# Cost of Preschool Quality: Using a Tool to Project Costs for Scaling and Sustaining High Quality Preschool Programs

MAY 10,2017

CENTER ON ENHANCING EARLY LEARNING OUTCOMES



- Goals, Purposes and Uses of Cost of Preschool Quality Tool (CPQ)
- Overview and Short Demo of CPQ
- Questions and Discussion





## Common Questions ~ Why It Helps to Have Data on the Cost of Quality

- •What is the overall cost of quality [as compared to what we are currently spending]?
- •Why does paying more lead to better outcomes?
- •Why does pre-K cost more than Kindergarten?
- How can we retain teachers? What is the cost to ensure all teachers are well-qualified?
- What is the cost of administration and infrastructure (leadership, oversight, accountability, coordination of coaching) to ensure consistently high-quality programs?
- •How do we balance providing access versus providing quality with limited resources?



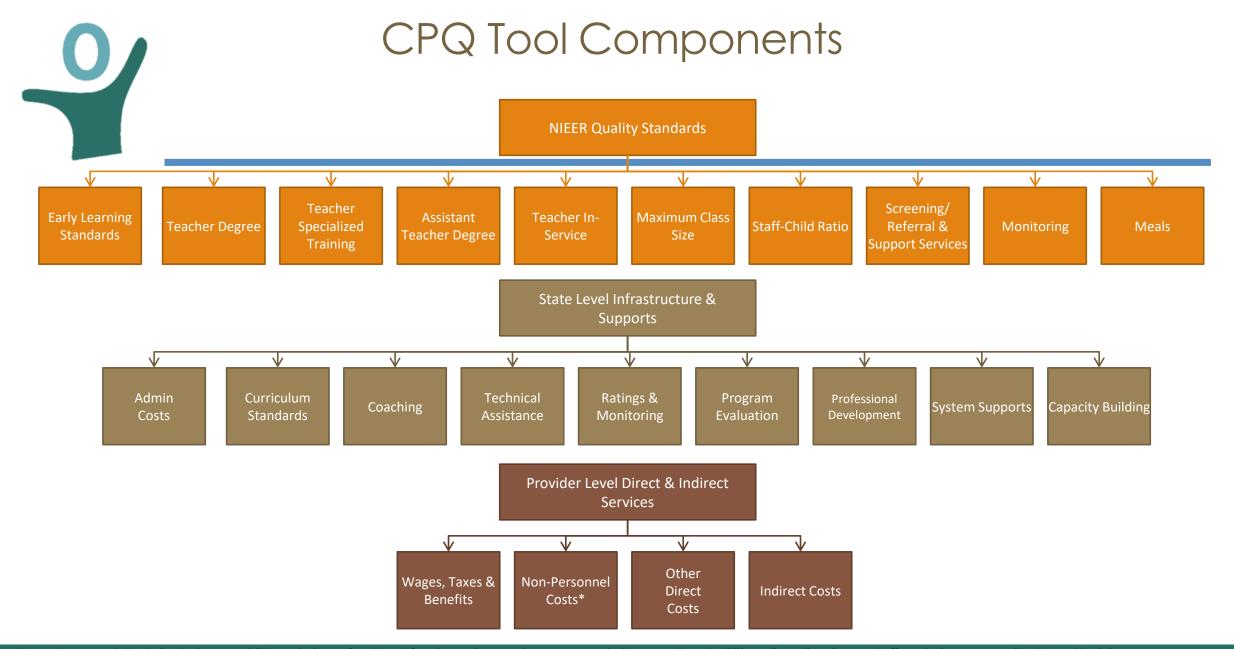
# CPQ Can Provide Data on...

- Costs to serve more children with current standards
- Costs to raise standards in an existing program
- Determine adequate per child/program allocation based on standards & available funding
- Costs of policy proposals, e.g. increase compensation
- Funding gaps/surplus, information needed to sustain program at current or increased capacity over time

