGS ENSURE HIGHER QUALITY?.....	8
Assessment of Child Care Quality	8
<i>Relationships between PTQ levels and child care quality-all providers</i>	9
<i>Relationships between PTQ levels and child care quality in family child care providers</i>	10
<i>Relationships between PTQ levels and child care quality in preschool classrooms</i>	11
<i>Relationships between PTQ levels and child care quality in infant/toddler classrooms</i>	12
Were there differences in child care quality in Waves 1, 2, 3 and 4?	13
How can quality be improved for PTQ child care providers?	14
WHAT ARE THE EXPERIENCES OF CHILD CARE PROVIDERS IN PATHS TO QUALITY?	16
Are Indiana child care providers enrolling in PTQ?	16
<i>What were the incentives for providers to enroll in PTQ?</i>	16
<i>What are the challenges for providers?</i>	18
<i>Are providers using training and technical assistance resources?</i>	18
<i>Are providers advancing to higher PTQ levels after entering the system?</i>	21
<i>Do child care providers in PTQ plan to advance?</i>	23
<i>What level do providers hope to attain?</i>	23
HOW DO PARENTS VIEW PATHS TO QUALITY?	25
Are parents aware of PTQ?.....	25
<i>Will PTQ affect parents’ child care decisions?</i>	26
PARENTS IN THE GENERAL PUBLIC: ARE THEY AWARE OF PATHS TO QUALITY?.....	27
HOW ARE CHILDREN DOING IN PATHS TO QUALITY?	30
Are children and families at all education and income levels gaining access to PTQ?	30
<i>Families using child care vouchers –related to PTQ?</i>	30
<i>Parent household income and education levels – related to PTQ?</i>	31
Infant-Toddler Development and PTQ levels: Descriptive Analyses	31
Preschool age children’s development and PTQ levels: Descriptive Analyses	32
Child development outcomes for children of families using child care vouchers	32
<i>Is child care quality related to child development and learning?</i>	33
CONCLUSIONS AND RECOMMENDATIONS.....	34
Validity of the PTQ Quality Rating System	34
Child care providers’ experiences with PTQ	36
Parents’ experiences with PTQ.....	38
Children in PTQ.....	40

ENDNOTES

APPENDIX A: DESCRIPTION OF MEASURES

**APPENDIX B: DESCRIPTION OF ENVIRONMENT RATING SCALES, CIS AND MEAN
SCORES**

APPENDIX C: DESCRIPTION OF MEASURES

Evaluation of Paths to QUALITY:

Indiana’s Child Care Quality Rating and Improvement System

What is Paths to QUALITY?

Paths to QUALITY (PTQ) is Indiana’s new statewide child care quality rating and improvement system. Launched in January 2008 in a phased roll-out in four main state regions over the course of two years, PTQ aims to improve the quality of child care available to Indiana’s young children and families, provide information to help parents select high quality care, and support child care providers in their efforts to provide the best possible care and education for children. According to the Indiana PTQ web site¹, the long-term goals are:

- Education of parents on the need for quality early education and child care and how to identify and select developmentally appropriate experiences that will help children as they enter school.
- Advocacy and public awareness within the community that promotes quality child care standards, child care worker education and its impact on business and economic development
- Development of well-trained qualified child care and early education staff through child care professional training and mentoring.
- Availability of high quality, affordable child care and appropriate early education experiences for families and children at all socio-economic levels.
- Collaboration with other community organizations as well as private businesses and foundations to develop solutions to ensure that all of our community's children will have opportunities to develop to their fullest potential.

As this report was written, 26 states in the United States had implemented some form of child care quality rating and improvement system (QRIS). Virtually all of the other states and territories had a QRIS in the planning or pilot phases. However, Indiana was among the first in the nation to launch a statewide QRIS program. Indiana’s QRIS is unique because it began as a community-based quality improvement effort in one community—Fort Wayne, Indiana. PTQ was created in 1999 by a diverse community group concerned with the education and welfare of young children and families, the Early Childhood Alliance. In 2000, PTQ was successfully implemented in Allen County surrounding Fort Wayne. The following year, PTQ was launched in the five surrounding counties of DeKalb, Whitley, Steuben, Noble, and LaGrange. Between 2005 and 2007, PTQ was successfully replicated by another community group in the southwestern region of the state around Evansville.² In 2007, state leaders made the decision to develop PTQ as a statewide child care quality improvement program, and the statewide planning and implementation process began.

Indiana's Paths to QUALITY, like most other QRIS programs across the nation, includes five basic components to achieve its goals³:

1. **Quality standards:** PTQ has evidence-based child care quality standards at four levels, ranging from Level 1 (basic quality; licensing) to Level 4 (highest quality; national accreditation).
2. **A quality rating system:** PTQ has trained raters who assign the appropriate PTQ level, based on the standards each provider has attained.
3. **Incentives for advancement:** Child care providers receive rewards in cash or materials, as well as public recognition for achieving higher levels in the system.
4. **Information for parents:** PTQ provides accessible information about what child care quality is, which child care providers are participating in PTQ, and the providers' current PTQ quality level.
5. **Educational opportunities and other supports for child care providers:** PTQ offers educational opportunities and mentoring for providers who wish to enter the system and advance their PTQ level.

Evaluation of Paths to QUALITY by Purdue University

In 2007 Purdue University was contracted by the Indiana Family & Social Services Administration, Bureau of Child Care, to evaluate the implementation phase of Indiana's Paths to QUALITY child care initiative. This evaluation study, with data collection completed between July 2008 and September 2011 included all eleven Child Care Resource and Referral Service Delivery Areas (SDAs) in Indiana. The overall goals of the evaluation research were to validate the quality rating system and describe the experiences of child care providers, parents, and children with this new program as it was implemented. During the course of the research, Purdue provided program leaders with periodic reports that described aspects of PTQ implementation in each SDA region, so that they could better monitor the acceptance and impact of PTQ and make program adjustments as needed.

This final report reflects the early Paths to QUALITY experiences of a wide range of Indiana citizens working in or using regulated child care. The report summarizes the evaluation findings for Paths to QUALITY from all eleven SDA regions, which include all 92 counties in the state of Indiana. To accurately describe the workings of PTQ, the Purdue University research team randomly selected providers, parents, and children from all regions to participate in the evaluation study.

The final evaluation sample comprised a total of 276 child care providers: 95 licensed child care centers (including 135 classrooms assessed); 169 licensed family child care homes; and 12 unlicensed registered child care ministries (including 14 classrooms assessed). Within these selected child care providers, the research team interviewed or assessed 270 child care teachers/providers, and 557 children and their parents.

The evaluation questions addressed by the Purdue research team were:

For the PTQ Quality Rating and Improvement System--

- When providers attain higher PTQ levels, does this result in higher quality care for children?

For child care providers in PTQ--

- Are child care providers entering the PTQ system?
- What are the incentives and the challenges for providers?
- Are providers using available training/technical assistance (T/TA) resources?
- Are providers advancing to higher PTQ levels?

For parents using PTQ and parents in the general public--

- Are parents aware of PTQ?
- Will PTQ affect their parents' child care decisions?

For children in PTQ--

- Are children and families at all education and income levels gaining access to child care at the highest PTQ levels?
- Are children in higher PTQ levels developing more optimally than children in lower PTQ levels?

The Purdue team used a variety of research methods to address these questions, including face-to-face and telephone interviews with child care providers and parents, extensive assessments in each center or home by trained observers to assess quality; and observations, surveys, and standardized tests to assess children's development.⁴ The research team sent a trained observer to each of the selected centers, homes, and child care ministries, and the observer spent approximately 4 hours completing the assessments in each child care room or family child care home. (Table 1A. in the Appendix A provides an overview of measures used in the evaluation.)

The report is presented in five sections:

1. Do Paths to QUALITY Ratings Ensure Higher Quality? (p. 8)
2. What are the Experiences of Child Care Providers in Paths to QUALITY? (p. 15)
3. How do Parents View Paths to QUALITY? (p. 25)
4. How Are Children Doing in Paths to QUALITY? (p. 30)
5. Conclusions & Recommendations (p. 34)

Do Paths to QUALITY Ratings Ensure Higher Quality?

Assessment of Child Care Quality

An important question for the new PTQ system is whether the rated PTQ quality levels are a valid measure of child care quality for child care centers and family child care homes. The Purdue University research team conducted a rigorous validity check of PTQ-rated quality by doing independent quality assessments using research-tested measures. If the PTQ ratings and these quality measures are positively correlated, stakeholders can feel confident the PTQ ratings are meaningful and distinguish real differences in child care quality.

Two measures, the Caregiver Interaction Scale (CIS) and the University of North Carolina environment rating scales (ERS) were used to objectively rate quality levels of PTQ-rated providers.

The ERS group of child care quality scales was chosen to provide objective assessments of quality levels in the sampled PTQ providers. The ERS was chosen because at the time of the launch of the PTQ evaluation, it was the only measure that could objectively assess quality in infant/toddler classrooms, preschool classrooms, and family child care homes, using the same quality concepts. Completion of the ERS requires a 4-hour observation visit. Each scale has the following subscales: Space and Furnishings, Personal Care, Language and Reasoning, Activities, Interaction, Program Structure and Parents and Staff.

Here are brief descriptions of each of the three ERS scales:

- The Infant Toddler Environment Rating Scale—Revised edition (ITERS-R) was used to assess child care quality in licensed center and registered ministry classrooms caring for children ages 0 to 30 months. The ITERS-R has 7 subscales and 39 items.
- The Early Childhood Environmental Rating Scale- Revised edition (ECERS-R) was used to assess child care quality in licensed center and registered ministry classrooms caring for children ages 2 ½ and up. The ECERS-R has 7 subscales and 43 items.
- The Family Child Care Environment Rating Scale—Revised edition FCCERS-R was used to assess child care quality in licensed family child care home settings. The FCCERS-R has 7 subscales and 38 items.

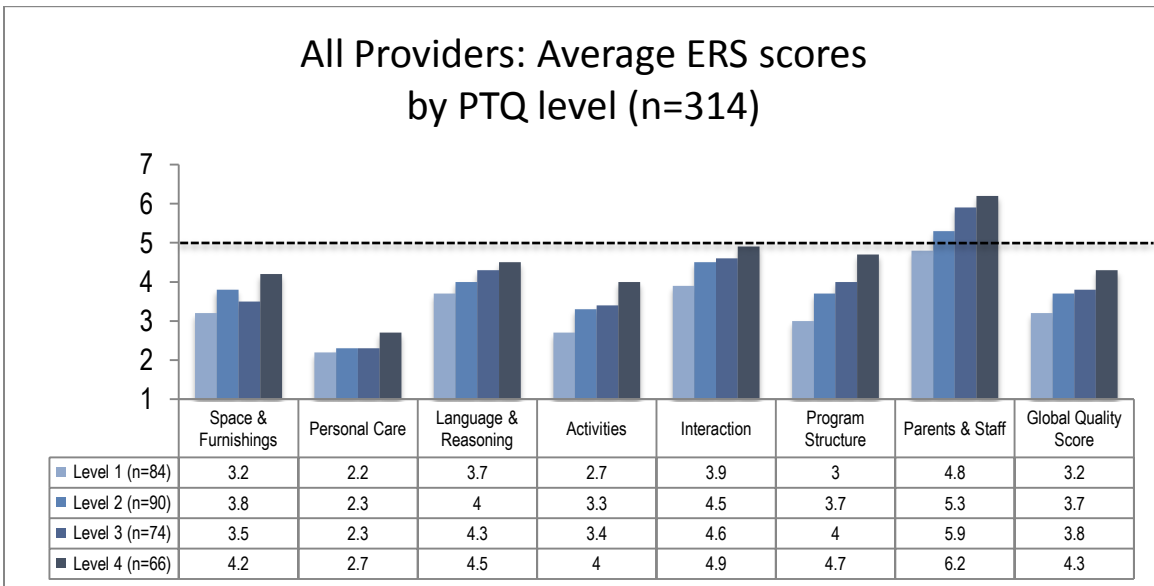
The ERS are 7-point scales, with higher scores indicating better child care quality (1 = inadequate; 3 = minimal; 5 = good; 7 = excellent). Each ERS consists of seven subscales: Space and Furnishings, Personal Care, Language and Reasoning, Activities, Interaction, Program Structure, and Parents and Staff. For more information on each of the ERS, see Appendix B.

