

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

NOVEMBER 17, 2016

CENTER ON ENHANCING EARLY LEARNING OUTCOMES



What We Will Do Today

1. Introductions and Burning Questions
2. Goals, Purposes and Uses of Cost of Preschool Quality Tool (CPQ)
3. Overview and Short Demo of CPQ
4. Small group simulations with the tool
5. Discussion and Next Steps



Introductions

Quick round robin of “burning questions”





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 needed to sustain program at current or increased capacity over time

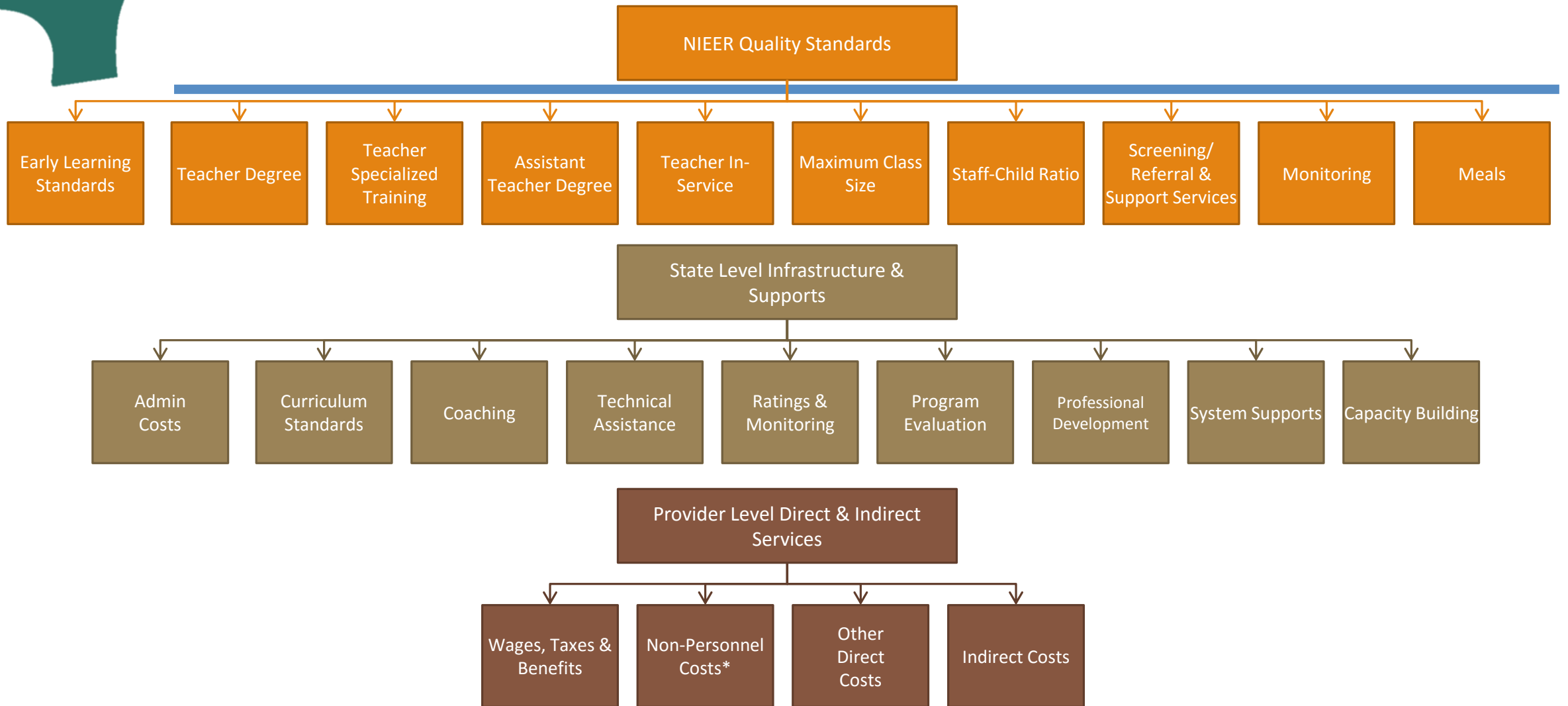


CPQ: Basic Characteristics

- 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



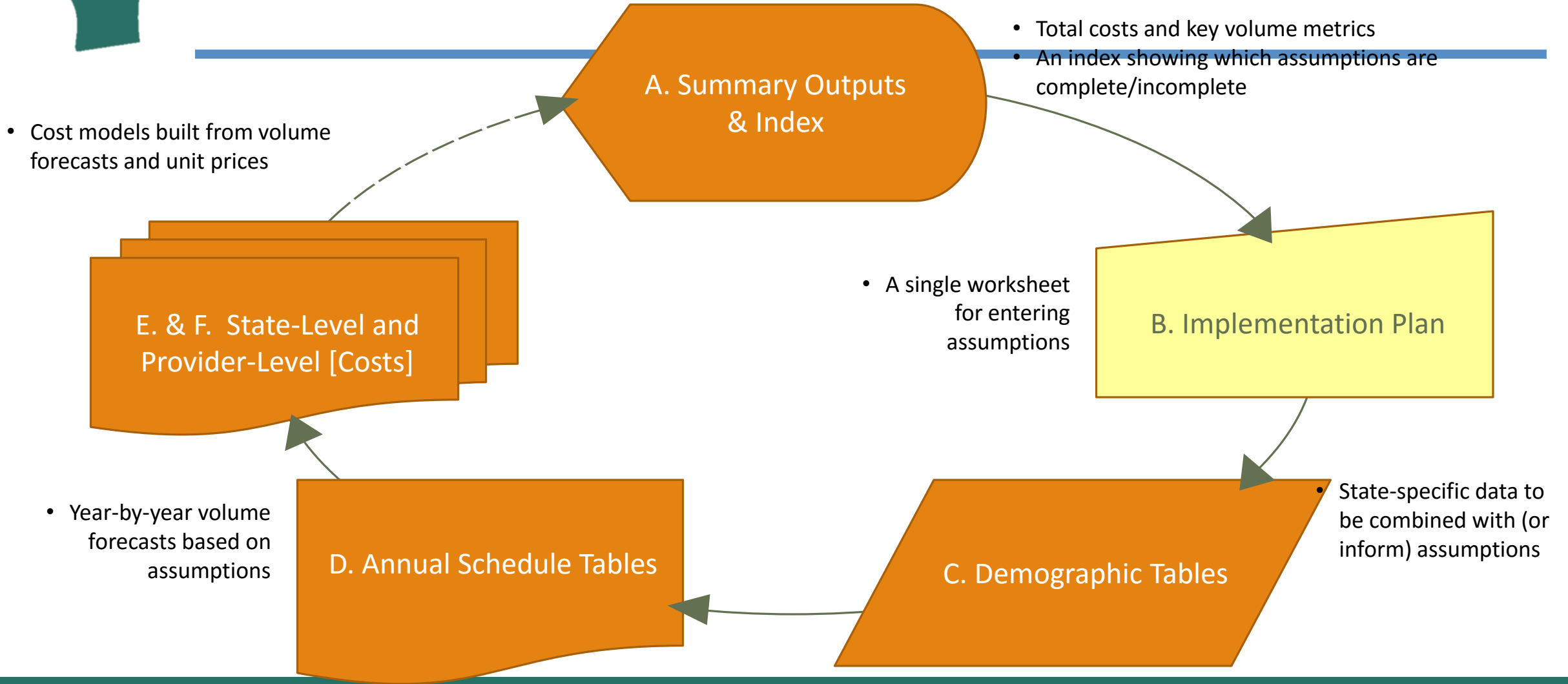
CPQ Tool Components



*Non-Personnel Costs include per-child costs (e.g., food and food prep), per-classroom costs (e.g., rent and utilities allocations), per-staff costs (e.g., consultants and training incremental to NIEER Quality Standards assumptions), and per-site costs (e.g., audit and legal expense).



Flow Chart of the CPQ Tool



Examples of CPQ Tool Capabilities

- Preschool slot plans by dosage
 - Vary by facility type by year
- Teacher qualifications & tuition support programs
 - Estimate teacher counts over time by degree level, net of attrition, and accounting for professional development
- State-level administrative costs
 - Explicitly assume incremental administrative costs for state-level monitoring and oversight quality elements
- Regional variations
 - Use the scenario planning feature to compare alternative models, or to model individual regions within a single, overall “system”