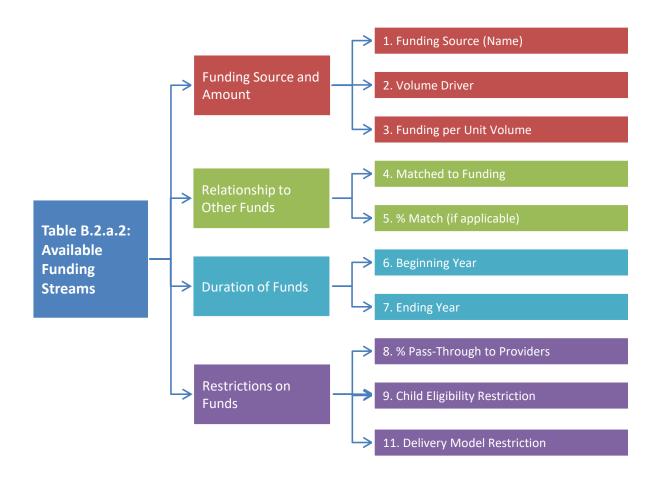


# CPQ: Basic Characteristics

- Excel based model, no macros, transparent
- Includes settings for "best practice" based on the 10 NIEER quality benchmark
- Flexible allows understanding implications for cost of various alternate modes of delivery, combination of ingredients, or prices
- Multi-year projections



## Table B.2.a.2: Available Funding



- Head Start (HS) Federal Funding
- Early Head Start (EHS) Federal Funding
- CCDF Child Care Development Fund Funding
- TANF Temporary Funding for Needy Families Funding
- Child Care Tax Credits
- Title I Funding
- Title IX Preschool Development Grant Funding
- IDEA Part B Funding
- IDEA Part C Funding
- CACFP Children and Adult Food Care Program Funding
- MIECHV (Home Visiting) Funding
- · State Pre-K Funding
- State Preschool Special Education Funding
- Other Federal Funding
- Other State Funding
- Other Local Funding
- Private Funding Philanthropic Grants and Donations
- Private Funding Tuition/Parent Co-Pay
- · Other Private Funding



## Flow Chart of the CPQ Tool

Cost models built from volume forecasts and unit prices

A. Summary Outputs & Index

- Total costs and key volume metrics
- An index showing which assumptions are complete/incomplete

E. & F. State-Level and Provider-Level [Costs]

 A single worksheet for entering assumptions

B. Implementation Plan

 Year-by-year volume forecasts based on assumptions

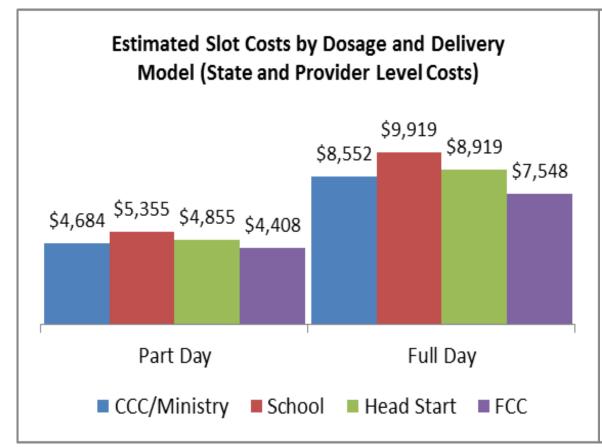
D. Annual Schedule Tables

C. Demographic Tables

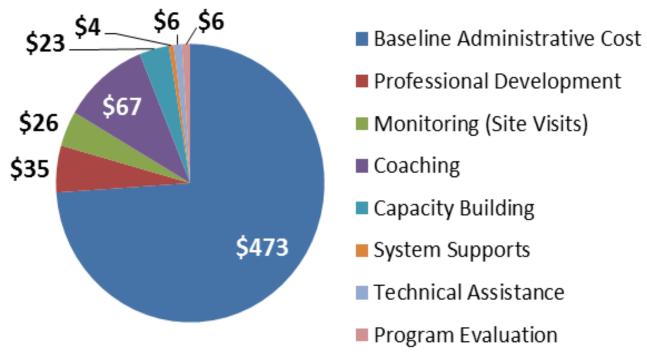
State-specific data to be combined with (or inform) assumptions



## Types of Data Produced by CPQ



#### State Level Costs: Cost per Slot Breakdown





# Using the CPQ Tool

## Overcoming 3 fears:

- I don't feel comfortable with Excel
- We don't have good state/local data
- We don't really want to know what it truly costs!



**Worksheet A: Summary Output and Index**, provides a more detailed summary of model output, as well as a hyperlinked index to the components in Worksheet B, a place to add user notes, and a built-in review of the completeness and consistency of input assumptions.

**Worksheet B: Implementation Plan**, The user's interaction with the CPQ begins and ends with Worksheet B.

**Worksheet C: Demographic Tables**, is the repository for geographic and funding data to help inform input assumptions to the CPQ.