The Caregiver Interaction Scale is a 26 item measure that uses the 4-hour observation time to assess the level of positive caregiver-child interactions, permissiveness, detachment, and punitiveness in the classroom. Each item is rated on a four point scale, from “not at all” to “very much.” The total score, considered a measure of overall positive, supportive interactions with children, indicates the caregiver is warmer, less permissive, less punitive, and less detached. (For more details about the CIS, see Table B1 in Appendix B.)

Relationships between PTQ levels and child care quality – all providers

As PTQ levels increase, so does overall child care quality. In the graph below, note that average quality levels for all providers are consistently higher for provider groups progressing from Level 1 through Level 4.

- The association between ERS quality and PTQ ratings was strongest for the Parents and Staff, Activities, and Program Structure subscales.
- Overall (global) ERS quality was moderately correlated with PTQ ratings.
- Smaller but statistically significant associations were also found between PTQ levels and the Space and Furnishings, Personal Care Routines, Language/Reasoning, and Interaction subscales.
- Level 4 providers were rated statistically higher in ERS quality than Level 1 providers in all of the quality subscales and the global quality score.
- Observed ERS quality, while related to the PTQ ratings, was *highly variable* within each PTQ level. For example, preschool classrooms at Level 1 had an *average* global quality score of 3.8, but a *range* of 1.7 to 5.5. Level 4 preschool classrooms had an *average* global quality score of 4.6, but *ranged* from 2.9 to 5.7. This amount of variability was found throughout the study, in all PTQ levels and in all types of care.



Associations between PTQ levels and caregiver sensitivity—all providers

Daily interactions between adults and children in child care are a key aspect of quality, closely connected to children’s learning. Small but statistically significant relationships were found between caregiver interactions and PTQ levels, meaning that caregivers were observed to interact more positively and supportively with children when providers at higher PTQ levels. (For more details, see Tables B2, B3, B4, and B5 in Appendix B.)

- Higher PTQ levels were positively associated with overall caregiver sensitivity and positive interactions. Providers at higher PTQ levels were more sensitive to children and displayed more positive interactions with children.
- Higher PTQ levels were negatively associated with caregiver permissiveness subscale and detachment. Providers at higher PTQ levels were less permissive and detached from children.
- Level 3 and 4 providers were rated *statistically higher* than Level 1 providers in overall caregiver sensitivity and positive interactions.
- Level 1 providers were rated *statistically higher* than Levels 2, 3 and 4 providers on detachment with children.

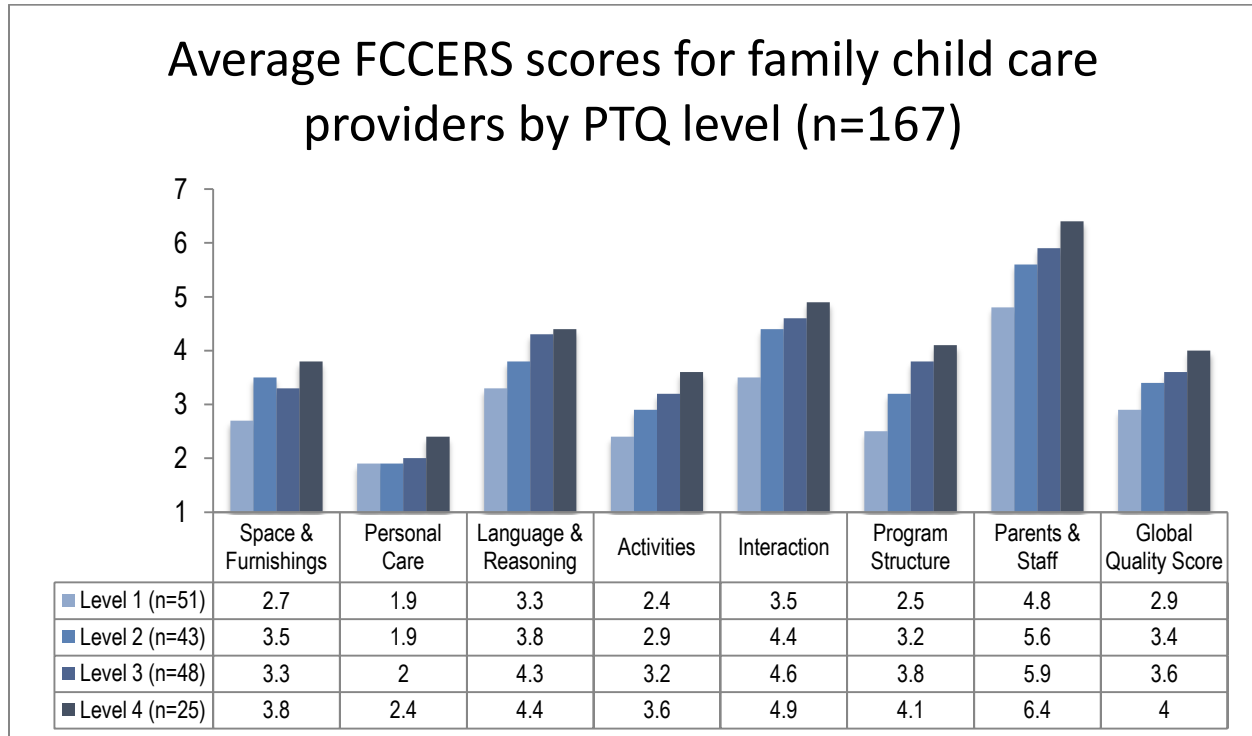
Relationships between PTQ levels and child care quality – Licensed family child care homes

Licensed family child care providers represented half (53%) of the evaluation sample. Overall, 167 family child care providers were observed using the FCCERS-R and the CIS. The ERS overall quality and subscale scores, by PTQ level, are presented in the graph below.

As a group, the licensed family child care homes showed the strongest association between Purdue-assessed quality and the rated PTQ levels:

- Level 2, 3 and 4 providers scored *significantly higher* on the Global Quality scale and the Interaction subscale than Level 1 providers. Level 4 providers had an average score of 4.0 in Global Quality, between “minimal” and “good.” (This compares very favorably with quality studies using the FCCERS scale completed recently in Georgia⁵ and Rhode Island.⁶)
- Level 3 and 4 providers scored *significantly higher* on the Space and Furnishings, Language/Reasoning, Activities, Program Structure subscales than Level 1 providers.
- Level 4 providers scored *significantly higher* than Levels 1, 2, and 3 on the Parents and Staff subscale.

- When family child care providers were rated higher by PTQ, they were more likely to interact sensitively and positively with the children, and less likely to be overly detached, punitive, or permissive.

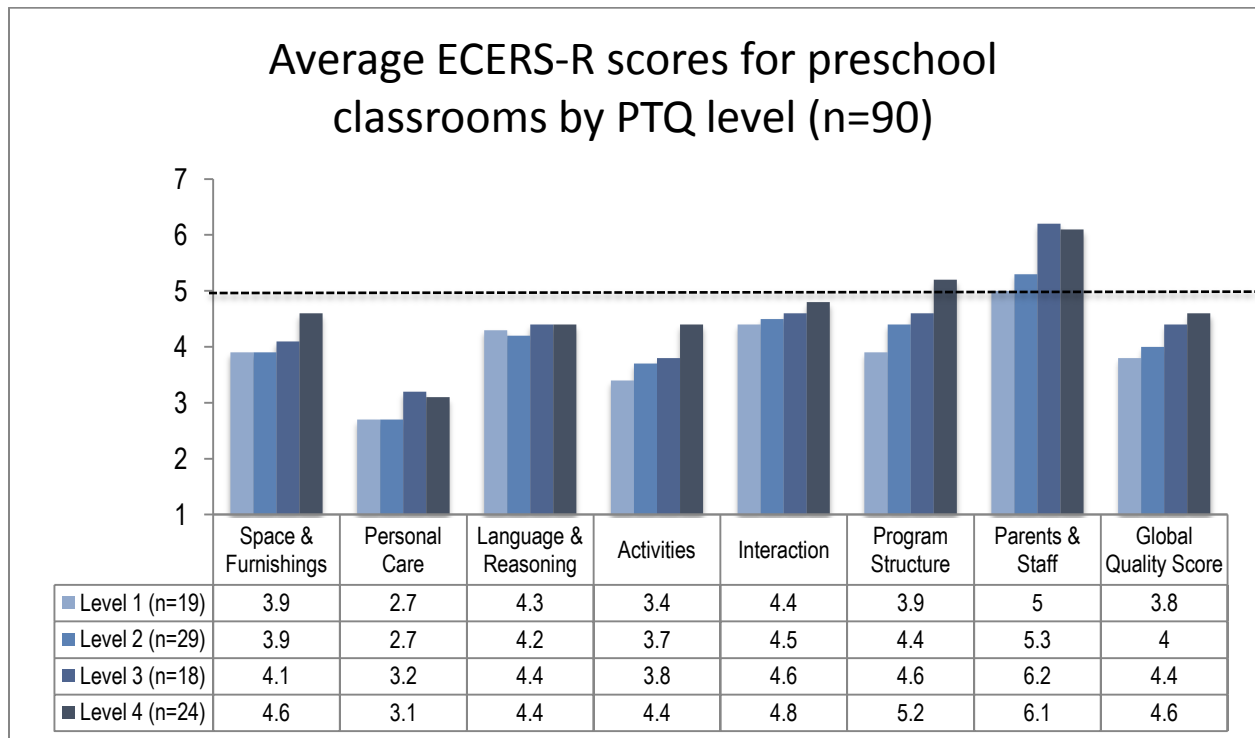


Relationships between PTQ levels and child care quality – preschool classrooms

Ninety (90) preschool classrooms were observed in both licensed child care centers and registered child care ministries using the ECERS-R. A summary of the quality ratings, by PTQ quality level, is presented in the graph below. In general, as PTQ levels increased, so did overall child care quality. Overall quality was somewhat low, with an average rating of 4.6 for PTQ Level 4 providers (5 = “good” on the ECERS-R). However this level of quality compares favorably with an average rating of 4.8 for Head Start classrooms in a recent national study.⁷ Also, quality was rated somewhat higher in preschool classrooms compared with licensed family child care homes (4.6 vs. 4.0 in ERS global quality at PTQ Level 4.)