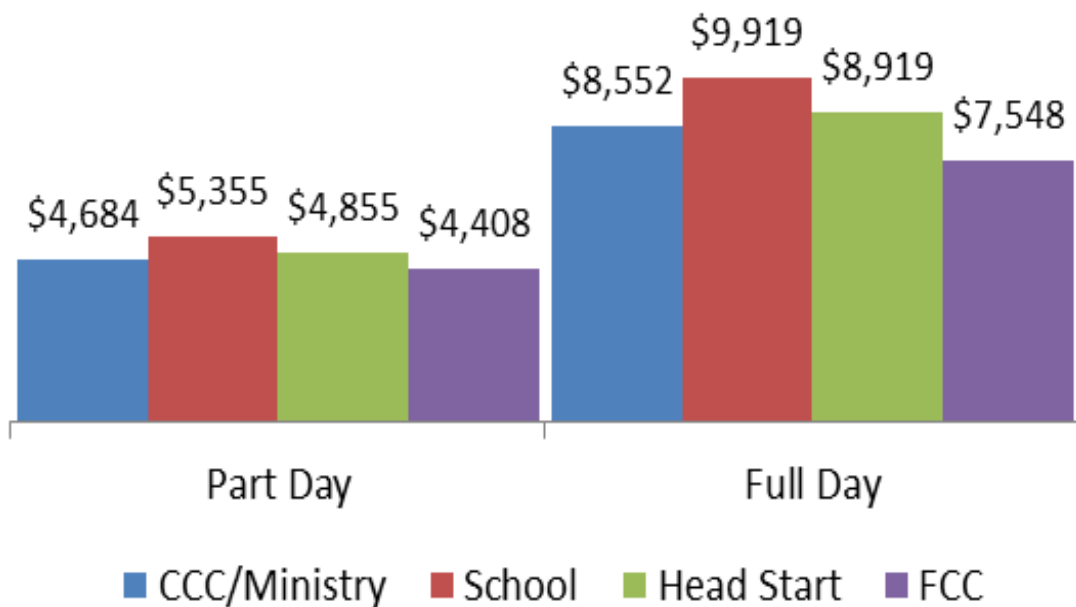
Yr1	Yr2	Yr3	Yr4	Yr5



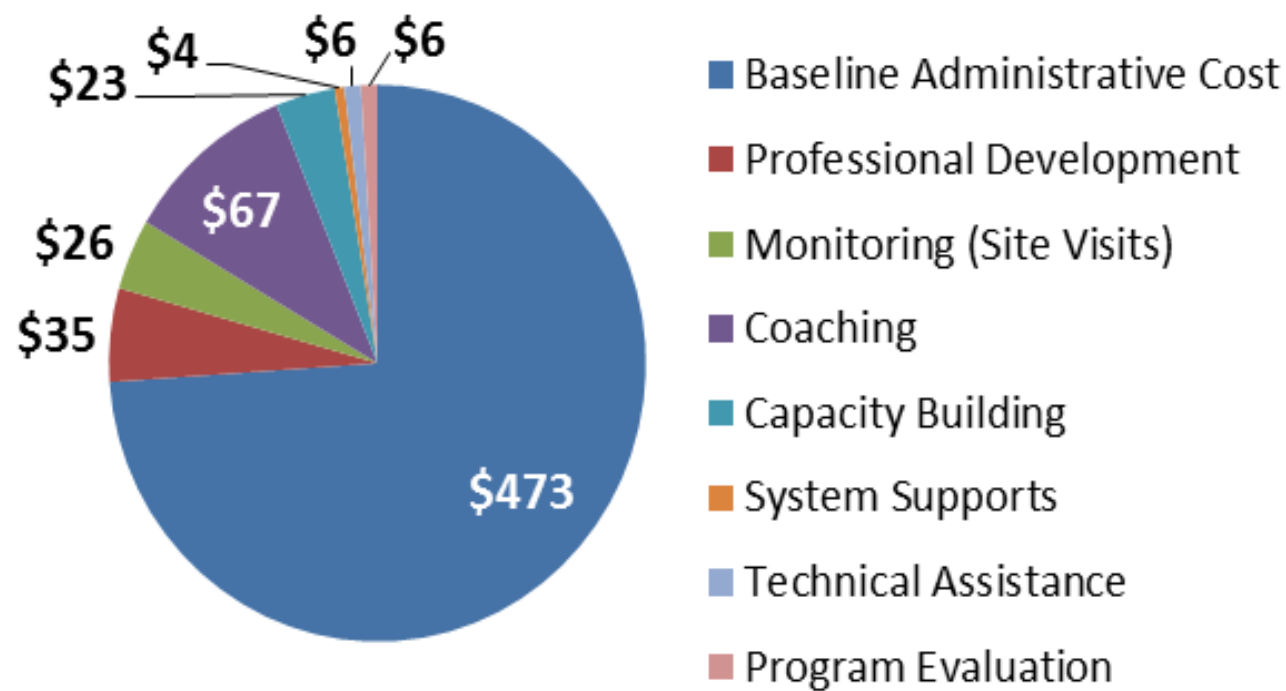


Types of Data Produced by CPQ

Estimated Slot Costs by Dosage and Delivery Model (State and Provider Level Costs)



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!



