

# **School Inclusion: Research Outcomes for Children with Autism at Recess**

Jill Locke, PhD

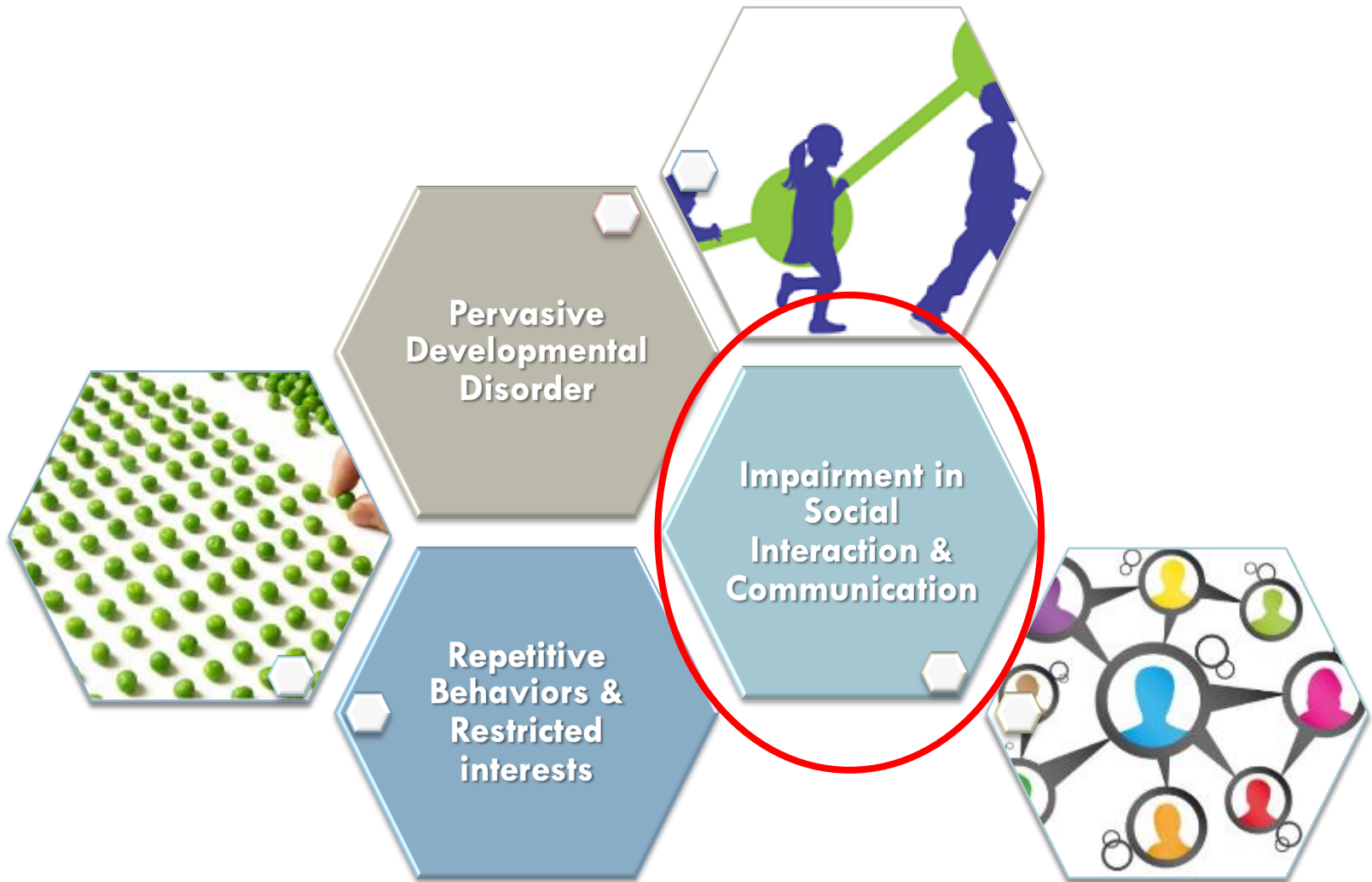
9<sup>th</sup> Annual Southwest Washington Autism Conference