However, the *association* between PTQ ratings and ERS quality was not as strong for preschool classrooms as it was for family child care homes. In other words, PTQ ratings are a stronger indicator of ERS quality in family child care homes than in centers. Here is a summary of the main results for preschool classrooms:

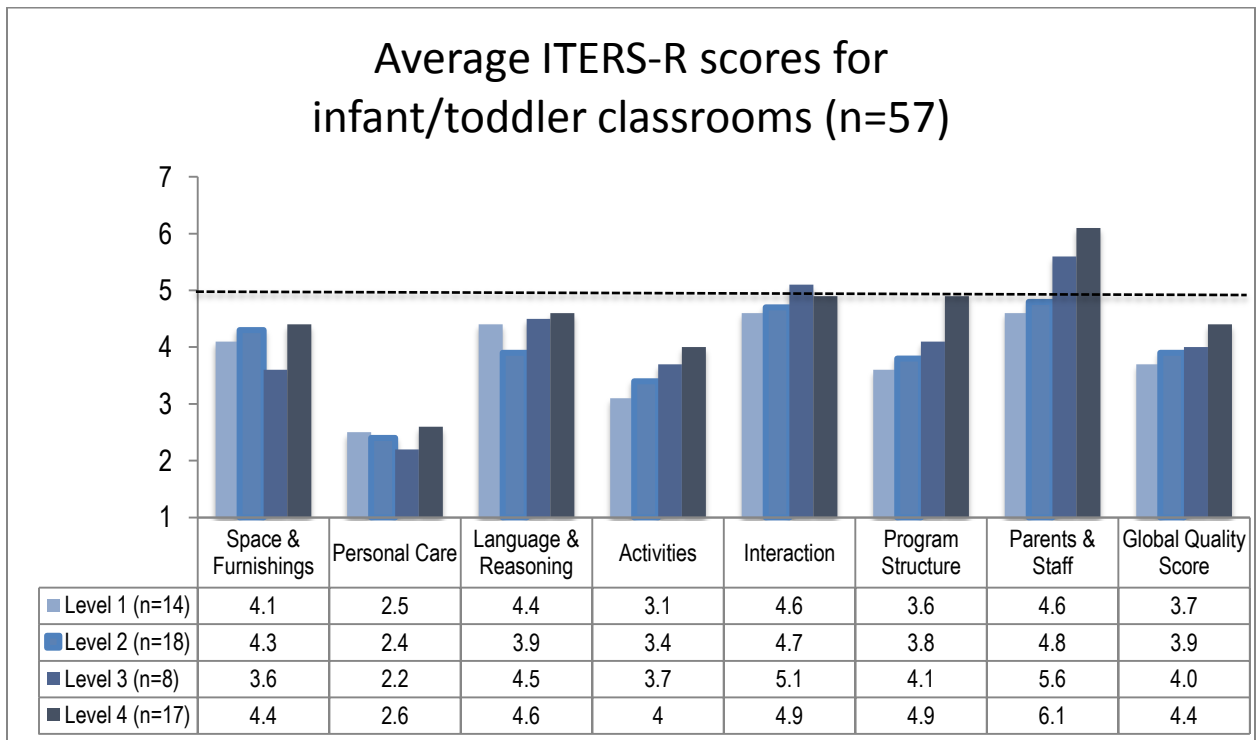
- When preschool classrooms were rated at higher PTQ levels, they had significantly higher ERS quality scores in Global Quality, Space and Furnishings, Activities, Program Structure, and Parents and Staff subscales.
- Level 4 providers scored *significantly higher* than Level 1 providers on the Global Quality score and the Space and Furnishings, Activities, Program Structure, and Parents and Staff subscales.
- Higher PTQ levels were not related to caregiver sensitivity as measured by the CIS.



Relationships between PTQ levels and child care quality--Infant/toddler classrooms

Fifty seven (57) infant-toddler classrooms were observed in both licensed child care centers and registered child care ministries using the ITERS-R. A summary of the quality ratings, by PTQ quality level, is presented in the graph below. In general, as PTQ levels increased, so did overall child care quality. Overall quality in infant-toddler groups was relatively low, similar to the preschool classrooms—4.4 global quality at PTQ Level 4. However, these quality levels compare favorably to those observed in a recent national study of quality in Early Head Start infant-toddler classrooms (average= 3.8).⁸ Here is a summary of results for infant-toddler classrooms:

- PTQ level was moderately associated with the Activities and Program Structure subscale and the Global Quality score. Providers at higher PTQ levels tended to be rated higher on Activities and Program Structure subscale and the Global Quality score.
- Level 4 providers scored *significantly higher* than Level 1 and 2 providers on Parents and Staff subscale.
- PTQ level was strongly associated with to the Parents and Staff subscale. Providers at higher PTQ levels were rated higher on the Parent and Staff subscale.
- No relationships were found between PTQ level and caregiver sensitivity with infants and toddlers.



Were there differences in child care quality in Waves 1, 2, 3, and 4?

Paths to QUALITY was implemented in a sequence of four regional waves over one year. Since Wave 1 providers (SDA 3, Fort Wayne area; and SDA 9, Evansville area) had been participating in Paths to QUALITY for years prior to the statewide expansion, additional analyses were done to determine if there were quality differences among the Wave regions. Here is a brief summary of the findings:

- In licensed child care centers, Wave 1 providers were rated statistically higher than other Waves in ERS Space and Furnishings, and CIS sensitivity and positive interaction. They were also rated statistically lower in caregiver permissiveness.
- In licensed family child care homes, Wave 1 providers were rated higher than other Waves in ERS Space and Furnishings and CIS overall positive caregiver-child interactions. The Wave 1 caregivers were rated lower in punitiveness and permissiveness with children.
- In the small sample of registered child care ministries, there were no differences in quality by the wave of data collection.

How can quality be improved for PTQ child care providers?

The evaluation research, as summarized above, found that PTQ levels do reliably distinguish between child care quality levels, as assessed using research-validated measures. However, the overall quality of even the PTQ Level 4 providers is on average lower than program leaders might expect or want, just below the 5 (“good”) level. What specific quality indicators could be targeted for improvement in order to improve the overall quality levels of PTQ providers?

To answer this question, the Purdue team examined each of the items on the ERS measures to determine which items had the lowest average scores. There were some common trends across this analysis of the ITERS-R, ECERS-R and the FCCERS-R scores. (See more detailed results of these analyses in Tables B6, B7, and B8 in the Appendix B.)

Here is a summary listing of the lowest rated items type of care:

Preschool classrooms (Level 4 average item score in parentheses)

- Meals/snacks (2.6)
- Diapering/toileting (2.4)
- Health practices (2.0)
- Safety practices (2.5)
- Using language to develop reasoning skills (3.4)
- Math/number (3.9)

Infant/toddler classrooms (Level 4 average item score in parentheses)

- Meals/Snacks (1.9)
- Diapering/Toileting (1.9)
- Health Practices (2.0)
- Safety practices (2.6)
- Blocks (2.2)
- Science/Nature (3.1)

Family child care homes (Level 4 average item score in parentheses)

- Meals/Snacks (1.9)
- Diapering/Toileting (1.7)
- Health Practices (2.1)
- Safety practices (1.9)
- Nap/Rest (2.5)
- Active Physical Play (2.1)

Note: The Personal Care subscale is the lowest rated subscale among all types of providers and at all PTQ levels. The seven items that comprise this subscale across all three ERS scales are Greetings/Departure, Meals/Snack, Nap/Rest, Toileting, Diapering, Health Practices and Safety Practices. All but the Greetings/Departure item are among the lowest rated items for PTQ

providers. If ERS-rated quality is to be improved across all PTQ levels, then providers, mentors, quality advisors, licensing consultants and the PTQ raters may want to focus attention on the items identified in this analysis.

What are the Experiences of Child Care Providers in Paths to QUALITY?

Are Indiana child care providers enrolling in PTQ?

In the first three years, the level of participation by licensed child care centers and licensed family child care homes has been a striking success for PTQ. In September 2011, at the conclusion of the Purdue evaluation study, there were 608 licensed child care centers, 2,972 licensed family child care homes, and 736 unlicensed registered child care ministries in operation in Indiana. Of these providers, 82% of all licensed child care centers, 52% of all licensed family child care homes, and 11% of all registered child care ministries had enrolled in PTQ. In this early phase of PTQ, as expected, most of the enrolled providers were rated at Level 1 or Level 2. (All providers who enroll in PTQ must come in at Level 1. In order to attain higher levels, they must meet the standards for the higher level, but also continue to meet the standards for all the levels below.) There were a total of 2,110 providers enrolled in PTQ, 53% rated at Level 1, 23% at Level 2, 14% at Level 3, and 10% at Level 4.

Table 1. Number of providers enrolled in PTQ by type of child care and PTQ level, September, 2011

PTQ Level	Licensed Child Care Centers	Licensed Family Child Care Homes	Registered Child Care Ministries	Total
Level 1	131	931	48	1110
Level 2	110	357	15	482
Level 3	128	165	7	300
Level 4	128	90	0	218
Total	497	1543	70	2110

What were the incentives for providers to enroll in PTQ?

Providers who participated in the evaluation completed a written survey, which was collected during the observation visit. These surveys were completed by 270 of 276 participating providers. Providers were asked, "Why did you decide to join the Paths to QUALITY program?" Seven choices were available, and providers could check more than one option. Nearly all (96%) of the providers responded to this question. Percentages are given for all providers and are broken down by type of care and PTQ level.

Table 2. Providers' reasons for enrolling in PTQ, by type of care

Incentive to enroll in PTQ	All Providers (n=270)	Licensed Child Care Center (n=94)	Family Child Care Homes (n=164)	Registered Ministry (n=12)
I wanted to improve the quality of my child care program.	82%	83%	81%	100%
I wanted more professional recognition.	70%	71%	72%	50%
I wanted to make my child care more attractive to parents.	66%	64%	66%	75%
I wanted new ideas for my child care program.	63%	58%	68%	50%
The gifts and cash incentives that were offered for PTQ participation.	61%	64%	61%	42%
I wanted the training or technical assistance that PTQ offered.	61%	61%	60%	67%
I wanted to increase my business.	49%	54%	47%	33%

Child care providers were also asked, "What aspect of the Paths to QUALITY has been most beneficial to you?" since enrollment in PTQ. Providers were given six choices and asked to pick only one answer. Overall, 76% of the providers responded.

Table 3. Child care providers: Most beneficial aspect of PTQ, by type of care

Most beneficial aspect of PTQ	All providers (n=210)	Licensed Child Care Center (n=74)	Family Child Care Homes (n=126)	Registered Ministry (n=10)
The mentoring services I have received from the local child care resource and referral agency.	37%	35%	38%	30%
The gifts and incentives I get from the program.	25%	30%	24%	0%
The recognition I get from parents, other providers, or the public that I am providing high quality child care.	16%	14%	17%	20%
The training provided through the program.	9%	4%	10%	30%
PTQ participation provides me with a marketing tool for my child care program.	9%	11%	7%	0%
Other (providers chose more than one answer)	6%	7%	5%	20%

What are the challenges for providers?

There were significant challenges for providers participating and advancing through the PTQ quality levels. Providers were asked, “In your opinion, what have been the biggest obstacles you face in moving up to the next Paths to QUALITY level?” 96% of the providers responded to this question.

Challenges for providers	All providers
Finding the time to complete tasks required by PTQ	21%
Completion of required education and training	16%
Insufficient funding to meet standards	9%
Organization; getting paperwork and documentation in order	8%
Preparing for and meeting national accreditation standards	6%
Other obstacles	6%
Having to wait 6 months in order to get the next assessment	4%
Difficulty making required environmental modifications	4%
Need more feedback from my mentor	2%
Challenges in developing a curriculum	2%
Reported they had no obstacles	14%

Are providers using available training/technical assistance (T/TA) resources?

The vast majority (94%) of providers reported that they had received some type of assistance from their local child care resource and referral agency. 76% of the providers reported the number of contacts (meetings, visits, or phone consultations) they had with their local resource and referral agency since they had enrolled in PTQ. Use of assistance from local child care resource and referral agency and the number of contacts did not differ by type of care. 92% of licensed child care centers, 100% of registered ministries, and 94% of family child care reported they had received assistance from their local child care resource and referral agency. Use of assistance did differ by PTQ level. 95% of Level 1 providers, 92% of Level 2 providers, 96% of Level 3 providers, and 90% of Level 4 providers reported receiving assistance from their local child care resource and referral agency.

