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# Variations in the Quality of TN-VPK Classrooms

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## Research Team

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- Child assessors/classroom observers across the state

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## Two Components of the Evaluation

- RCT (Randomized Control Trial) Lipsey and Hofer papers in this symposium
- RDD (Age-Cutoff Regression Discontinuity Design)
  - RCT cannot address issues of quality
  - Of interest is whether the variation Hofer described in child outcomes is a function of differences in program characteristics
    - Program characteristics include such things as classroom interactions and structure as well as district wide support for pre-k
  - RDD study can provide actionable information to state policy makers



## Representative Sample of TN-VPK Program

- Statewide representative sample of TN Pre-K classrooms.
- 40 classrooms within each of four Tennessee regions selected to participate, one region each year:
  - Central West 2009
  - West 2010
  - Central East 2011
  - (Far) East 2012
- School readiness outcomes for children who attended Pre-K the year before are compared to those for children just beginning Pre-K, with adjustment for the age difference.

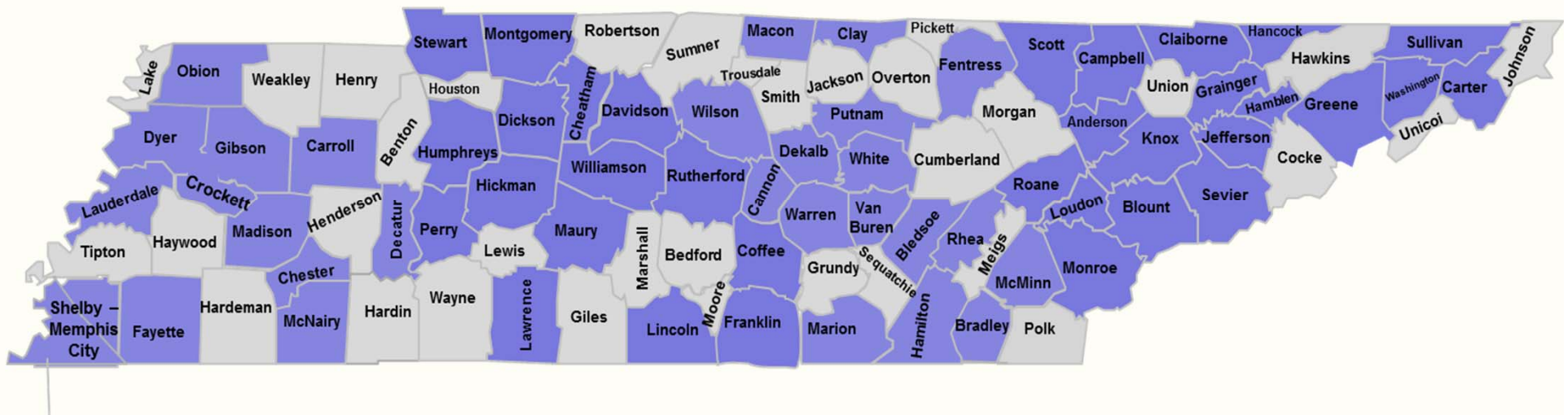


## The Selection Process

- Within each region, schools with TN-VPK classrooms were categorized into 16 groups according to:
    - District size: Urban vs. Non-Urban
    - Funding Sources: Full State funding vs. Blended funding
    - Experience with Pre-K classrooms: Pilot vs. Voluntary
    - AYP standing: High Priority vs. not
- Identified by DOE Staff
- Schools were randomly selected within these categories in proportions to represent the TN-VPK program
  - Classrooms were randomly selected within each selected school.



# Districts Involved in the RDD Classroom Observations





## Year 1

Information about the participating districts and schools from interviews:

- Pre-K Coordinators
- Principals
- Directors
- Affiliated Principals
- Teachers
- **Classrooms observed for the first 4 hours of the instructional day (1<sup>st</sup> 2 cohorts) or a full day (2<sup>nd</sup> 2 cohorts)**



# Measures Used in Observations

- ECERS-R
  - One of the most widely-used instruments to evaluate the quality of early care and education environments.
  - 43 items grouped into 7 subscales- we used only the first six subscales
- ELLCO
  - An instrument used to evaluate the language and literacy environments of early childhood classrooms.
  - The rating scale portion of the instrument involves 19 items grouped into 5 subscales.
- Narrative Record
  - Records continuous data about the progression of activities in the classroom.
  - An episode is a period of time that is only ended (and a new episode immediately begins) when the Pedagogy or Content changes, or the children move from inside the classroom to outside the classroom or the reverse.