Worksheet D: Annual Schedule Tables, fill an important function: they translate input assumptions into annual counts of volumes (children, teachers, facilities, etc.), that can then be multiplied by unit cost assumptions.

Worksheet E: State-Level Infrastructure & Supports and Worksheet F: Provider-Level Direct & Indirect Services, The cost times volume calculations by implementation year are carried out in the final two worksheets (E&F), one for provider-level costs and one for state- (or district-) level costs.



## LIVE ONLINE DEMO

>Slides 12-16 will be viewed during the live demo

### First, let's orient ourselves to Worksheet B, the Implementation Plan

	Casmania						5. 11.6						15646
	Scenario:						Default Scenario						Default Scenari
	System:		Default System										Default System
	State/Region:			4			Alabama, AL						Alabama, AL
Table B.1: Model Outputs and Key Performance Metrics													
							nplementation						4
State-Level Implementation Costs		Year 0	Year 1	1 Year 2	Year 3	Year 4	4 Year 5	5 Year 6	6 Year 7	7 Year 8	Year 9	Year 10	Total \$0
Provider-Level Implementation Costs													\$0
Total Annual Implementation Costs													\$0
Existing Funding													\$0
Funding Surplus/(Shortfall)													\$0
Number of 3- and 4-year-olds Served													-
% of FPL Eligible 3- and 4-Year Old Population Served													
Fully Loaded Cost per Slot Including Both State-Level and Provider-Level Costs													
any conduct cost por sist manages													
Table B.2.a.1: Annual Preschool Slot Plan													
able B.Z.a.1. Allitual Freschoor Slot Flati					By Deliv	very Model By I	y Dosage				4		
		Chi'	ild Care Cente	tors	Public PreK				Head Start		1		
		Part Day	Full Day		Part Day						+		
Cumulative Number of 3- and 4-year-old Slots		(3hr)			(3hr)		·			Day (10hr)	1		Total
Year 0 (Pre-Existing Slots)											4		
Year 1											4		
Year 2											4		
Year 3									4		4	·	
Year 4									4		4	·	
Year 5											4		
Year 6											4	·	
Year 7											4	· · · · · · · · · · · · · · · · · · ·	
Year 8				4					4			·'	
Year 9							4		4			1	
Year 10				4					4		1	'	
Subtotal: Cumulative Slots by Delivery Model	FALSI		0	0 0	0	0	0	0	0 0	U	,,	'	0 slots
Slot Breakdown: FPL/ELL/Special Needs		Fixed	'									· · · · · · · · · · · · · · · · · · ·	<u> </u>
FPL Eligibility Threshold (% FPL)	TRUE		'				ļ					'	185% F
% of Slots allocated for ELL	TRUE						1		'			I	5% ELI
% of Slots allocated for Special Needs	TRUE						1		'			'	5% Special N
Subtotal: Allocations for ELL and Special Needs		10%										· · · · · · · · · · · · · · · · · · ·	10% ELL/Sp.
% of Slots allocated to Rural Areas	TRUE											'	50% Ru
Dosage: Weeks per year (all Delivery Models assume 5 days per week)		Weeks	_										
Part Day Care	TRUE												32 wee
				-1									40 wee
Full Day Care Extended Day Care	TRUE TRUE												52 wee

## As soon as you enter a count of slots in Table B.2.a.1, the CPQ returns cost-perslot calculations (as well as total cost)