All providers, number of CCR&R contacts since enrollment in PTQ:

- Average number of contacts reported = 7
- Middle number of contacts (median) = 6
- Minimum = 0
- Maximum = 32

During a follow-up telephone survey completed 4 to 9 months after the observation visit providers were again asked if they had received any assistance from their local child care

resource and referral agency. 68% providers reported receiving assistance for their local child care resource and referral agency in the past six months. Use of assistance from local child care resource and referral agency and the number of contacts did not differ *significantly* by type of care or PTQ level. 71% of licensed child care centers, 90% of registered ministries, and 64% of family child care reported they had received assistance from their local child care resource and referral agency. 70% of Level 1 providers, 79% of Level 2 providers, 53% of Level 3 providers, and 69% of Level 4 providers reported receiving assistance from their local child care resource and referral agency.

All providers, number CCR&R contacts within past 6 months:

- Average number of contacts reported = 8
- Middle number of contacts (median) = 5
- Minimum = 1
- Maximum = 48

Many providers (44%) reported receiving assistance from IAEYC in the initial provider survey. Most Level 3 (64%) and Level 4 (92%) providers reported having contact with IAEYC since they had enrolled in the system.

Level 3 providers reported:

- Average number of contacts = 3
- Middle number of contacts (median) = 3
- Minimum = 1
- Maximum = 10

Level 4 providers reported:

- Average number of contacts = 5
- Middle number of contacts (median) = 4
- Minimum = 2
- Maximum = 20

During the follow up provider survey, 58% of Level 3 providers and 77% of Level 4 providers reported receiving assistance from IAEYC in the last six months.

Level 3 providers reported:

- Average number of contacts = 1
- Most common number of contacts = 1
- Middle number of contacts (median) = 1
- Minimum = 1
- Maximum = 2

Level 4 providers reported:

- Average number of contacts = 1
- Most common number of contacts = 1
- Middle number of contacts (median) = 1
- Minimum = 1
- Maximum = 2

The child care providers reported using a variety of training/technical assistance resources to help them improve or maintain child care quality, so they could either progress to the next PTQ level or maintain their current level. Here are the training/technical assistance resources providers reported in the initial provider survey by type of care and PTQ level.

Table 4. Training/technical assistance used by type of care

Training/technical assistance resources used to improve or maintain child care quality	All Providers (n=270)	Licensed Child Care Center (n=94)	Family Child Care Home (n=164)	Registered Child Care Ministry (n=12)
Mentoring	83%	75%	87%	92%
Training session(s) I attended at the local child care resource and referral agency or in my community	68%	58%	72%	92%
Attended a local child care conference	57%	55%	57%	83%
Training provided in my child care center or home	42%	52%	32%	100%
Talked with an IAEYC accreditation advisor	40%	50%	36%	17%
Consulting in person or by phone from the local child care resource and referral agency's <i>Infant/Toddler Specialist</i>	39%	35%	39%	67%
Consulting in person or by phone from the local child care resource and referral agency's <i>Inclusion Specialist</i>	37%	43%	32%	50%
Used the Lending Library	32%	20%	39%	42%
Joined a local accreditation work group	27%	24%	27%	50%

Table 5. Training/technical assistance used by PTQ level

Training/technical assistance resources used to improve or maintain child care quality	Level 1 (n=78)	Level 2 (n=75)	Level 3 (n=67)	Level 4 (n=50)
Mentoring	84%	92%	83%	66%
Training session(s) I attended at the local child care resource and referral agency or in my community	67%	58%	74%	78%
Attended a local child care conference	49%	46%	65%	76%
Training provided in my child care center or home	47%	39%	32%	52%
Talked with an IAEYC accreditation advisor	11%	15%	64%	90%
Consulting in person or by phone from the local child care resource and referral agency's <i>Infant/Toddler Specialist</i>	38%	39%	41%	38%
Consulting in person or by phone from the local child care resource and referral agency's <i>Inclusion Specialist</i>	29%	37%	39%	44%
Used the Lending Library	32%	36%	28%	34%
Joined a local accreditation work group	22%	23%	30%	38%

Are providers advancing to higher PTQ levels after entering the system?

During the follow up telephone surveys, providers were asked if their PTQ level had changed since the Purdue Evaluation Team visit, approximately six months earlier. Two hundred thirty eight providers responded to this question-- **23% of providers' level had changed since the evaluation visit (22% advanced one or more levels, 2% dropped a level) while 71% of providers remained on the same level.**

Table 6. Rates of PTQ level change in 6 month period between Purdue evaluation visit and follow-up telephone interview

Level of provider at time of Purdue evaluation visit	% of providers that moved up at least 1 level	% of providers that went down 1 level	% of providers that stayed at the same level	% of providers that closed facility	% of providers that moved and are not on PTQ yet
All Providers (n=238)	22%	2%	71%	4%	1%
Level 1 (n=65)	26%	NA	69%	5%	0%
Level 2 (n=70)	41%	4%	46%	7%	2%
Level 3 (n=53)	13%	2%	81%	2%	2%
Level 4 (n=50)	NA	2%	96%	2%	0%
Licensed Child Care Centers (n=90)	19%	1%	77%	2%	1%
Level 1 (n=19)	42%	NA	47%	11%	0%
Level 2 (n=27)	30%	0%	67%	0%	3%
Level 3 (n=18)	6%	0%	94%	0%	0%
Level 4 (n=26)	NA	4%	96%	0%	0%
Family Child Care Homes (n=164)	24%	3%	66%	6%	1%
Level 1 (n=40)	20%	NA	75%	2.5%	2.5%
Level 2 (n=41)	47%	7%	34%	12%	0%
Level 3 (n=33)	18%	3%	73%	3%	3%
Level 4 (n=25)	NA	92%	0%	4%	4%
Registered Ministries (n=11)	27%	73%	0%	0%	0%
Level 1 (n=7)	14%	NA	86%	0%	0%
Level 2 (n=2)	100%	0%	0%	0%	0%
Level 3 (n=2)	0%	0%	100%	0%	0%
Level 4 (n=0)	0%	0%	0%	0%	0%

Do child care providers in PTQ plan to advance?

When the research team asked providers about their plans for advancement during the follow-up survey, most responded that they were actively pursuing a higher PTQ level. (This question was added to the follow-up survey after Wave 1, so providers in those first regions are not included.)

Table 7. Providers’ plans for advancement, by type of care

	All Providers (n=219)	Licensed Child Care Centers (n=83)	Family Child Care Homes (n=125)	Registered Child Care Ministries (n=11)
I am working hard to move up PTQ levels.	54%	52%	54%	55%
I have advanced to the PTQ level where I would like to be.	20% (3% of Level 1, 2, & 3)	29% (4% of Level 1, 2, & 3)	15% (2% of Level 1, 2, & 3)	9% (No level 4 ministries)
I have no plans to move up PTQ levels.	4%	1%	6%	0%
Other responses.*	22%	18%	24%	36%

*Other responses included Level 4 providers, providers waiting for accreditation, and responses like working but at a slow pace or not too hard.

What level do providers hope to attain by next year?

In the follow-up phone interviews, providers were asked about their specific plans for advancement. These hoped-for advancements in PTQ level, if actually attained, would result in significant increases in the number of Level 3 and Level 4 child care.

- Level 1 4%
- Level 2 18%
- Level 3 33%
- Level 4 46%
- Do not know 2%

If market forces are operating in a system like PTQ, one would expect that higher rated services could demand higher prices from consumers. (An example is the hotel star rating system, in which 4-star hotels typically have higher rates than 2-star hotels.) In the implementation phase of PTQ, some providers reported they had raised their fees to parents, but there was no significant correspondence between raising fees and the providers PTQ quality level, so other factors must be at work. Reasons that providers increased child care rates included: the cost of PTQ (14% of those who increased rates), to increase staff wages for a standard of living increase (89%), and because as a PTQ participant I feel I can charge more (19%).

Table 8. Have you increased your fees to parents in the past 6 months?

	Yes	No
Level 1	15%	85%
Level 2	27%	73%
Level 3	13%	87%
Level 4	18%	82%

How do Parents View Paths to QUALITY?

Are parents aware of PTQ?

Four hundred fifty (450) parents of children in the observed PTQ child care settings were interviewed by members of the PTQ evaluation team on the telephone. This survey will be referred to as the “PTQ parent survey.”

Do parents know that their child care provider is participating in PTQ?

- 78% of parents reported their provider was in PTQ
- 18% of parents reported their provider was not in PTQ
- 4% of parents reported they did not know whether their provider was in PTQ

After Wave 1 was completed, the question "*Had you heard about PTQ before we asked you to be in this study?*" was added to the PTQ parent survey. Two hundred thirty-three (233) parents responded to this added question.

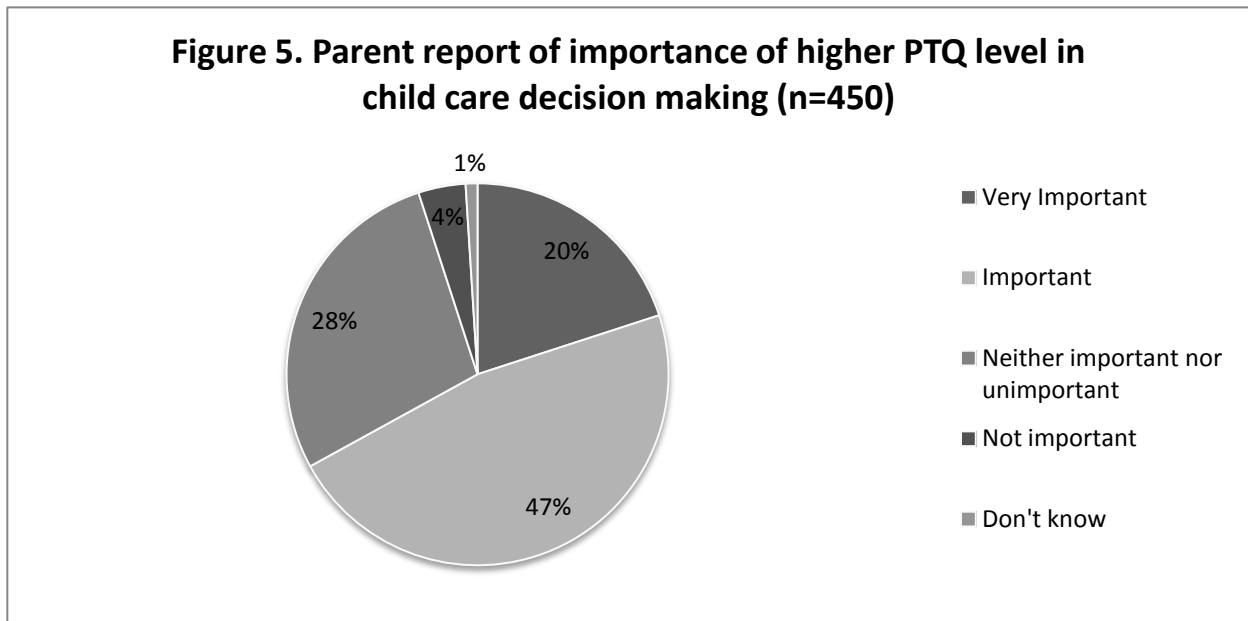
- 37% of parents reported they had heard about PTQ before being asked to participate in the Purdue evaluation study.
- 63% of parents reported they had **not** heard about PTQ before being asked to participate in the Purdue evaluation study.

If the parents indicated they had heard of PTQ before, a follow up question, "*How did you hear about Indiana's Paths to QUALITY?*" was asked. The most common source of information was from the family's own child care provider.