Chosen by  
State DOE  
Personnel





## Observation Procedures

- 160 classrooms observed around the state
- Minimum=4 hours
- Same general set of observers across the state
- Observers trained to be highly reliable with one another before they began
- Checks made during observational period to ensure that reliability was maintained
- Little to no reliance on teacher answers for ECERS items

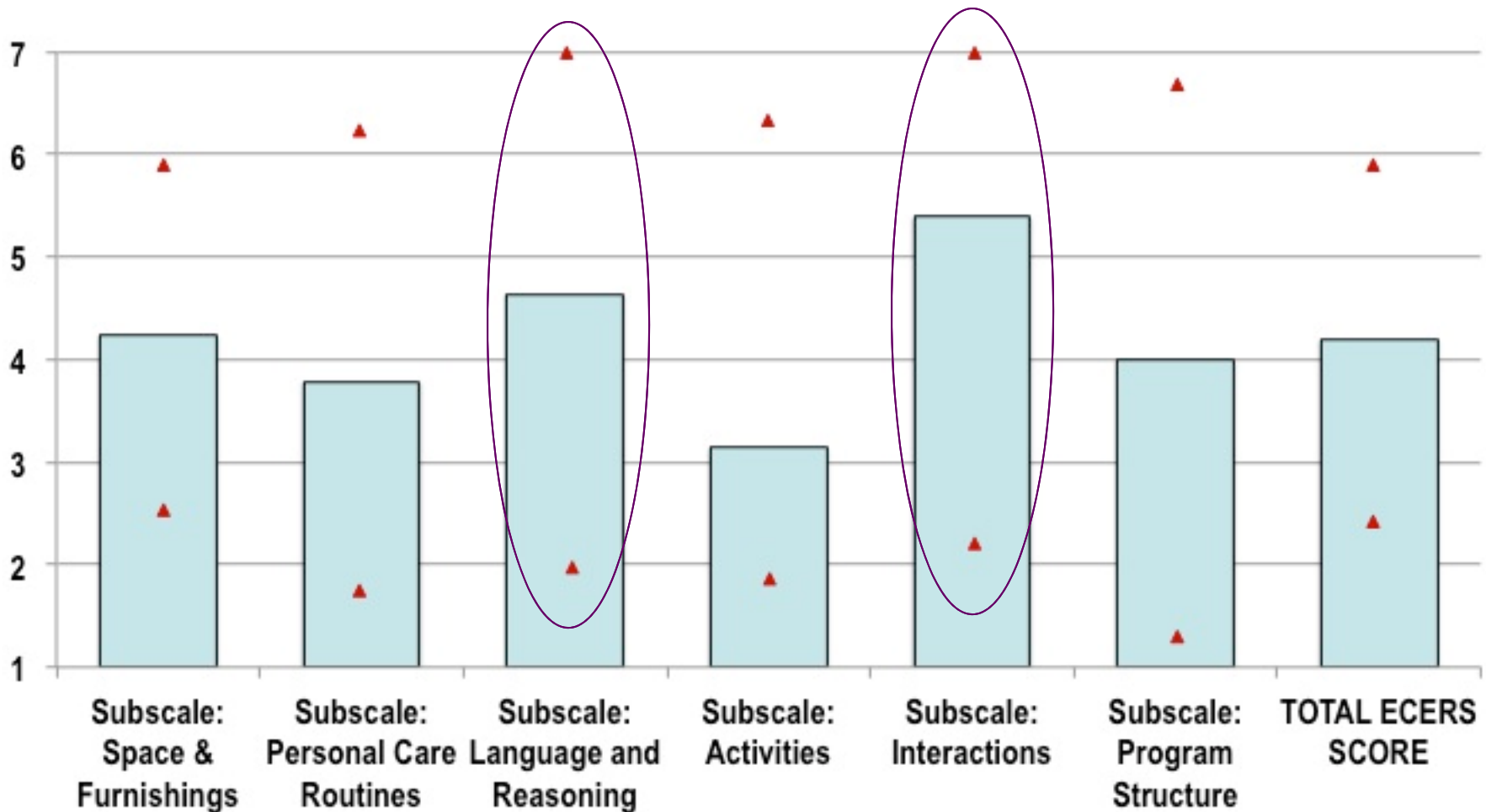


## ECERS Score Summary

- 85% of the classrooms observed scored less than Good quality on the total ECERS-R score (defined as a score of 5).
- There was great variation in scores across the state.
- Most of the classrooms did well on the Interactions subscale.
- There were 11 classrooms that scored below Minimal quality on their total ECERS-R score.