Scenario:	7					D	Default Scenario	10					Default Scenario
System:						Г	Default System	'n					Default System
State/Region:							Alabama, AL						Alabama, AL
-					1						, —		
Table B.1: Model Outputs and Key Performance Metrics	4												
	<del></del>					By Im	nplementation `	n Year					
		Year 0	Year 1	1 Year 2	Year 3				Year 7	7 Year 8	Year 9	Year 10	.0 Total
State-Level Implementation Costs	4 P	\$255,051											\$255,051
Provider-Level Implementation Costs	4 - V	\$8,415,214											\$8,415,214
Total Annual Implementation Costs	4 - V	\$8,670,264											\$8,670,264
Existing Funding	4 - P	\$0											\$0
Funding Surplus/(Shortfall)	4 - P	(\$8,670,264)											(\$8,670,264)
Number of 3- and 4-year-olds Served	4	1,000									1		1,000
% of FPL Eligible 3- and 4-Year Old Population Served	4	1.6%											1.6%
Fully Loaded Cost per Slot Including Both State-Level and Provider-Level Costs	4 V	\$8,670											\$8,670
												<u> </u>	
	I											<u>.                                    </u>	
Table B.2.a.1: Annual Preschool Slot Plan	4												
	,					very Model By I	·				4		
	,1		d Care Cente			Public PreK			Head Start				
	1	Part I ay	Full Day										
Cumulative Number of 3- and 4-year-old Slots					(3hr)	) (6hr)	) Day (10hr)	(3hr)	(6hr)	r) Day (10hr)	·	<b>'</b>	Total
Year 0 (Pre-Existing Slots)			1000	4							4	, T	1000 slots
Year 1					4						4	'	
Year 2					4						4	'	
Year 3											4	,	
Year 4												<u> </u>	
Year 5	,										4	,	<u> </u>
Year 6													
Year 7												1	
Year 8													<u>_</u>
Year 9	4										4	1	
Year 10 Subtotal Cumulative Slots by Delivery Model	4		1000	1		-	-	-		-		+ <sup>1</sup>	1000 slate
Subtotal: Cumulative Slots by Delivery Model	TRUE	0	1000	0 0	0	0 0	0	0	0	U		· '	1000 slots
Slot Breakdown: FPL/ELL/Special Needs	<u>-</u> -	Fixed										'	
FPL Eligibility Threshold (% FPL)	TRUE	185%										·	185% FPL
% of Slots allocated for ELL	TRUE	5%					+			+			5% ELL
% of Slots allocated for Special Needs	TRUE	5%		+			+		<del></del> 1	+		+ <u>'</u>	5% Special Need
Subtotal: Allocations for ELL and Special Needs	+	10%		+								+	10% ELL/Sp.Nee
% of Slots allocated to Rural Areas	TRUE	50%		+								<del></del> '	50% Rural
Dosage: Weeks per year (all Delivery Models assume 5 days per week)	+	Weeks	Days									+	
Part Day Care	TRUE	32	160										32 weeks
Full Day Care	TRUE TRUE	40 52	200 260									· · · · · · · · · · · · · · · · · · ·	40 weeks
Extended Day Care	. TO		260	all controls								,	52 weeks

### You can also simulate changes in the mix of dosages and delivery models

						erform similo							
	Scenario:					D	Default Scenario	10					Default Scenario
	System:		Default System										Default System
St.	tate/Region:						Alabama, AL						Alabama, AL
						, —							
Table B.1: Model Outputs and Key Performance Metrics													
							nplementation \						4
		Year 0	Year 1		Year 3			Year 6	5 Year 7	7 Year 8	Year 9	Year 10	
State-Level Implementation Costs		\$1,275,253	\$3,005,042	1	\$4,146,253								\$16,759,603
Provider-Level Implementation Costs		\$19,509,895		1	\$70,764,308								\$266,786,055
Total Annual Implementation Costs		\$20,785,147	\$37,291,669	\$53,218,215	\$74,910,561								\$283,545,658
Existing Funding		\$0	\$0	\$0	\$0								\$0
Funding Surplus/(Shortfall)			(\$37,291,669)	) (\$53,218,215)	(\$74,910,561)	(\$97,340,065)							(\$283,545,658)
Number of 3- and 4-year-olds Served		5,000	6,000		8,000								9,000
% of FPL Eligible 3- and 4-Year Old Population Served		8.0%	9.7%		13.1%								14.9%
Fully Loaded Cost per Slot Including Both State-Level and Provider-Level Costs		\$4,157	\$6,215	\$7,603	\$9,364	\$10,816							\$10,816
Table B.2.a.1: Annual Preschool Slot Plan					D. I.								
		Chi'	ild Care Cente			ery Model By I Public PreK			Head Start				
		Part Day	Full Day		Part Day						.———		
Cumulative Number of 3- and 4-year-old Slots		(3hr)			(3hr)		· I	(3hr)		·		P	Total
Year 0 (Pre-Existing Slots)		5000											5000 slots
Year 1		4000	1000			1000							6000 slots
Year 2		3000	2000			2000						,	7000 slots
Year 3		2000	2000			3000						, i	8000 slots
Year 4		1000	2000	2000		4000						ı	9000 slots
Year 5												,	
Year 6												,	
Year 7												·	
Year 8													
Year 9													
Year 10													
Subtotal: Cumulative Slots by Delivery Model	TRUE		2000	2000	0	4000	0	0	0	0		,	9000 slots
Slot Breakdown: FPL/ELL/Special Needs		Fixed											
FPL Eligibility Threshold (% FPL)	TRUE											, i	185% FPL
% of Slots allocated for ELL	TRUE												5% ELL
% of Slots allocated for Special Needs	TRUE											j	5% Special Ne
Subtotal: Allocations for ELL and Special Needs		10%										i	10% ELL/Sp.Ne
% of Slots allocated to Rural Areas	TRUE			4			4			4		i	50% Rura
December 1845 - Learne 1951 College 1845 - Learne 1845 - Learne 1951 - L	1	Weeks	Days										
Dosage: Weeks per year (all Delivery Models assume 5 days per week)												•	32 weeks
Part Day Care	TRUE		160										
	TRUE TRUE TRUE	40	200	)									40 weeks 52 weeks