The CPQ is organized into six worksheets

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 level 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.

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

Instructions: Enter information and assumptions in **yellow-shaded** cells only. To add another scenario, copy and paste Columns D-P in the columns to the right (and perform similar copy-and-paste for all other worksheets)

Scenario:	Default Scenario	Default Scenario
System:	Default System	Default System
State/Region:	Alabama, AL	Alabama, AL

Table B.1: Model Outputs and Key Performance Metrics

	By Implementation Year											Total	
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10		
State-Level Implementation Costs													\$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													

Table B.2.a.1: Annual Preschool Slot Plan

		By Delivery Model By Dosage									Total		
		Child Care Centers			Public PreK			Head Start					
		Part Day (3hr)	Full Day (6hr)	Extended Day (10hr)	Part Day (3hr)	Full Day (6hr)	Extended Day (10hr)	Part Day (3hr)	Full Day (6hr)	Extended Day (10hr)			
Cumulative Number of 3- and 4-year-old Slots													
Year 0 (Pre-Existing Slots)													
Year 1													
Year 2													
Year 3													
Year 4													
Year 5													
Year 6													
Year 7													
Year 8													
Year 9													
Year 10													
Subtotal: Cumulative Slots by Delivery Model	FALSE	0	0	0	0	0	0	0	0	0	0	0	0 slots
Slot Breakdown: FPL/ELL/Special Needs		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%											5% Special Needs
Subtotal: Allocations for ELL and Special Needs		10%											10% ELL/Sp.Needs
% of Slots allocated to Rural Areas	TRUE	50%											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	40	200										40 weeks
Extended Day Care	TRUE	52	260										52 weeks

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

Instructions: Enter information and assumptions in **yellow-shaded** cells only. To add another scenario, copy and paste Columns D-P in the columns to the right (and perform similar copy-and-paste for all other worksheets)

Scenario:	Default Scenario	Default Scenario
System:	Default System	Default System
State/Region:	Alabama, AL	Alabama, AL

Table B.1: Model Outputs and Key Performance Metrics

By Implementation Year	
	Total
State-Level Implementation Costs	\$255,051
Provider-Level Implementation Costs	\$8,415,214
Total Annual Implementation Costs	\$8,670,264
Existing Funding	\$0
Funding Surplus/(Shortfall)	(\$8,670,264)
Number of 3- and 4-year-olds Served	1,000
% of FPL Eligible 3- and 4-Year Old Population Served	1.6%
Fully Loaded Cost per Slot Including Both State-Level and Provider-Level Costs	\$8,670

Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
\$255,051											\$255,051
\$8,415,214											\$8,415,214
\$8,670,264											\$8,670,264
\$0											\$0
(\$8,670,264)											(\$8,670,264)
1,000											1,000
1.6%											1.6%
\$8,670											\$8,670

Table B.2.a.1: Annual Preschool Slot Plan

By Delivery Model By Dosage											
	Child Care Centers			Public PreK			Head Start			Total	
	Part Day (3hr)	Full Day (6hr)	Extended Day (10hr)	Part Day (3hr)	Full Day (6hr)	Extended Day (10hr)	Part Day (3hr)	Full Day (6hr)	Extended Day (10hr)		
Cumulative Number of 3- and 4-year-old Slots											
Year 0 (Pre-Existing Slots)		1000								1000 slots	
Year 1											
Year 2											
Year 3											
Year 4											
Year 5											
Year 6											
Year 7											
Year 8											
Year 9											
Year 10											
Subtotal: Cumulative Slots by Delivery Model	TRUE	0	1000	0	0	0	0	0	0	0	1000 slots
Slot Breakdown: FPL/ELL/Special Needs		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%									5% Special Needs
Subtotal: Allocations for ELL and Special Needs		10%									10% ELL/Sp.Needs
% of Slots allocated to Rural Areas	TRUE	50%									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	40	200								40 weeks
Extended Day Care	TRUE	52	260								52 weeks