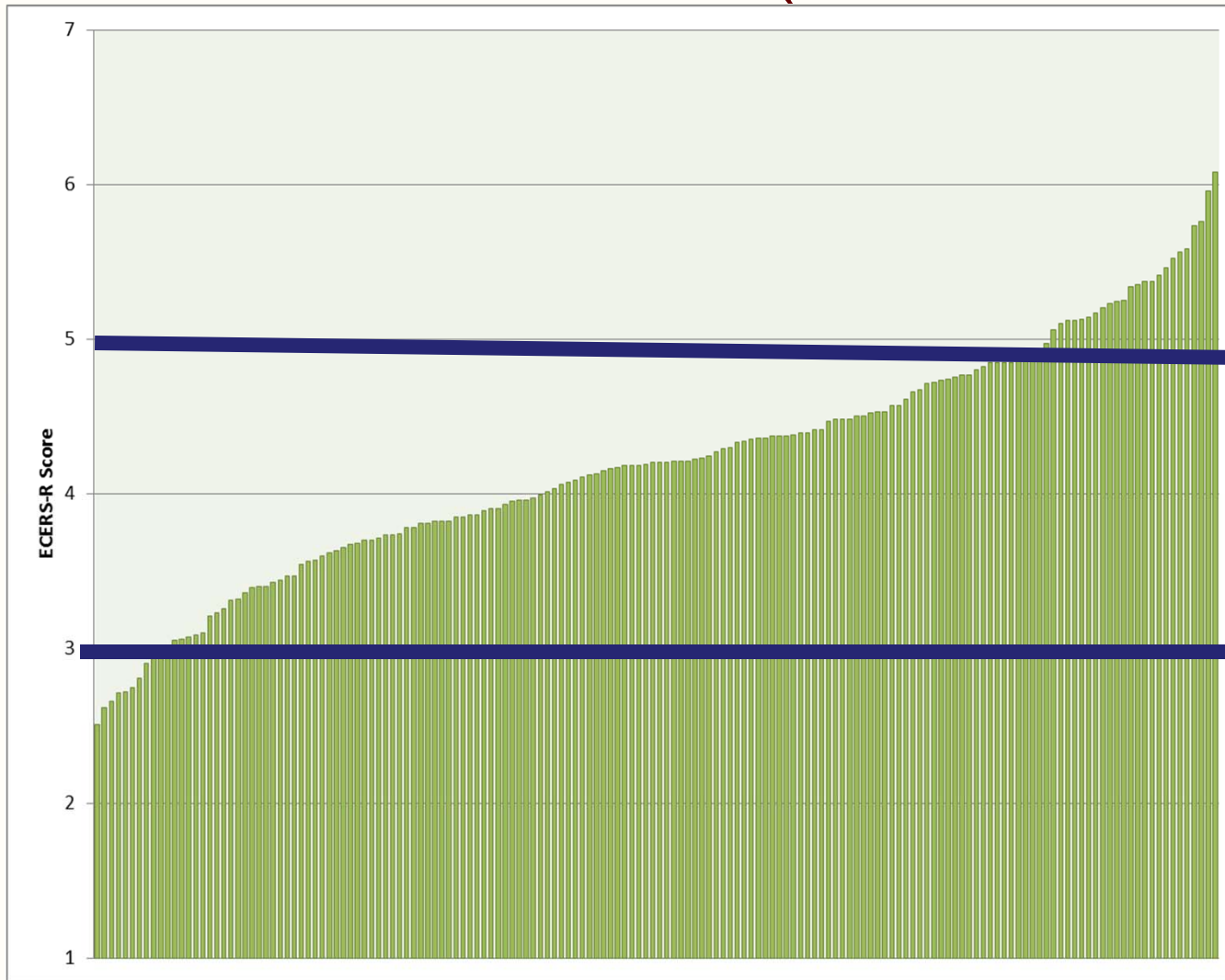


# ECERS-R Scores





## ECERS-R Scores: TOTAL SCORE (160 classroom bars)

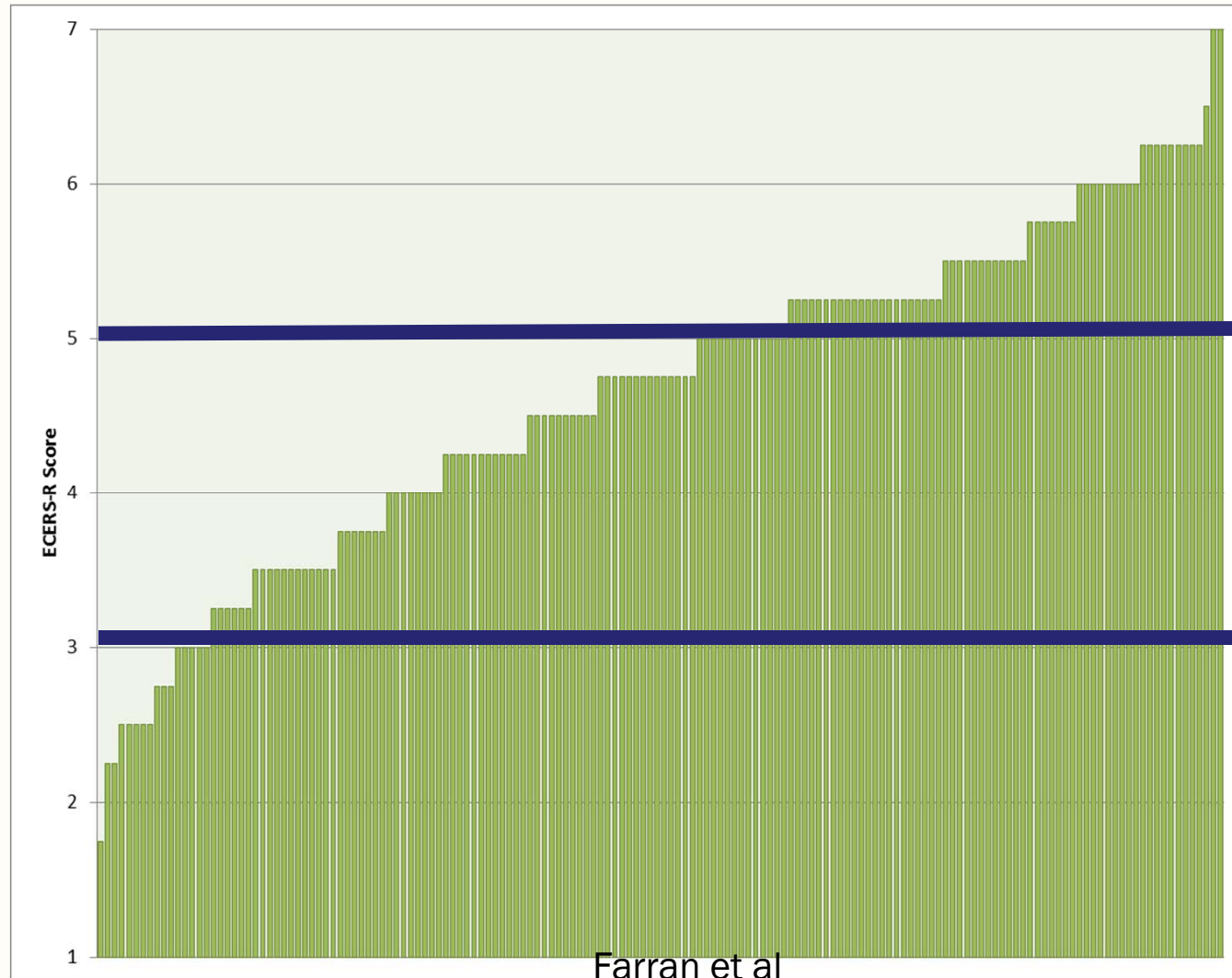


“Good”  
ECERS  
Anchor

“Minimal”  
ECERS  
Anchor



## ECERS-R Scores: Language/Reasoning

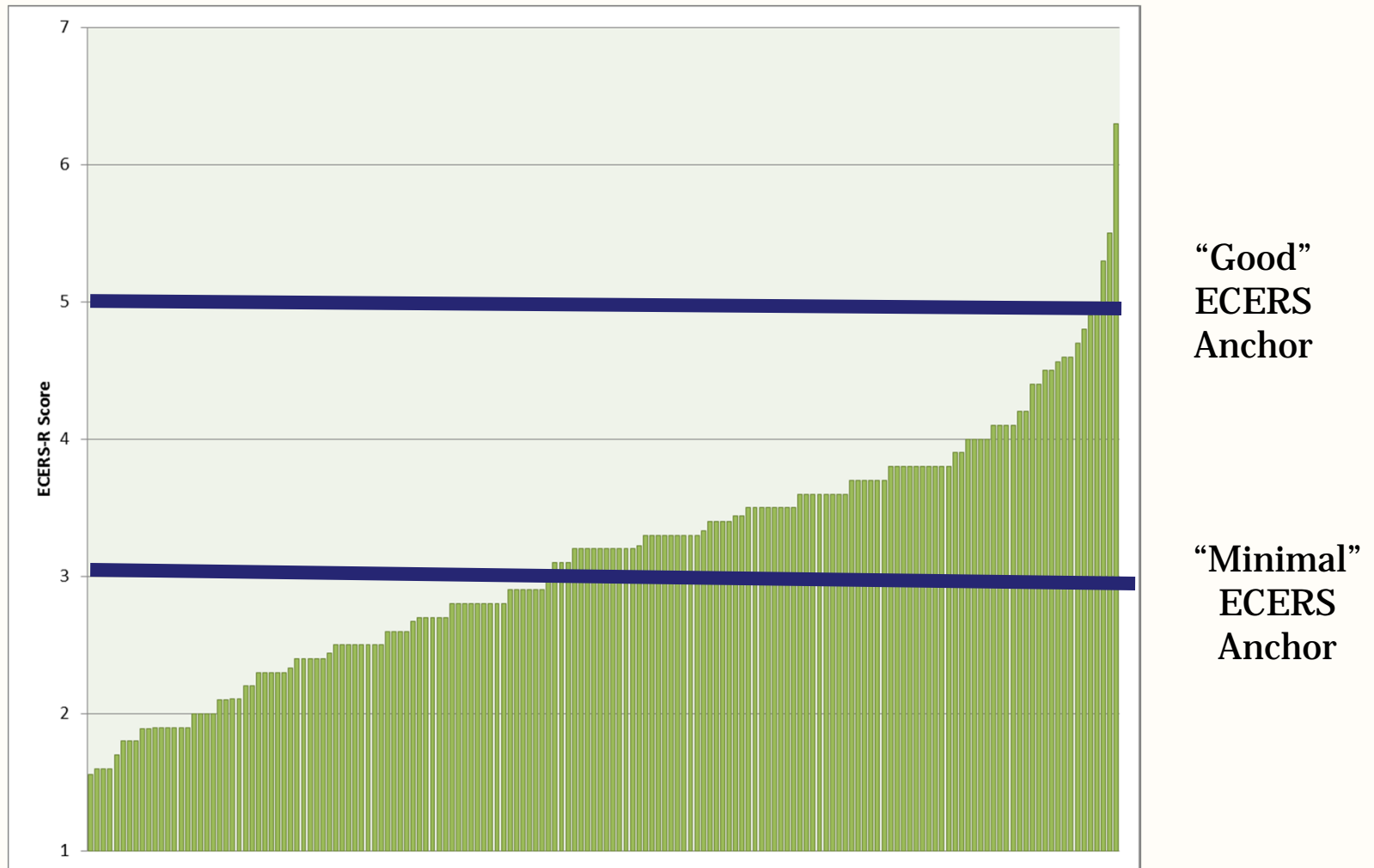