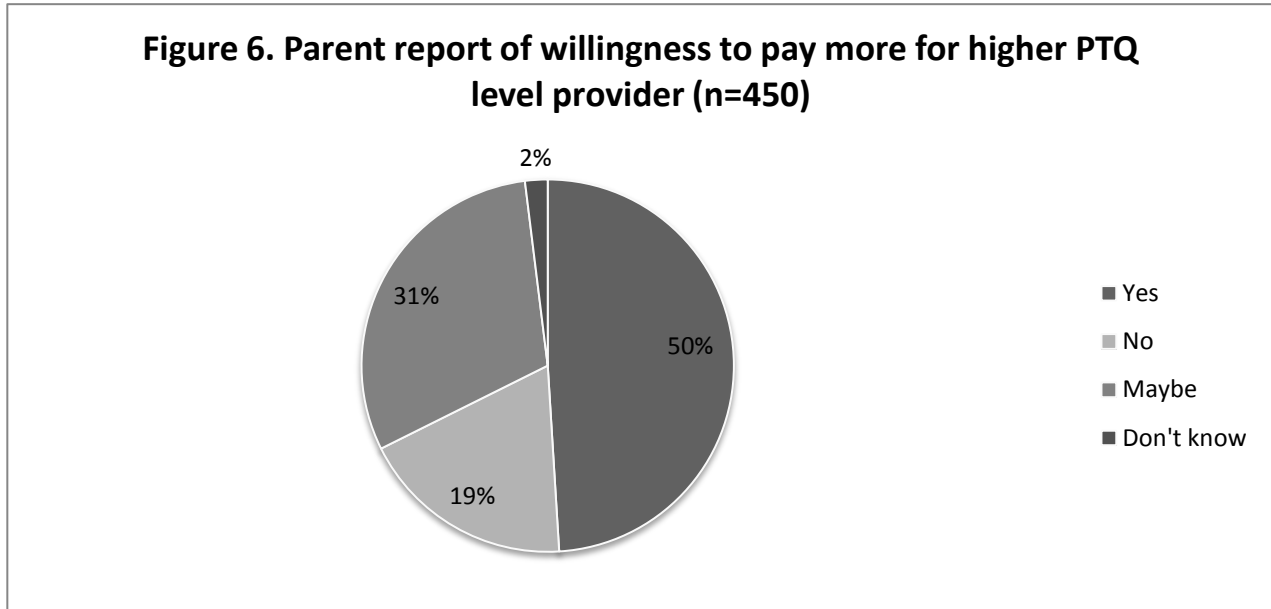
- | | |
|------------------------------------|-----|
| • Family's own child care provider | 62% |
| • From a relative or friend | 7% |
| • Employer | 7% |
| • From a posted flyer | 6% |
| • CCDF | 6% |
| • Another child care provider | 5% |
| • TV or radio | 5% |
| • Website | 3% |

Will PTQ affect parents' child care decisions?

Parents were asked during the PTQ parent interview about the importance the PTQ level of a provider may play in their future child care decision making. The majority of parents (67%) answered a higher PTQ level would be either an important or very important factor in their decision in choosing child care.



Parents were also asked during the observed parent survey about their willingness to pay more for child care if the provider was on a higher level in the PTQ program. Half of the 450 parents responded "Yes" they would be willing to pay more to a provider on a higher PTQ level, and 37% replied, "Maybe."



Parents in the General Public: Are they aware of Paths to QUALITY?

A telephone survey of parents with children ages 0 to 6 from the general public in Indiana was conducted from January 2009 to August 2010 (Time 1). The Kent State Survey Research Lab and Purdue Social Research Institute randomly selected and surveyed parents of to assess general awareness, understanding, and use of the QRS system. Again, in April - June, 2011 (Time 2), the Kent State Survey Research Lab completed the survey with randomly selected parents of children ages 0 to 6 from the general public in Indiana. Questions were similar to those asked in the PTQ parent survey.⁹ Here is a summary of results from the General Public Surveys:

- Parents of the surveys at Time 1 and Time 2 were similar in reporting the average number of hours each week using child care. Both Time 1 and Time 2 parents reported using child care an average of 28 hours per week. They used all types of child care and were similar at Time 1 and Time 2.
- There was a slight increase from Time 1 to Time 2 in parents' awareness of PTQ. At Time 1 data collection 12% (75) of parents reported that had heard of PTQ, while at Time 2 data collection 19% (131) of parents reported that had heard of PTQ. In Time 1 parents from SDA 9 and SDA 3 were not included in the question "Have you ever heard of Indiana's Path to QUALITY child care quality improvement program before I called you

today?" When parent responses from SDA 9 and SDA 3 are removed from Time 2 only 14% of parents reported that they had heard of PTQ.

- Parents in SDAs 9 and 3 were most likely to report that they had heard about PTQ. 45% of parents in SDA 9 reported they had heard about PTQ while 35% of parents in SDA 3 reported they had heard about PTQ. SDA 3 and 9 are the SDAs in which the pilot PTQ programs were implemented, and parents in those communities have historically had more exposure to PTQ through their providers and previous marketing initiatives in each community.
- Child care providers were parents' most frequent source of information about PTQ. 57% of Time 1 parents who had heard of PTQ reported hearing about it from their provider while 67% of Time 2 parents reported hearing about it from their provider. However, the proportion of parents who reported receiving written or verbal information from their providers declined.
- Time 2 parents did identify more sources from which they heard about PTQ and reported hearing more about PTQ in the community from sources like church, work, library, stores, children's fairs, school (both children's school and college courses) and friends than Time 1.
- More parents in Time 2 than Time 1 reported hearing about PTQ from traditional marketing avenues such as signs, posters, bookmarks, or brochures in the community, newspaper, magazines, television, radio, yard signs, websites such as Carefinder, Facebook or YouTube, and community events.
- 13% of Time 1 parents reported their provider was in PTQ, while 14% of Time 2 parents reported that their provider was in PTQ. 58% of the self-identified PTQ Time 1 parents reported they knew their provider's PTQ level while 70% of the self-identified PTQ Time 2 parents reported they knew their provider's PTQ level. This suggests an increase in awareness of the PTQ levels among parents who know their provider is participating in PTQ.
- Parents from Time 1 were more likely to report that their provider had shared written information about PTQ with them. Among the 93 Time 1 parents who were aware their provider was enrolled in PTQ, 70% said they had received written information and 68% had received verbal information from their provider about PTQ. Among the 99 Time 2 parents who were aware their provider was enrolled in PTQ, 55% said they had received written information and 64% had received verbal information from their provider about PTQ.
- Parents in Time 2 were more likely to report that a higher PTQ level would influence their decision about where to enroll their child in child care. 61% of the Time 1 parents compared with 71% of the Time 2 parents said that PTQ level would have some influence on their child care decisions.

- Time 2 parents were more likely to report that PTQ would be very important or important in child care decisions. 55% of Time 1 parents reported that PTQ level would be very important or important in their child care decisions compared with 66% of Time 2 parents.
- Time 2 parents were more likely to report they were willing to pay more for child care if provider was on a higher PTQ level. 47% of Time 1 parents reported they would be willing to pay more for child care at a higher PTQ level, while 57% of Time 2 parents reported they would be willing to pay more for child care at a higher PTQ level.
- Overall, the main differences between Time 1 and Time 2 were in parents' reports of their awareness of PTQ, the sources from which they heard about PTQ, whether a higher PTQ level would influence their decision about enrolling child in child care, the importance of PTQ in future child care decisions, and willingness to pay more for child care if provider was on a higher PTQ level.

How Are Children Doing in Paths to QUALITY?

The Purdue evaluation team completed assessments with 557 children and their parents to learn about children's participation in PTQ. Evaluation questions addressed whether children from higher risk families (lower parent education and income levels) were getting access to the highest quality levels of care, and whether all children were developing optimally, especially within the highest PTQ levels.

Are children and families at all education and income levels gaining access to child care at the highest PTQ levels?

Data were analyzed in three ways: (1) comparing children whose parents received child care assistance payment vouchers, (2) comparing children at different household income levels, and (3) comparing children at different parental educational levels.

Parents who participated in the PTQ parent phone interviews were asked three demographic questions – whether they received child care vouchers or subsidies, what was their household income level, and what was the parent's education level.

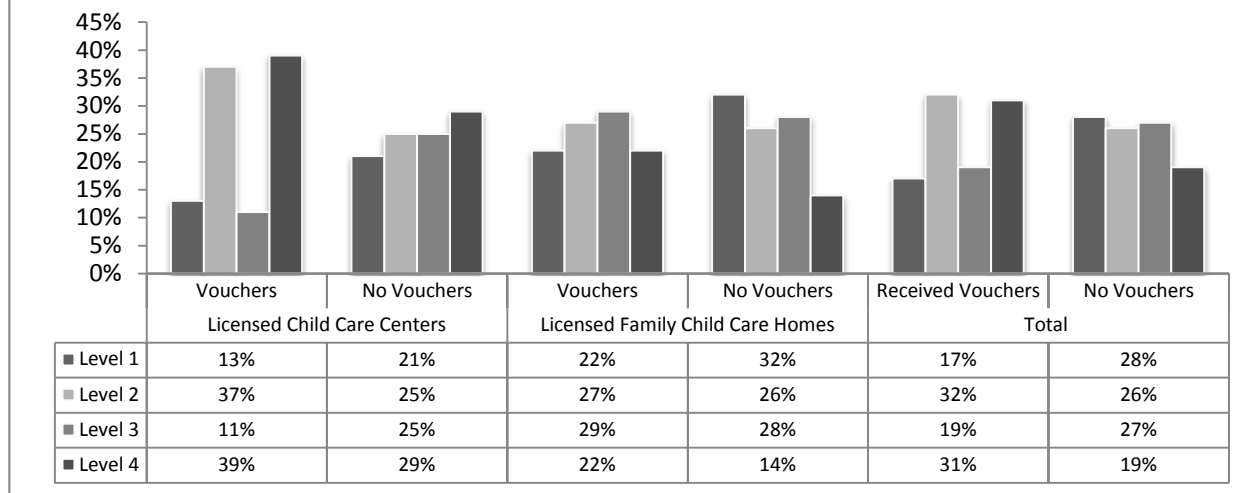
Families Using Child Care Vouchers—Related to PTQ Level?

Of the 448 parents responding, 22% (n=99) received child care vouchers or subsidies, and 78% (n=349) did not. Below is a table summarizing the proportions of children receiving child care vouchers or subsidies by type of provider and PTQ level.

Children in licensed child care centers who were receiving vouchers were most likely to be found in child care rated at Level 2 and Level 4, and less likely to be found in child care rated at Level 1 and Level 3, when compared with children who were not receiving vouchers. This means that within our sample of voucher-using PTQ children, they were most likely to be found at Level 4 or at Level 2. This finding suggests that significant numbers of children using vouchers are gaining access to the highest quality level of child care. This is possibly because children from low income families are served by Head Start or by community child care centers that have been serving this population for many years.

For children in licensed family child care, there were no differences in child care voucher use by PTQ level. This means that non-voucher using children were evenly distributed among the four PTQ quality levels. Of the 18 children in registered child care ministries we assessed, none were using child care vouchers.

Figure 7. Distribution of children receiving child care vouchers, by type of care and PTQ quality level



Parent Household Income and Education Levels—Related to PTQ Level?

In the PTQ parent interviews, parents were asked to report their annual household income level and highest level of education completed. Data were analyzed to test whether children from households with different income levels were gaining access to providers with higher PTQ levels. There were no differences found by income levels in children’s likelihood of being with providers with higher or lower PTQ levels. Finally, data were analyzed to test whether children from households with reported different educational levels were gaining equal access to providers with higher PTQ levels. There were no associations found between education level and children’s access to higher or lower PTQ levels. This supports the conclusion that families with lower socio-economic status (SES) are just as likely as families with higher SES to get quality child care in PTQ. (See Tables C1 and C2 in Appendix C for details.)