By Delivery Model By Dosage											
	Child Care Centers			Public PreK			Head Start			Total	
	Part Day (3hr)	Full Day (6hr)	Extended Day (10hr)	Part Day (3hr)	Full Day (6hr)	Extended Day (10hr)	Part Day (3hr)	Full Day (6hr)	Extended Day (10hr)		
Cumulative Number of 3- and 4-year-old Slots											
Year 0 (Pre-Existing Slots)		1000								1000 slots	
Year 1											
Year 2											
Year 3											
Year 4											
Year 5											
Year 6											
Year 7											
Year 8											
Year 9											
Year 10											
Subtotal: Cumulative Slots by Delivery Model	TRUE	0	1000	0	0	0	0	0	0	0	1000 slots
Slot Breakdown: FPL/ELL/Special Needs		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%									5% Special Needs
Subtotal: Allocations for ELL and Special Needs		10%									10% ELL/Sp.Needs
% of Slots allocated to Rural Areas	TRUE	50%									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	40	200								40 weeks
Extended Day Care	TRUE	52	260								52 weeks

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

Instructions: Enter information and assumptions in **yellow-shaded** cells only. To add another scenario, copy and paste Columns D-P in the columns to the right (and perform similar copy-and-paste for all other worksheets)

Scenario:
System:
State/Region:

Default Scenario	Default Scenario
Default System	Default System
Alabama, AL	Alabama, AL

Table B.1: Model Outputs and Key Performance Metrics

	By Implementation Year											Total
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
State-Level Implementation Costs	\$1,275,253	\$3,005,042	\$3,543,767	\$4,146,253	\$4,789,289							\$16,759,603
Provider-Level Implementation Costs	\$19,509,895	\$34,286,627	\$49,674,449	\$70,764,308	\$92,550,776							\$266,786,055
Total Annual Implementation Costs	\$20,785,147	\$37,291,669	\$53,218,215	\$74,910,561	\$97,340,065							\$283,545,658
Existing Funding	\$0	\$0	\$0	\$0	\$0							\$0
Funding Surplus/(Shortfall)	(\$20,785,147)	(\$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	7,000	8,000	9,000							9,000
% of FPL Eligible 3- and 4-Year Old Population Served	8.0%	9.7%	11.4%	13.1%	14.9%							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

		By Delivery Model By Dosage									Total
		Child Care Centers			Public PreK			Head Start			
		Part Day (3hr)	Full Day (6hr)	Extended Day (10hr)	Part Day (3hr)	Full Day (6hr)	Extended Day (10hr)	Part Day (3hr)	Full Day (6hr)	Extended Day (10hr)	
Cumulative Number of 3- and 4-year-old Slots											
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	1000		3000					8000 slots
Year 4		1000	2000	2000		4000					9000 slots
Year 5											
Year 6											
Year 7											
Year 8											
Year 9											
Year 10											
Subtotal: Cumulative Slots by Delivery Model	TRUE	1000	2000	2000	0	4000	0	0	0	0	9000 slots
Slot Breakdown: FPL/ELL/Special Needs		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%									5% Special Needs
Subtotal: Allocations for ELL and Special Needs		10%									10% ELL/Sp.Needs
% of Slots allocated to Rural Areas	TRUE	50%									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	40	200								40 weeks
Extended Day Care	TRUE	52	260								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.