## Worksheet C is the repository for publicly available, state-level data to inform input assumptions in the CPQ

#### Table C.2: Three- and Four-Year-Old Population Splits by FPL by State/Region/County

Source: Child Counts and Poverty Initial Data Pull (e 2015-11-03).xlsx (2013 ACS 5-Year Estimates, Table B17024, www.factfinder.census.gov)

Note: the splits provided below, from ACS tables, are for all children under 6 years old; therefore, it is assumed that these percentages are accurate for the subset of 3- and 4-year-olds.

	<b>Population Forecast</b>	t: (3- and 4-year olds)								
State	<100%	<125%	<150%	<175%	<185%	<200%	<300%	<400%	<500%	
Alabama, AL	31%	38%	44%	50%	52%	55%	71%	82%	89%	
Alaska, AK	16%	22%	27%	33%	36%	39%	58%	73%	84%	
Arizona, AZ	28%	36%	43%	49%	51%	54%	71%	82%	89%	
Arkansas, AR	32%	39%	47%	54%	56%	59%	75%	86%	92%	
California, CA	24%	31%	37%	43%	45%	48%	63%	73%	81%	
Colorado, CO	21%	26%	31%	37%	40%	42%	59%	72%	82%	
Connecticut, CT	16%	21%	25%	29%	30%	33%	46%	59%	69%	
Delaware, DE	20%	26%	32%	38%	40%	42%	59%	71%	82%	
Florida, FL	27%	34%	40%	47%	49%	52%	69%	80%	87%	
Georgia, GA	29%	36%	42%	48%	50%	53%	69%	80%	87%	
Hawaii, HI	16%	21%	26%	31%	32%	35%	55%	70%	82%	
Idaho, ID	22%	30%	39%	48%	51%	55%	76%	87%	93%	
Illinois, IL	22%	28%	34%	39%	41%	44%	60%	72%	81%	
Indiana, IN	26%	32%	39%	45%	47%	50%	69%	81%	90%	
Iowa, IA	19%	25%	31%	36%	38%	42%	62%	79%	88%	
Kansas, KS	22%	30%	36%	42%	44%	48%	67%	79%	88%	
Kentucky, KY	30%	37%	43%	48%	50%	53%	70%	82%	89%	
Louisiana, LA	30%	37%	43%	48%	50%	53%	68%	80%	88%	
Maine, ME	22%	28%	35%	41%	43%	47%	65%	79%	88%	
Maryland, MD	15%	19%	24%	28%	30%	33%	49%	62%	72%	
Massachusetts, MA	17%	21%	24%	28%	30%	32%	45%	57%	68%	
Michigan, MI	28%	34%	40%	45%	47%	50%	66%	79%	87%	
Minnesota, MN	17%	22%	27%	32%	34%	37%	54%	70%	80%	
Mississippi, MS	37%	44%	51%	56%	58%	61%	77%	86%	93%	
Missouri, MO	26%	32%	38%	44%	47%	50%	68%	80%	88%	
Montana, MT	23%	30%	37%	44%	46%	50%	67%	82%	90%	
Nebraska, NE	21%	27%	33%	40%	42%	45%	64%	78%	88%	
Nevada, NV	24%	31%	38%	45%	47%	50%	69%	82%	89%	
New Hampshire, NH	14%	18%	23%	28%	29%	32%	49%	65%	78%	
New Jersey, NJ	18%	22%	26%	30%	32%	34%	48%	59%	69%	
New Mexico, NM	33%	40%	48%	54%	56%	59%	76%	86%	92%	
New York, NY	24%	29%	35%	40%	41%	44%	58%	69%	78%	
North Carolina, NC	29%	36%	42%	48%	50%	53%	69%	80%	87%	
North Dakota, ND	17%	22%	27%	32%	34%	37%	55%	73%	85%	
Ohio, OH	27%	34%	39%	45%	47%	50%	66%	79%	87%	
Oklahoma, OK	27%	34%	42%	49%	51%	55%	73%	85%	91%	
Oregon, OR	25%	32%	38%	44%	47%	49%	67%	79%	86%	
Pennsylvania, PA	22%	27%	32%	38%	40%	43%	60%	73%	82%	
Rhode Island, RI	23%	28%	34%	38%	40%	43%	58%	70%	81%	