Infant-Toddler Development and PTQ Levels

Two children from each classroom or family child care home were randomly selected for a developmental assessment. The children were assessed by trained research assistants in a 20-45 minute time period during the Purdue quality assessment visit. 249 children ages 6 to 35 months were assessed statewide. The *Brief Infant Toddler Social and Emotional Assessment* was used to assess social competence and problem behavior. The *Mullen Scales of Early Learning* was used to assess cognitive development. (Descriptive data for these assessments are presented in Table C3 in the Appendix.)

Analyses were conducted to determine if children’s developmental levels on these measures were higher at PTQ Level 4 vs. Level 1. In other words, at this point in the implementation of

PTQ, was there evidence PTQ Level conferred any advantage to infants' and toddlers' development?

- Infant-toddler developmental outcomes did not differ by type of care or PTQ level, even when parental education and household income were taken into account.

Although these associations for infants/toddlers did not reach statistical significance, the average scores indicated a trend in the expected direction – infants and toddlers in Level 4 sites had higher average social competence, fewer reported behavioral problems, and scored higher on the cognitive assessments.

Preschool Age Children Development and PTQ Levels

308 children ages 36 to 60 months were assessed statewide. The *Social Competence and Behavior Evaluation* was used to assess social competence and problem behavior. The *Woodcock Johnson III Applied Problems and Letter Word Identification Subtests* were used to assess cognitive development. The Peabody Picture Vocabulary Test – 4 was used to measure receptive vocabulary (comprehension). (Descriptive data for these assessments are presented in Table C4 in the Appendix.)

Analyses were conducted to determine if children's developmental levels on these measures were higher at PTQ Level 4 vs. Level 1. In other words, at this point in the implementation of PTQ, was there evidence PTQ Level conferred any advantage to preschoolers' development? There was one statistically significant finding:

- PTQ level was negatively related to anxiety/withdrawal behaviors, $r = -.12$, $p = .03$. Children with providers at higher PTQ levels displayed fewer anxiety/withdrawal behaviors than children with providers at lower PTQ levels.

Further analyses were conducted to determine if these child outcomes differed by type of care or PTQ level.

- Child outcomes did not differ by type of care or PTQ level, even when parental education and household income were taken into account.

Child Development Outcomes for Children of Families Using Child Care Vouchers

Of the 99 children receiving child care subsidies or vouchers, 41 infants/toddlers and 56 preschoolers were assessed using the developmental measures. As with the whole sample of children, there were no statistically-significant relationships between PTQ level and the developmental levels of this subgroup of voucher-using children. (See Tables C5 and C6 in the Appendix for details.)

Is child care quality, as measured by the Purdue University quality assessments, related to child development and learning?

As a part of the validation of PTQ, Purdue researchers conducted independent assessments of the quality of licensed child care centers, licensed family child care homes, and unlicensed registered child care ministries in the evaluation sample. The quality measures used were:

- Early childhood Environment Rating Scale-Revised (ECERS-R; for preschool classrooms in licensed centers and registered ministries)
- Infant Toddler Environment Rating Scale-Revised (ITERS-R; for infant-toddler classrooms in licensed centers and registered ministries)
- Family Child Care Environment Rating Scale-Revised (FCCERS; for children of all ages in licensed family child care homes)
- Caregiver Interaction Scale (CIS; quality of caregiver-child interactions in all settings)

Analyses revealed that higher quality child care was associated with some aspects of child development for both infants/toddlers and preschoolers.

Infants/Toddlers:

- When environmental quality as measured by several ITERS-R scales was higher, infants/toddlers displayed higher levels of social competence.
- When caregivers' interactions with children were higher quality, infants/toddlers' cognitive and language scores were higher.
- Infant's and toddlers' cognitive and language development higher when caregivers' interactions with them were of higher quality. Children who scored higher on the Mullen Scales of Early Learning tended to have caregivers who were less permissive and less detached and displayed more sensitivity and positive interactions with children than the caregivers of children who scored lower on these cognitive measures.

Preschoolers:

- When providers were rated higher on the Language/Reasoning scale of the ECERS-R or FCCERS, children displayed greater language ability.
- When providers were rated higher on the Parents/Staff scale of the ECERS-R or FCCERS, children displayed less anxiety or aggression.
- When caregivers were observed to interact with children more positively and less punitively or permissively, children displayed higher levels of social competence and greater language ability.

Conclusions & Recommendations

Validity of the PTQ Quality Rating System

There is strong evidence from this evaluation research that the PTQ rating system, as implemented in the first two years of the program, measures meaningful differences in child care quality. PTQ ratings were compared to independent quality assessments using the University of North Carolina Environmental Rating Scales (ERS: ECERS-R, ITERS-R, FCCERS-R), assessing global environmental quality, and the Caregiver Interaction Scale, assessing the quality of caregiver-child interactions. Using these measures, PTQ Level 4 providers are providing significantly higher quality care than Level 1 providers. In most cases, incremental increases of quality are seen when assessing Level 1, 2, and 3 providers. The PTQ rating system distinguishes quality levels best for licensed family child care providers, who have a wider range of quality than center-based child care providers.

The average ERS global quality level for all Level 4 providers in PTQ was 4.3 on the 7-point scale, which is below the “good” quality level (5). The average global quality levels for Level 4 providers were 4.0 for licensed family child care providers, 4.6 for all preschool classrooms in licensed child care centers, and 4.4 for infant-toddler classrooms in licensed centers. While these quality levels are comparable to averages found in national studies of Head Start and Early Head Start, clearly there is room for quality improvement at the top PTQ levels.

ERS rated quality was highly variable within each PTQ level. This means that PTQ levels are assigned to centers, homes, and ministries that have widely varying ERS quality scores. While PTQ standards and ERS quality indicators are not strictly aligned, the amount of variability we observed is an issue worth attention in the future. One possible reason for the quality variations would be if the PTQ ratings are not done in a consistent, reliable manner across all providers within each PTQ level. Highly variable quality among providers at the same level, especially at the highest PTQ levels, may degrade trust in the PTQ quality rating system if this issue is not addressed and reduced.

Some quality indicators in the ERS assessments were especially low, and these indicators lowered the overall quality scores for PTQ providers. The lowest-scoring indicators were in the areas of Personal Care (meals/snacks; diapering/toileting; health practices; safety practices; nap/rest) and several curriculum areas (using language to develop reasoning skills; math/number; blocks; science/nature; active physical play.) Improvements in assessed quality in these indicators would raise overall quality scores.

Recommendations:

- *Continue to improve the PTQ quality rating system, to ensure that providers are assessed consistently and according to the PTQ standards for each level.*
- *Conduct a detailed review of the ERS quality assessments completed in this evaluation, to identify needed revisions in PTQ standards and/or areas of emphasis in future PTQ training/technical assistance for providers.*

- *In future revisions of PTQ standards and training/technical assistance goals, consider greater emphasis on personal care/health, early childhood curriculum, and teaching quality. PTQ raters, mentors, and advisors may need new tools to specifically address quality indicators in these areas.*

Child Care Providers' Experiences with PTQ

Indiana child care providers have chosen to participate in Paths to QUALITY in phenomenal numbers. In September, 2011, less than three years after PTQ was fully funded statewide, 2110 providers were enrolled, including 82% of all licensed child care centers, 52% of all licensed family child care homes, and 11% of all unlicensed registered child care ministries. These are among the highest participation rates for centers and homes in any voluntary statewide quality rating and improvement system.¹⁰

Providers report they enrolled in PTQ in order to improve their program quality, gain public recognition, get new ideas through training or technical assistance, make their programs more attractive to parents, and increase their business. The cash and materials incentives available in PTQ were also important for more than half of the providers.

Once enrolled in PTQ, providers found important benefits from participating. The mentoring they received from the child care resource and referral agency was a significant benefit for many providers. Also mentioned were gifts and cash incentives, and the public recognition they got from parents, other providers, and in their community. The value of mentoring stood out in providers' responses-- especially for family child care homes, registered child care ministries, and Level 1 and 2 providers. Workshops and conferences were valued by all providers, but especially by Level 3 and 4 providers.

Participation in PTQ is not without its challenges. Many challenges were experienced, including finding the time to complete the tasks required for PTQ advancement, finding and paying for required training for staff, insufficient funding to meet PTQ standards, getting documentation in order for PTQ rating or accreditation, and having to wait six months for the next PTQ rating.

In spite of these challenges, many providers are advancing their PTQ quality level. More than half of all providers reported they were "working hard to move up PTQ levels," and only 4% stated they had no plans to increase their level. In fact, we observed that many providers we interviewed had increased their PTQ level within a six month period: 25% of Level 1 providers, 48% of Level 2 providers, and 14% of Level 3 providers had advanced to the next level between the time we visited them and when we called back approximately six months later. 79% of the providers we interviewed stated they hoped to advance to either Level 3 or Level 4 within the next year! Statewide, according to the PTQ central data system, 52% of all providers who enrolled in PTQ have advanced at least one level since enrollment.

Recommendations:

- *Child care providers need to have confidence that working to advance their PTQ quality level will be beneficial, in terms of pride in offering quality care to children and families, public recognition for their accomplishments, and financial rewards. PTQ should take continuing steps to ensure that providers are actually receiving benefits and recognition for their participation and advancement in PTQ.*

- *In future evaluation research, study in more depth the impact of mentoring, which providers benefit most, and what specific mentoring activities are related to PTQ advancement.*
- *Continue targeted efforts to inform registered child care ministries about PTQ and to support their participation.*
- *Conducting regional meetings and focus groups with providers may provide valuable information about how PTQ is working for them and potential improvements in PTQ marketing and incentives.*
- *Find new ways to give providers community- and state-level public recognition, especially as they advance to Levels 3 and 4.*
- *Consider a tiered child care voucher reimbursement rate that will provide higher reimbursements for each PTQ level.*
- *Assess needs for training and technical assistance of all providers participating in PTQ, specifically for each state region and each type of provider. Target T/TA resources to these identified needs. Give particular attention to training that is proven effective and whether it is affordable and accessible to providers who need it.*
- *Consider providing training in leadership and time management, to support providers efforts to manage the new responsibilities that come with participation in the PTQ system.*
- *Continue to focus T/TA efforts with Level 3 and Level 4 providers on gaining and maintaining national accreditation, but also on assessing and maintaining caregiver-child interaction quality.*

Parents' Experiences with PTQ

In statewide random public surveys and interviews with PTQ parents, we found that awareness of PTQ and its potential benefits is still relatively low. In the summer of 2011, only 14% of parents of preschoolers in Indiana had heard of Paths to QUALITY. Rates of general public parent awareness were highest in the two regions of the state where PTQ began: Fort Wayne (35%) and Evansville (43%). Even among parents we interviewed whose children were actually enrolled with a PTQ provider, only 37% reported they had heard about PTQ.

Among the parents already using PTQ providers who were aware of PTQ, their own child care provider was the most common source of information. 62% reported they had found out about the program from their provider. Other reported sources of information were relatives, friends, employers, flyers posted, the child care voucher program, other child care providers, TV/radio, and a website. In the general public surveys, parents who knew about PTQ also identified their own child care provider as the most common source of information, 57% in 2010 and 67% in 2011. Beyond the providers, many sources of PTQ information were mentioned, especially in 2011 after the statewide PTQ awareness campaign was conducted-- church, work, library, stores, children's fairs, school (both children's school and college courses) friends, signs, posters, bookmarks, brochures, newspaper, magazines, television, radio, yard signs, websites such as Carefinder, Facebook or YouTube, and community events were all mentioned. However, child care providers remained by far the most common source for parents.