“Good”  
ECERS  
Anchor

“Minimal”  
ECERS  
Anchor



## ECERS-R Scores: Activities



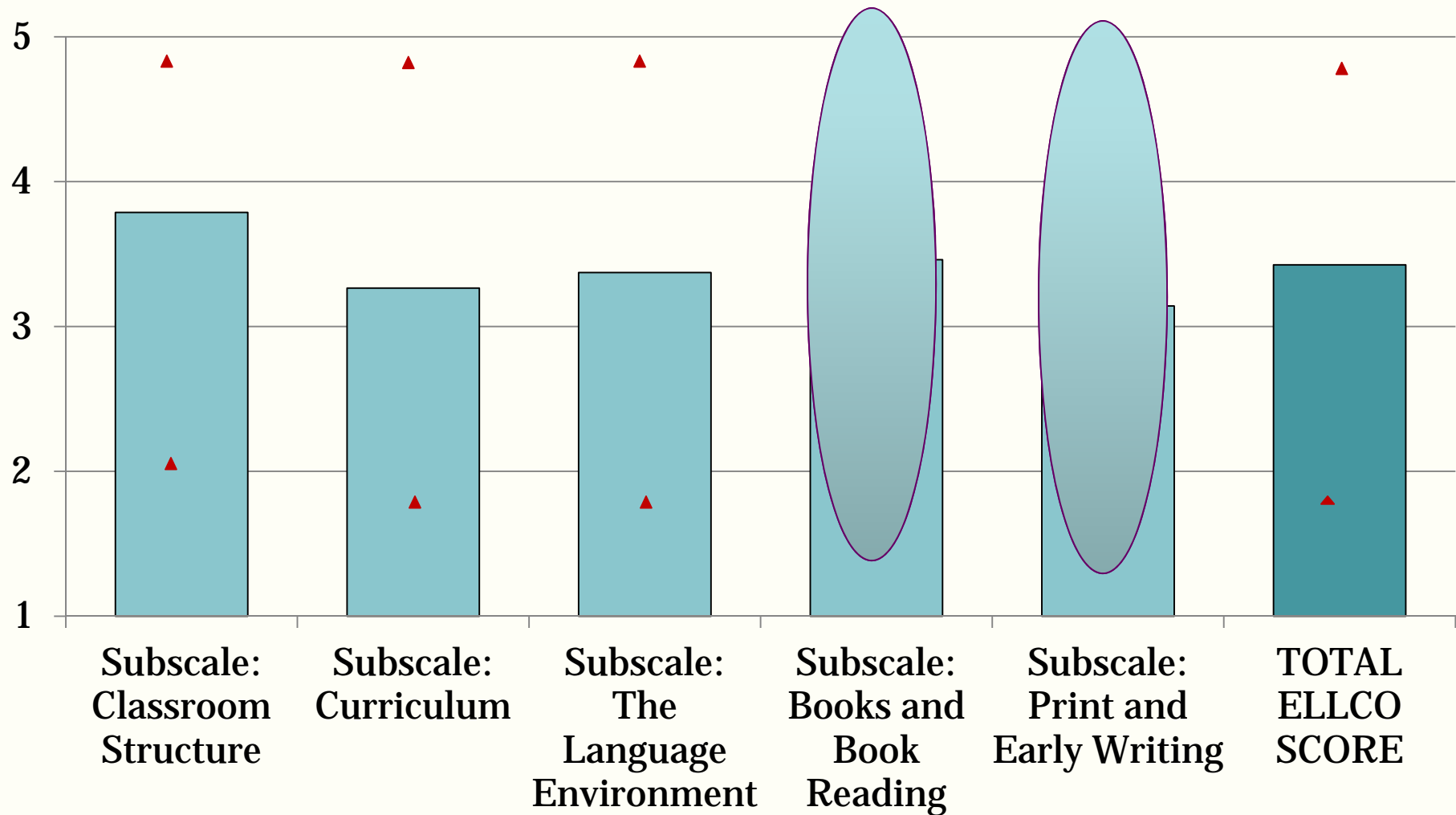


## ELLCO Score Summary

- Average scores across all ELLCO subscales and the total score were around the anchor of “Basic” evidence of quality.
- Scores were lower on the Print and Early Writing subscale than the others, both in overall average score (lowest subscale average) and variation across classrooms.
- There was 1 classroom that scored below Inadequate on the total ELLCO score.