Population Forecast: (3- and 4-year olds)											
State	<100%	<125%	<150%	<175%	<185%	<200%	<300%	<400%	<500%	501%+	
Alabama, AL	31%	38%	44%	50%	52%	55%	71%	82%	89%	100%	
Alaska, AK	16%	22%	27%	33%	36%	39%	58%	73%	84%	100%	
Arizona, AZ	28%	36%	43%	49%	51%	54%	71%	82%	89%	100%	
Arkansas, AR	32%	39%	47%	54%	56%	59%	75%	86%	92%	100%	
California, CA	24%	31%	37%	43%	45%	48%	63%	73%	81%	100%	
Colorado, CO	21%	26%	31%	37%	40%	42%	59%	72%	82%	100%	
Connecticut, CT	16%	21%	25%	29%	30%	33%	46%	59%	69%	100%	
Delaware, DE	20%	26%	32%	38%	40%	42%	59%	71%	82%	100%	
Florida, FL	27%	34%	40%	47%	49%	52%	69%	80%	87%	100%	
Georgia, GA	29%	36%	42%	48%	50%	53%	69%	80%	87%	100%	
Hawaii, HI	16%	21%	26%	31%	32%	35%	55%	70%	82%	100%	
Idaho, ID	22%	30%	39%	48%	51%	55%	76%	87%	93%	100%	
Illinois, IL	22%	28%	34%	39%	41%	44%	60%	72%	81%	100%	
Indiana, IN	26%	32%	39%	45%	47%	50%	69%	81%	90%	100%	
Iowa, IA	19%	25%	31%	36%	38%	42%	62%	79%	88%	100%	
Kansas, KS	22%	30%	36%	42%	44%	48%	67%	79%	88%	100%	
Kentucky, KY	30%	37%	43%	48%	50%	53%	70%	82%	89%	100%	
Louisiana, LA	30%	37%	43%	48%	50%	53%	68%	80%	88%	100%	
Maine, ME	22%	28%	35%	41%	43%	47%	65%	79%	88%	100%	
Maryland, MD	15%	19%	24%	28%	30%	33%	49%	62%	72%	100%	
Massachusetts, MA	17%	21%	24%	28%	30%	32%	45%	57%	68%	100%	
Michigan, MI	28%	34%	40%	45%	47%	50%	66%	79%	87%	100%	
Minnesota, MN	17%	22%	27%	32%	34%	37%	54%	70%	80%	100%	
Mississippi, MS	37%	44%	51%	56%	58%	61%	77%	86%	93%	100%	
Missouri, MO	26%	32%	38%	44%	47%	50%	68%	80%	88%	100%	
Montana, MT	23%	30%	37%	44%	46%	50%	67%	82%	90%	100%	
Nebraska, NE	21%	27%	33%	40%	42%	45%	64%	78%	88%	100%	
Nevada, NV	24%	31%	38%	45%	47%	50%	69%	82%	89%	100%	
New Hampshire, NH	14%	18%	23%	28%	29%	32%	49%	65%	78%	100%	
New Jersey, NJ	18%	22%	26%	30%	32%	34%	48%	59%	69%	100%	
New Mexico, NM	33%	40%	48%	54%	56%	59%	76%	86%	92%	100%	
New York, NY	24%	29%	35%	40%	41%	44%	58%	69%	78%	100%	
North Carolina, NC	29%	36%	42%	48%	50%	53%	69%	80%	87%	100%	
North Dakota, ND	17%	22%	27%	32%	34%	37%	55%	73%	85%	100%	
Ohio, OH	27%	34%	39%	45%	47%	50%	66%	79%	87%	100%	
Oklahoma, OK	27%	34%	42%	49%	51%	55%	73%	85%	91%	100%	
Oregon, OR	25%	32%	38%	44%	47%	49%	67%	79%	86%	100%	
Pennsylvania, PA	22%	27%	32%	38%	40%	43%	60%	73%	82%	100%	
Rhode Island, RI	23%	28%	34%	38%	40%	43%	58%	70%	81%	100%	

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

Instructions: Enter information and assumptions in **yellow-shaded** cells only. To add another scenario, copy and paste Columns D-P in the column

Scenario:	Default Scenario	Default Scenario
System:	Default System	Default System
State/Region:	Alabama, AL	Alabama, AL

Table B.1: Model Outputs and Key Performance Metrics

	Total	Total
State-Level Implementation Costs	\$16,759,603	\$15,941,665
Provider-Level Implementation Costs	\$266,786,055	\$244,731,785
Total Annual Implementation Costs	\$283,545,658	\$260,673,449
Existing Funding	\$0	\$0
Funding Surplus/(Shortfall)	(\$283,545,658)	(\$260,673,449)
Number of 3- and 4-year-olds Served	9,000	9,000
% of FPL Eligible 3- and 4-Year Old Population Served	14.9%	14.9%
Fully Loaded Cost per Slot Including Both State-Level and Provider-Level Costs	\$10,816	\$9,935

Table 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 teacher
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
Extended Day (Each Classroom Can Accommodate 1 Class per Day)	0.6 classes	0.6 classes



Practice Using the CPQ

- Watch how [IN](#) used the tool and built internal capacity to produce cost projections to meet their goals

- Small Group Discussion and Demo



Key Take Away's

Any “Ah ha” or “Oh No” To Share?



Resources

All materials are posted on ceelo.org [Costs of Quality Preschool Webinar](#), including mini-modules to demo tool

- Including a [User Guide](#) and [Glossary](#)

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](#)