Whether parents were already aware of PTQ or not, they reported they value the information PTQ provides, and they intend to use it to guide their child care decisions. In the general public parent surveys, 61% in 2010 reported that PTQ quality level would have some influence in their future child care decisions, and this number increased to 71% in 2011. Among parents already using a PTQ provider, 67% said PTQ level would be important in their future decisions.

Parents reported they are willing to pay more for child care rated higher in PTQ. In the general statewide parent surveys, in 2010, 47% of those interviewed said they would consider paying more for child care rated at a higher PTQ level, and this number increased to 57% in the 2011 survey. Among parents already using a PTQ provider, 50% said they would pay more, and 31% said they might pay more, for care at a higher PTQ level.

Recommendations:

- *Inform PTQ child care providers about the results of this evaluation. Knowing that parents intend to use PTQ levels to choose care and that they may be willing to pay more for higher-rated care may motivate providers to continue their efforts in PTQ.*
- *Continue efforts to build public awareness of PTQ. The higher parent awareness levels in the first regions implementing PTQ (Fort Wayne, the founding region, and Evansville, the first replication region) suggest building public awareness takes time and sustained effort. Study and learn from the successes of these regions.*

- *Be aware that different parent education strategies may be needed to reach different parent groups in diverse regions of the state. Allow for local effort, tailored to parents' ways of getting information in their communities, coordinated with statewide efforts designed for all parents.*
- *Child care providers are an important source of information for parents about PTQ. Continue a strong marketing campaign through providers.*
- *Talk with providers around the state, through regional meetings and focus groups, to investigate potential new ways to reach current and prospective parent clients with PTQ information.*
- *Consider finding new funding and developing one or more new statewide TV public service announcements, to increase general public awareness of the PTQ brand and goals and how to access quality child care.*
- *Continue to explore ways to make information on the Child Care Indiana and Indiana Carefinder web sites more useful to parents and also to highlight PTQ. Consider the following enhancements to these web based information systems:*
 - *Integrate content and functions of these two information site, so the resources parents need to find quality child care are easy to access, with a few clicks.*
 - *Improve web site functionality so that parents can:*
 - *Specify their location*
 - *See providers located within a certain number of miles of the parents' work or home, including locations on a map;*
 - *See immediately if each provider has current openings or not;*
 - *Allow providers to update their space available information directly—it is in their own interest.*
 - *See information about each identified provider's PTQ level and what this means in terms of quality and benefits for children and families;*
 - *Allow parents to filter their searches by PTQ level.*
 - *Access information via mobile phones.*

Children in PTQ

Children from Indiana families at all income and education levels are gaining access to higher quality care within PTQ. Children using child care vouchers and those from families with lower parent income and education levels are found in PTQ Level 4 child care centers and homes at the same rate as families with higher income and education levels. This is an especially important finding, because research shows that children from low-resource families can benefit most from high quality early care and education.

At this early stage of PTQ implementation, we did not find consistent, strong associations between PTQ quality level and young children’s development and learning. Considering all of the cognitive, language, and social-emotional child assessments, we found only small trends suggesting children that placed in care at higher PTQ levels were doing better. These trends were not statistically significant, after parent education and income was controlled. This is not so surprising, due to several limitations:

1. The sample of children in this evaluation may not have been adequate to provide a valid assessment of the link between PTQ level and children’s development. Even though 557 children were assessed statewide, only two children from each classroom or family child care home could be included. We attempted to randomly sample classrooms and children-- but we were reliant on parents’ permission for their children to participate. Therefore, our sample is relatively small and not technically representative of all Indiana children participating in PTQ.
2. PTQ is still a new program. Normally a large-scale child care quality improvement program must operate for a while before it can produce its full effect on children’s development. Researchers on the national level recommend programs like PTQ be fully operational and running smoothly for at least 3 years before child development outcomes are used to evaluate program effectiveness.¹¹
3. As reported in an earlier section of this report, quality as assessed by Purdue was quite variable within each PTQ level. This variability within each level will have the effect of obscuring positive effects of higher PTQ levels on children’s development.
4. More rigorous (and more expensive) research designs, such as experimental and longitudinal research, are needed to determine if PTQ will improve children’s developmental outcomes and their readiness for school.¹² The one-time correlational design used this evaluation study was not intended to test PTQ effectiveness in improving children’s outcomes.
5. The current study did not include any measure of *dosage* (i.e., the amount of exposure, or time in care, each child had experienced.) Therefore, for example, we cannot distinguish children who have been in Level 4 care for shorter or longer periods of time.

These limitations should be considered in planning future evaluations of the impact of PTQ on children’s learning and developmental outcomes.

While PTQ levels did not predict children’s outcomes in this study, we did find that specific measures of child care quality did predict children’s development and learning. For infants and toddlers, higher levels of ERS quality predicted higher levels of social competence, and more positive, responsive interactions with caregivers predicted more advanced cognitive and language skills. For preschoolers, those who were in settings rated higher in ERS Language/Reasoning displayed higher language ability. Preschoolers in settings rated higher on the Parents/Staff ERS scale displayed fewer problem behaviors. When caregivers interacted more positively and responsively with preschoolers, the children tended to display more social competence and higher language abilities.

Recommendations:

- *In future PTQ evaluation planning, consider the costs/benefits of conducting a rigorous evaluation of children’s developmental and school readiness outcomes as a measure of PTQ effectiveness. This research will be expensive, so private funding or collaborations with other states or the federal government may be needed, if such a study is deemed necessary.*
- *In future revisions of the PTQ standards and rating procedures, consider strengthening standards focused on positive, responsive caregiver child interactions and caregivers’ support of children’s social skills, language, and cognition. While these recommended adult-child interactions are challenging to assess and improve, past research has shown that improvements in these aspects of teaching and caring lead to gains in children’s learning.*

Endnotes

¹ See the Indiana PTQ web site, www.in.gov/fssa/pathstoquality/3723.htm.

² For more information about the evaluation of the original two community-level implementations of Paths to QUALITY, see the Purdue University report, “*Paths to QUALITY- Child care quality rating system for Indiana: What is its scientific basis?*,” available at www.in.gov/fssa/files/ScientificBasisPTQ.pdf.

³ For more information about Paths to QUALITY and its standards, go to the Indiana PTQ web site, www.in.gov/fssa/2554.htm.

⁴ For detailed information about the evaluation methods used in this study, see the Purdue University report, “*A child care quality rating and improvement system for Indiana: Evaluation methods and measure*,” available at www.in.gov/fssa/files/PTQ_TechReport2_Measures.pdf.

⁵ Maxwell, K. L., Early, D. M., Bryant, D., Kraus, S., & Hume, K., (2010). Georgia study of early care and education: Family child care findings. Chapel Hill: The University of North Carolina at Chapel Hill, FPG Child Development Institute.

⁶ Maxwell, K. L., & Kraus, S. (2010). Rhode Island’s 2010 family child care quality study. Chapel Hill: The University of North Carolina, FPG Child Development Institute.

⁷ Head Start Family and Child Experiences Survey (FACES), 1997-2013. See www.acf.hhs.gov/programs/opre/hs/faces/index.html.

⁸ Vogel, Cheri A., Kimberly Boller, Yange Xue, Randall Blair, Nikki Aikens, Andrew Burwick, Yevgeny Shrago, Barbara Lepidus Carlton, Lara Kalb, Linda Mendenko, Judy Cannon, Sean Harrington, and Jillian Stein. Administration for Children and Families. *Learning As We Go: A First Snapshot of Early Head Start Programs, Staff, Families, and Children*. OPRE Report #2011-7, Washington, DC. Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. 2011.

⁹ For more complete information and results of the randomized public surveys, see the Purdue University report, “*Paths to QUALITY Evaluation Research: General Parent Survey Statewide Comparison Report*.”

¹⁰ Tout, K., Starr, R., Soli, M., Moodie, S., Kirby, G., & Boller, K. (April, 2010). *Compendium of quality rating systems and evaluations*. OPRE Report, Washington, DC. Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

¹¹ See for example Elicker, J. & Thornburg, K. R. (2011). *Evaluation of Quality Rating and Improvement Systems for Early Childhood Programs and School-Age Care: Measuring Children’s Development*, Research-to-Policy, Research-to-Practice Brief, OPRE 2011-11c. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Appendix A

Table A1. Overview of Measures

<i>Data collected from the Child Care Provider</i>		
Variable	Name of Measure	Measure Description
Child Care Quality- Global Assessment	Early Childhood Environmental Rating Scale—Revised (ECERS-R)	Assessors use scale to rate overall child care quality in center-based child care classrooms caring for children ages 2 ½ and up.
	Infant Toddler Environmental Rating Scale—Revised (ITERS-R)	Assessors use scale to rate overall child care quality in center-based child care classrooms caring for children ages 0 to 30 months.
	Family Child Care Environmental Rating Scale (FCCERS)	Assessors use scale to rate child care quality in family child care home settings.
Child Care Quality- Provider Sensitivity	Caregiver Interaction Scale	Assessors rate the quality and content of the teacher’s interactions with children.
Providers’ perceptions of PTQ	Surveys of providers participating in PTQ	Includes questions about providers’ understanding of PTQ, perceptions of PTQ assessment, technical assistance received, and impact of PTQ on providers’ businesses.
Providers’ perceptions of PTQ	Follow-up surveys with the original sample of providers	Survey follows up on perceptions of PTQ assessment, technical assistance received, and impact of PTQ on providers’ businesses.
<i>Data collected from the Parent</i>		
Variable	Name of Measure	Measure Description
Parents’ perceptions of PTQ-- PTQ participants	Surveys with parents served by PTQ providers	Includes questions about parents’ understanding of PTQ and whether PTQ has affected their child care choices.
Parents’ perceptions of PTQ-- General public	Surveys with randomly-selected parents in the general public	Includes questions about parents’ understanding of PTQ and whether PTQ has affected their child care choices.

Data collected from/about the Child

Variable	Name of Measure	Measure Description
Cognitive Development—infant and toddlers	Mullen Scales of Early Learning	Direct assessment of child’s ability to process visual patterns.
Cognitive Development--preschool age children	Woodcock Johnson Applied Problems subtest	Direct assessment of children's skill in solving practical problems in mathematics.
	Woodcock Johnson Letter Word Identification subtest	Direct assessment of early reading skill such as or the ability to match a pictographic representation of a word with an actual picture of the object and identifying letters and words.
Language Development—infant toddler	Mullen Scales of Early Learning	Direct assessment of receptive (vocabulary acquisition) and expressive (ability to use language productively) language.
Language Development—preschool age children	Peabody Picture Vocabulary Test	Direct assessment of receptive (vocabulary acquisition) language.
Social Emotional Development—infant toddler	Brief Infant Toddler Social and Emotional Assessment	Provider rates child’s problem behavior and social competence.
Social Emotional Development—preschool age children	Social Competence and Behavior Evaluation	Provider rates child’s aggression, anxiety, and social competence.

Appendix B: Description of the Environment Rating Scales (ERS)

Center-based child care classrooms caring for children ages 2 ½ and up in licensed child care centers and registered ministries, were assessed using the Early Childhood Environment Rating Scale-Revised (ECERS-R) while classrooms caring for infants and toddlers (0 to 30 months) in licensed child care centers and registered ministries were assessed using the Infant Toddler Environment Rating Scale-Revised (ITERS-R). The Family Child Care Environment Rating Scale-Revised (FCCERS-R) was used to assess quality in family child care homes. The three measures, designed with similar conceptual structures, allow researchers to compare quality across types of child care settings. Assessors were trained on the three measures and then completed independent observations with reliable trainers to 85% (within one point) reliability before beginning data collection. Inter-rater reliability was monitored throughout the entire data collection period to maintain reliability among assessors. Reliability checks were completed with each assessor throughout data collection.