# ELLCO Scores







# NARRATIVE RECORD: DIVISION OF TIME



# Narrative Record Example Snippet

Start Time	Brief Description (child and teacher)	Activity Type: WGT, WG, SG, SGT, Center, SGCenter, SGTCenter, Meal, Trn, NAP	Content: M LIT Sc SS AIM MIX GM None	Inside or Outside of the Classroom
8:00	All children enter the classroom from the cafeteria and put their things in their cubbies	TRANSITION	NONE	IN
8:10	Children are on carpet and teacher helps them count how many are present today, go over letter of the day, talk about weather, shake hands with neighbors, go over the calendar, etc.	WHOLE GROUP TEACHER	MIX	IN
8:15	Children are on floor and teacher is reading a book	WHOLE GROUP TEACHER	LIT	IN
8:30	Teacher discusses sides of a triangle and has children look for triangles around the room	WHOLE GROUP TEACHER	MATH	IN
8:40	Children line up to go to restroom while teacher fills in the attendance record for the day	TRANSITION	NONE	IN
8:55				

**OBSERVATION TOTAL: 55 minutes**

- **TRANSITION TOTAL: 25 minutes (45%)**
- **WHOLE GROUP TOTAL: 30 minutes (55%)**
- **MATH CONTENT TOTAL: 10 minutes (18%)**



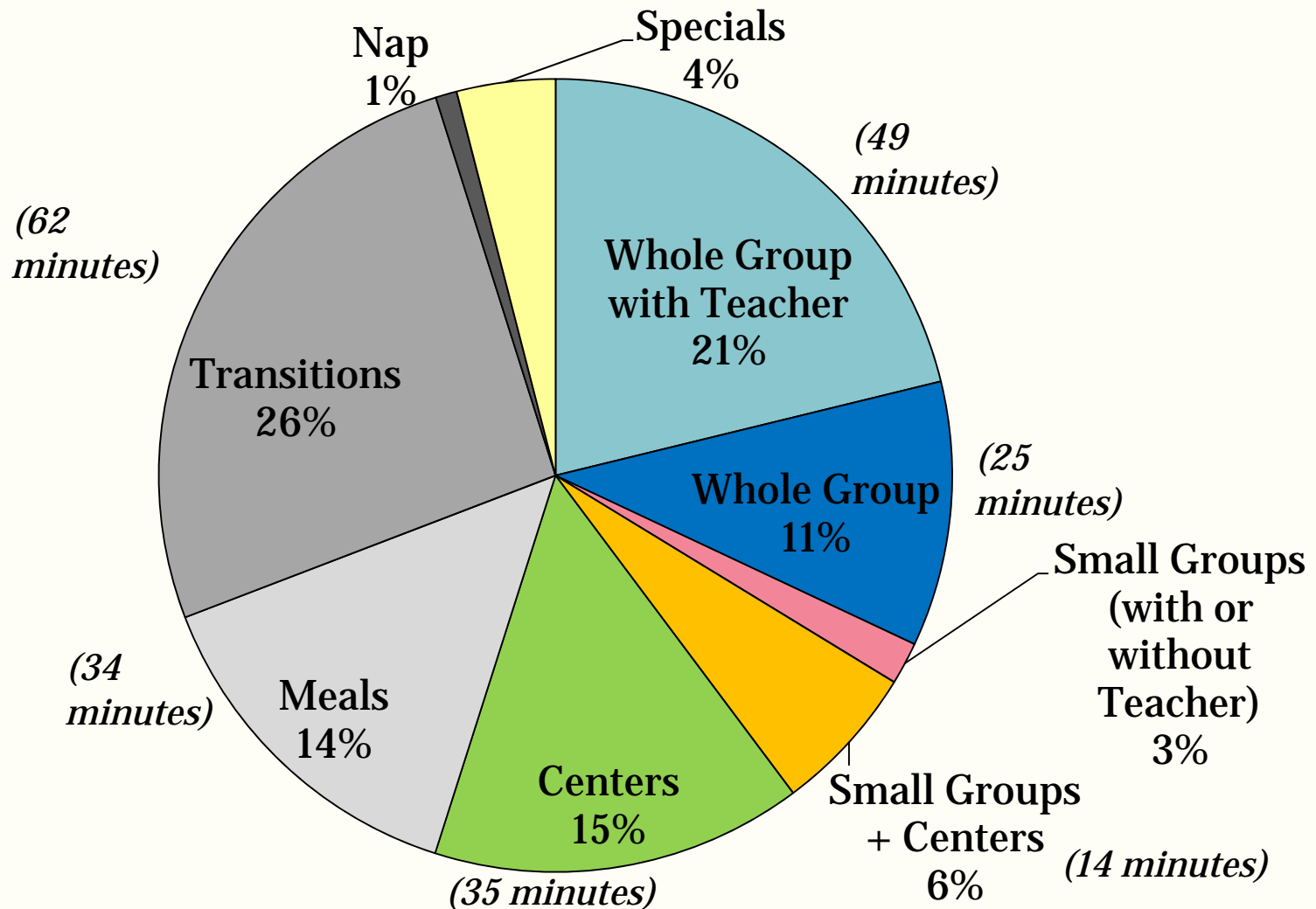
## Time Spent in TN-VPK Classrooms

### Pedagogy – teaching arrangements across first 4 hours

- The largest part of the average observation (98 minutes, or 41% of the first four hours of the day) was spent in *routine activities*.
- More time spent in *whole-group activities* (32%) than in any other
- 21% of the morning in center time
- The 49 minutes spent in activities involving centers is below what ECERS considers necessary for 6.5-hour programs to reach “minimal” quality standards.
  - Almost half of classrooms observed spent 45 minutes or less in any kind of center time.
- 39 classrooms spent nearly half of the first four hours of the day in routines (transitions and meals).