## You can create side-by-side Scenarios for comparison of alternatives, or to model more complex Systems

ructions: Enter information and assumptions in <u>yellow-shaded</u> cells only. To add another scenario, copy		
Scenario:	Default Scenario	Default Scena
System:	Default System	Default Syste
State/Region:	Alabama, AL	Alabama, Al
le B.1: Model Outputs and Key Performance Metrics		
	Total	Total
tate-Level Implementation Costs	\$16,759,603	\$15,941,665
rovider-Level Implementation Costs	\$266,786,055	\$244,731,78
l Annual Implementation Costs	\$283,545,658	\$260,673,44
xisting Funding	\$0	\$0
ling Surplus/(Shortfall)	(\$283,545,658)	(\$260,673,44
lumber of 3- and 4-year-olds Served	9,000	9,000
6 of FPL Eligible 3- and 4-Year Old Population Served	14.9%	14.9%
Loaded Cost per Slot Including Both State-Level and Provider-Level Costs	\$10,816	\$9,935
le B.2.b: NIEER Preschool Quality Standards and Benchmarks		
1. Program Development (Benchmark: Comprehensive Early Learning Standards)		
	Total	Total
Development of Comprehensive Early Learning Standards (\$)	\$0	\$0
Other Program Development Costs (\$)	\$0	\$0
Subtotal: Program Development Costs	\$0	\$0
2. Maximum Class Size (Benchmark: 20 Children per Class or Lower)		
	Total	Total
Maximum Number of Preschool Children per Class	20 children	22 children
Targeted Enrollment Efficiency: Percent of Class Size Capacity Utilized	85%	85%
Subtotal: Average Class Size	17 children	19 children
Cumulative Number of Part Day Classes Required	59 classes	53 classes
Cumulative Number of Full Day Classes Required	354 classes	317 classes
Cumulative Number of Extended Day Classes Required	118 classes	106 classes
Subtotal: Number of Preschool Classes Required to Service Slot Plan	531 classes	476 classes
·		
3. Staff-Child Ratio (Benchmark: One Classroom Adult per 10 Children or Better)		
	Total	Total
Maximum Number of Children per Classroom Adult	10 children	10 children
Maximum Number of Lead Teachers per Class	1 lead teacher	1 lead teach
Number of Classes per Day per Adult Teaching Staff Member		
Part Day (Each Classroom Can Accommodate 2 Classes per Day)	2.0 classes	2.0 classes
Full Day (Each Classroom Can Accommodate 1 Class per Day)	1.0 classes	1.0 classes

# State Using CPQ and Types of Questions They Want to Answer

- States that have requested the CPQ AR, AZ, DC, HI, IN, KY, LA, MA, MI, MO, NJ, OR, WA
- Uses
  - Determine appropriate salaries for directors and coordinators
  - Estimate costs of high quality preschool to inform budget allocations for preschool in school districts and child care reimbursement rates
  - ■Estimate cost of increasing quality, specifically teacher qualifications
  - ■Estimate the cost of serving more 4 year olds
  - Develop funding formulas that address the complex factors that go in to considering cost for early learning programs
  - Estimate costs of administrative functions to support quality to state and providers

# Resources

All materials are posted on ceelo.org <u>Costs of Quality Preschool Webinar</u>, including mini-modules to demo tool

- Including a <u>User Guide</u> and <u>Glossary</u>
- Watch how <u>IN</u> used the CPQ in 2016-2017

#### See these finance related resources:

- PDG Finance Peer Exchange http://ceelo.org/pdg\_peer\_exchange\_finance/
- Resources developed for grantees on financing
- Discussion Guide: State Financing for ECE systems
- Financing Early Care and Education bibliography