Early Childhood Environment Rating Scale—Revised edition (ECERS-R: Harms, Clifford, & Cryer, 1998). The ECERS-R was used to assess child care quality in center-based child care classrooms caring for children ages 2 ½ and up. It consists of 43 items organized under seven subscales: space and furnishings, personal care routines, language-reasoning, activities, interaction, program structure, and parents and staff. Each item is rated on a 7-point scale (1 = inadequate; 3 = minimal; 5 = good; 7 = excellent). The total scale was shown to be reliable ($r = .92$; Harms, Clifford, & Cryer, 1998).

Infant Toddler Environment Rating Scale—Revised edition (ITERS-R: Harms, Clifford, & Cryer, 2003). The ITERS-R was used to assess child care quality in center-based child care classrooms caring for children ages 0 to 30 months. It consists of 39 items organized under seven subscales: space and furnishings, personal care routines, listening and talking, activities, interaction, program structure, and parents and staff. Each item is rated on a 7-point scale (1 = inadequate; 3 = minimal; 5 = good; 7 = excellent). The total scale was shown to be reliable ($r = .92$; Harms, Clifford, & Cryer, 2003).

Family Child Care Environment Rating Scale—Revised edition (FCCERS, Harms, Clifford, & Cryer, 2007). The FCCERS-R was used to assess child care quality in family child care home settings. It consists of 38 items organized under seven subscales: space and furnishings, personal care routines, listening and talking, activities, interaction, program structure and parents and provider. Each item is rated on a 7-point scale (1 = inadequate; 3 = minimal; 5 = good; 7 = excellent). The total scale was shown to be reliable ($r = .88$; Harms, Clifford, & Cryer, 2007).

Table B1.

Sample Items from the Subscales of the Caregiver Interaction Scale (CIS).

Positive Relationships – this reflects appropriate interactions, enthusiasm and warmth. Example items include:

- Speaks warmly to children
- Seems to enjoy the children
- Encourages children to try new experiences
- Pays positive attention to the children as individuals

Caregiver Punitiveness – this reflects hostile and excessively critical behavior toward children. Example items include:

- Seems critical of the children
- Places high value on obedience
- Threatens children in trying to control them
- Finds fault easily with children

Caregiver Permissiveness - this reflects tolerance of misbehaviors. Examples items include:

- Exercises a great deal of control over the children
- Reprimands children when they misbehave
- Exercises firmness when necessary
- Expects the children to exercise self-control

Caregiver Detachment – this reflects the degree to which the teacher is uninvolved or uninterested in the children. Example items include:

- Seems distant or detached from the children
- Spends considerable time in activity not involving interaction with the children
- Fails to show interest in children’s activities
- Fails to supervise children very closely

Table B2. Mean Caregiver Sensitivity Ratings, by PTQ Level, All Providers Combined

	Positive Relationships	Punitive	Permissiveness	Detachment	Total Average Score
Level 1 (n=84)	2.4	1.4	2.1	1.8	3.0
Level 2 (n=87)	2.5	1.3	2.1	1.5	3.1
Level 3 (n=74)	2.8	1.2	1.9	1.4	3.2
Level 4 (n=65)	2.8	1.3	1.9	1.5	3.2

Table B3. Mean Caregiver Sensitivity Ratings, by PTQ Level, Preschool Classrooms Only

	Positive Relationships	Punitive	Permissiveness	Detachment	Total Average Score
Level 1 (n=19)	2.5	1.3	2.0	1.5	3.1
Level 2 (n=29)	2.6	1.3	2.0	1.4	3.1
Level 3 (n=18)	2.8	1.3	1.9	1.3	3.3
Level 4 (n=23)	2.8	1.5	2.0	1.5	3.2

Table B4. Mean Caregiver Sensitivity Ratings, by PTQ Level, Licensed Family Child Care Homes Only

	Positive Relationships	Punitive	Permissiveness	Detachment	Total Average Score
Level 1 (n=51)	2.2	1.4	2.2	2.0	2.9
Level 2 (n=40)	2.5	1.2	2.1	1.6	3.1
Level 3 (n=48)	2.8	1.2	1.9	1.5	3.2
Level 4 (n=25)	2.9	1.2	1.9	1.6	3.3

Table B5. Mean Caregiver Sensitivity Ratings, by PTQ Level, Infant-Toddler Classrooms Only.

	Positive Relationships	Punitive	Permissiveness	Detachment	Total Average Score
Level 1 (n=14)	2.6	1.4	2.1	1.6	3.1
Level 2 (n=18)	2.6	1.4	2.3	1.5	3.1
Level 3 (n=8)	2.8	1.3	2.2	1.4	3.2
Level 4 (n=17)	2.7	1.2	2.0	1.5	3.2

What subscales and items have the lowest scores on the ERS? Where can quality be improved for Level 3 and 4 providers?

Each of the items on the ERS was analyzed to determine which had the lowest average scores. There appears to be some trends across the ITERS-R, ECERS-R and the FCCERS-R. Following are the lowest rated items by PTQ level and type of care. Tables B6., B7., and B8. display means for the lowest ERS items.

Table B6. Means for the Lowest ERS Items in Preschool Classrooms

	Meals/Snack	Diapering/ Toileting	Health Practices	Safety practices	Using language to develop reasoning skills	Math/Number
Level 1	1.8	1.8	2.3	1.8	2.8	3.1
Level 2	1.5	1.6	2.3	2.1	2.8	2.9
Level 3	2.6	2.4	2.7	1.8	3.0	3.0
Level 4	2.6	2.4	2.0	2.5	3.4	3.9

Table B7. Means for the Lowest ERS Items in Infant/Toddler Classrooms

	Meals/Snack	Diapering/ Toileting	Health Practices	Safety practices	Blocks	Science/Nature
Level 1	1.5	1.8	1.9	2.3	2.4	2.8
Level 2	1.5	1.2	1.6	2.9	2.7	2.5
Level 3	1.0	1.6	1.6	2.0	1.6	2.0
Level 4	1.9	1.9	2.0	2.6	2.2	3.1

Table B8. Means for the Lowest ERS Items in Family Child Care Homes

	Meals/Snack	Diapering/ Toileting	Health Practices	Safety practices	Nap/Rest	Active Physical Play
Level 1	1.2	1.3	1.5	1.5	1.6	1.8
Level 2	1.4	1.3	1.6	1.6	1.9	1.6
Level 3	1.3	1.2	1.6	1.6	1.8	1.9
Level 4	1.9	1.7	2.1	1.9	2.5	2.1

APPENDIX C

Table C1. Distribution of Children by Household Income Levels, by Type of Care and PTQ Quality Level

	Licensed Child Care Centers			Licensed Family Child Care Homes		
	Low income ^a	Middle income ^b	High income ^c	Low income ^a	Middle income ^b	High income ^c
Level 1	12% (10)	25% (9)	23% (15)	27% (19)	33% (35)	27% (17)
Level 2	33% (28)	36% (13)	22% (14)	23% (16)	24% (26)	32% (20)
Level 3	28% (24)	17% (6)	15% (10)	34% (24)	27% (29)	26% (16)
Level 4	28% (24)	22% (8)	40% (26)	17% (12)	16% (17)	15% (9)
TOTAL	46% (86)	19% (36)	35% (65)	30% (71)	45% (107)	25% (62)

^aLow income = under \$35,000. ^bMiddle income = \$35,000-\$75,000. ^cHigh income = \$75,000 and higher.

Table C2. Distribution of Children by Parental Education Levels, by Type of Care and PTQ Quality Level

	Licensed Child Care Centers			Licensed Family Child Care Homes		
	Low education ^a	Middle education ^b	High education ^c	Low education ^a	Middle education ^b	High education ^c
Level 1	0	17% (14)	21% (15)	0	37% (28)	34% (36)
Level 2	17% (1)	29% (25)	32% (23)	25% (1)	25% (25)	28% (29)
Level 3	50% (3)	26% (22)	15% (11)	25% (1)	32% (33)	27% (28)
Level 4	33% (2)	28% (24)	32% (23)	50% (2)	16% (16)	11% (12)
TOTAL	4% (6)	52% (85)	44% (72)	2% (4)	48% (102)	50% (105)

^aLow education = high school diploma/GED or less. ^bMiddle education = some college or associate's degree. ^cHigh education = B.A. or higher.

Table C3. Mean (SD) Scores for Infant-toddler Developmental Measures, by PTQ Level

PTQ Rating	Children	Social Competence	Social Problem Behavior	Developmental Score-Cognitive M = 100, SD 15
Level 1	66	14.5 (4.42)	12.4 (8.5)	87.53 (17.26)
Level 2	76	15.3 (3.63)	13.1 (7.63)	90.81 (19.6)
Level 3	60	15.14 (3.79)	13.1 (8.1)	89.33 (17.45)
Level 4	47	15.23 (4.01)	13.01 (8.2)	92.57 (19.54)

Table C4. Mean (SD) Scores for Preschool Developmental Measures, by PTQ Level

PTQ Rating	Children	Social Competence and Behavior Evaluation			Woodcock Johnson		PPVT
		Social Competence	Anxiety Withdrawn	Anger Aggression	Letter Word identification	Math skills	Receptive language
Level 1	78	3.85 (.98)	1.94 (.62)	2.31 (.90)	99.21 (12.09)	103.58 (11.57)	100.18 (13.71)
Level 2	80	3.90 (.85)	1.87 (.59)	2.18 (.64)	98.2 (12.65)	102.57 (16.37)	99.56 (13.94)
Level 3	80	4.12 (.94)	1.72 (.56)	2.05 (.70)	96.37 (11.55)	102.30 (12.70)	97.67 (14.36)
Level 4	70	3.89 (.86)	1.76 (.62)	2.19 (.67)	101.16 (12.28)	103.58 (14.08)	102.45 (14.87)

Table C5. Mean (SD) Scores for Infant-toddler Developmental Measures of Children Receiving Child Care Subsidies or Vouchers, by PTQ Level

PTQ Rating	Children	Brief Infant Toddler Social Emotional Assessment		Mullen Scale of Early Learning
		Social Competence	Social Problem Behavior	Cognitive Score M = 100, SD 15
Level 1	3	19.67 (.58)	27.5 (4.9)	90 (19.31)
Level 2	17	14.43 (3.96)	15.62 (8.31)	80.18 (18.22)
Level 3	10	14 (2.8)	12.5 (6.24)	91.2 (14.8)
Level 4	11	13.27 (3.25)	12.4 (8.65)	88.3 (17.69)

Note. Because of the small numbers associated with children receiving vouchers, caution should be used in interpreting this data. (n=41).

Table C6. Mean (SD) Scores for Preschool Developmental Measures of Children Receiving Child Care Subsidies or Vouchers, by PTQ Level

PTQ Rating	Children	Social Competence and Behavior Evaluation			Woodcock Johnson		PPVT
		Social Competence	Anxiety Withdrawn	Anger Aggression	Letter Word identification	Math skills	Receptive language
Level 1	14	3.68 (1.25)	2.01 (.75)	2.34 (1.14)	95.57 (8.78)	98.79 (10.94)	95.71 (8.47)
Level 2	12	3.65 (.66)	1.71 (.75)	2.04 (.75)	93.4 (10.24)	101.23 (10.8)	94.15 (13.06)
Level 3	9	4.33 (.99)	1.74 (.50)	2.1 (.49)	91.89 (12.72)	94.78 (12.45)	94.89 (15.49)
Level 4	20	3.67 (.89)	1.99 (.67)	2.37 (.91)	98.90 (11.05)	100.25 (14.65)	98.05 (14.66)

Note. Because of the small numbers associated with children receiving vouchers, caution should be used in interpreting this data. (n=56).