# Instructional Settings (1<sup>st</sup> 4 hours of day)





## Inside v. Outside the Classroom

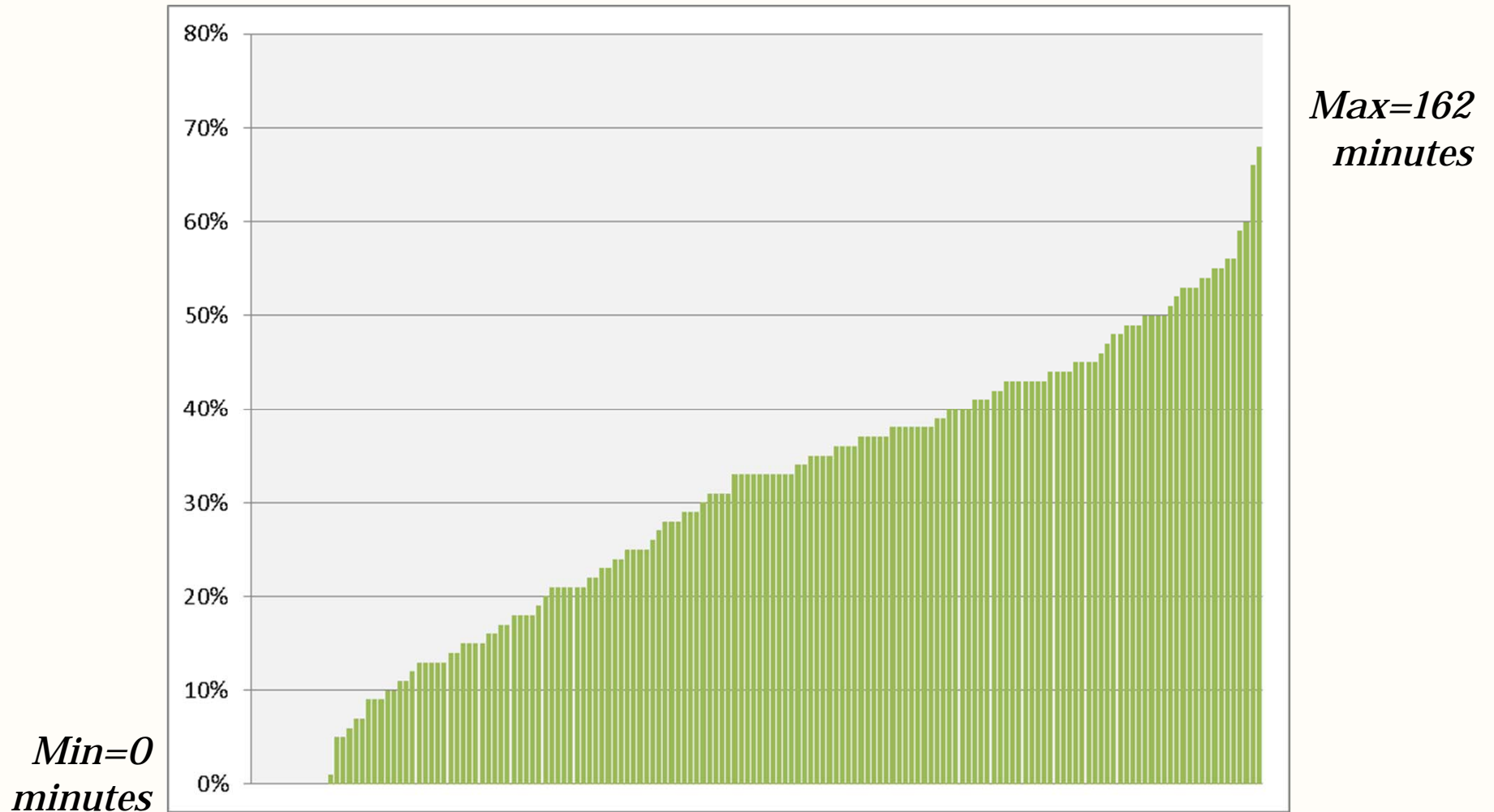
- Time spent outside the room may be due to having young children in elementary schools as children leave the room for many reasons:



- Play outside
- For more than a quarter of the first four hours of the day (~66 minutes), the average class is outside their classroom.
- Some classrooms spent more than half the morning outside the room, while others (8%) never left the room.



# Percent of Time Out of the Room (240 minutes)



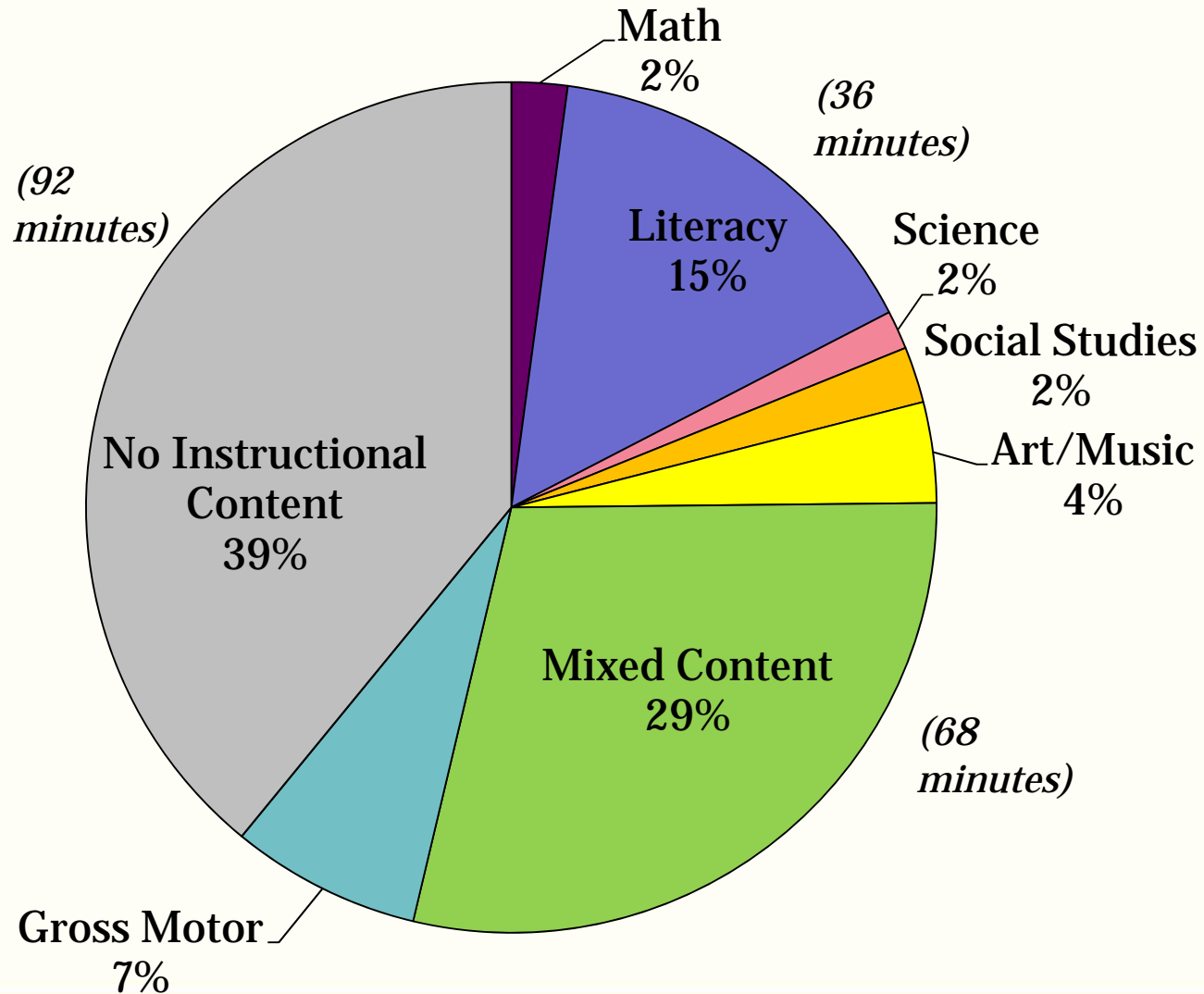


## Content Covered in TN-VPK Classrooms

- Most of the instructional time is spent on literacy or mixed content.
  - “Mixed content”
    - Material covered for less than 1 minute
    - A variety of content occurring simultaneously (e.g., Center Time)
- Quite a bit of time is spent without any instructional content
  - Routine activities
    - Meals
    - Transitions
    - Outdoors



# Content Covered (1<sup>st</sup> 4 hours of day)







## Summary: Observations of classrooms in statewide prekindergarten program

- ECERS scores similar to other large scale evaluations of pre-k programs
  - Averaging at a level ECERS developers would consider less than ideal
  - Great variety
    - Several classrooms scored in the Ideal range
    - Several classrooms scored as clearly inadequate
- ELLCO scores similar to ECERS
  - Lower scores in print and writing cause for concern
- Record of time spent
  - Lots of “down” time -- in routine activities and out of the room
  - Focus almost exclusively on literacy when content is taught.



## Conclusion

- Observational data suggest the difficulty of scaling up pre-kindergarten programs and maintaining quality
  - Little infrastructure for supporting professional development for teachers or overseeing what they are doing
  - Larger scale implementation of pre-k needs a coherent vision for how children learn and what facilitates overall development
  - Without unifying vision, classrooms can devolve to “training” rather than learning
  - Placement of pre-k in schools may make any vision more difficult to create and sustain
- Next steps are to see if the observed variety is linked to how much children learned in these same classrooms