November 6, 2019

# Overview

- Social impairments in children with autism in school
  - ▣ Playground Engagement
  - ▣ Initiations and Responses
  - ▣ Friendships
  - ▣ Social Network Inclusion
- Strategies to support children with autism

# What is Autism?





## Context Matters

- ❑ Social communication and interaction deficits can dramatically impair peer engagement and social relationships at school
- ❑ Studying the context – supports – structure - culture

# Playground Engagement

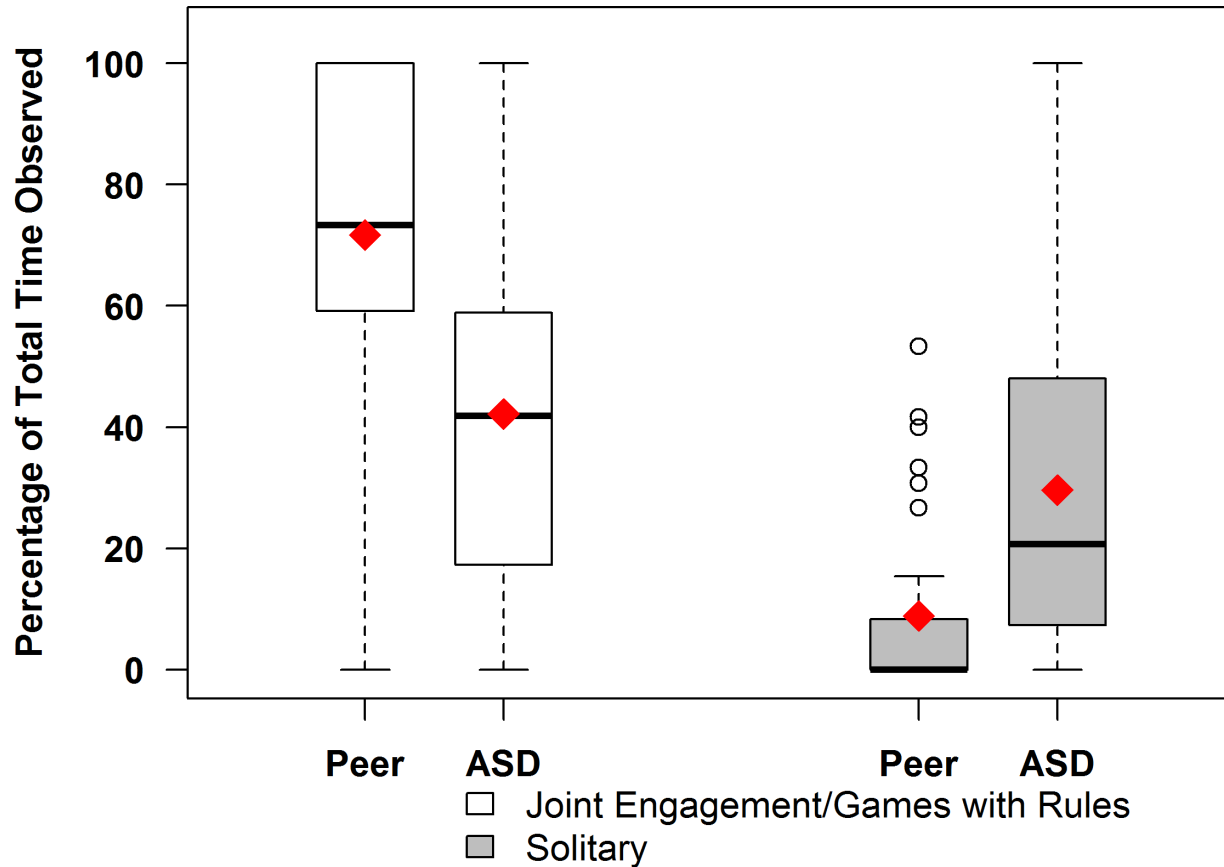
- Children with ASD:
  - are more unengaged with peers (~33%)
  - are often on the periphery of the playground
  - may prefer solitary activities



# Playground Engagement

(Locke, Shih, Kretzmann, & Kasari, 2016)

## Playground Observation of Peer Engagement



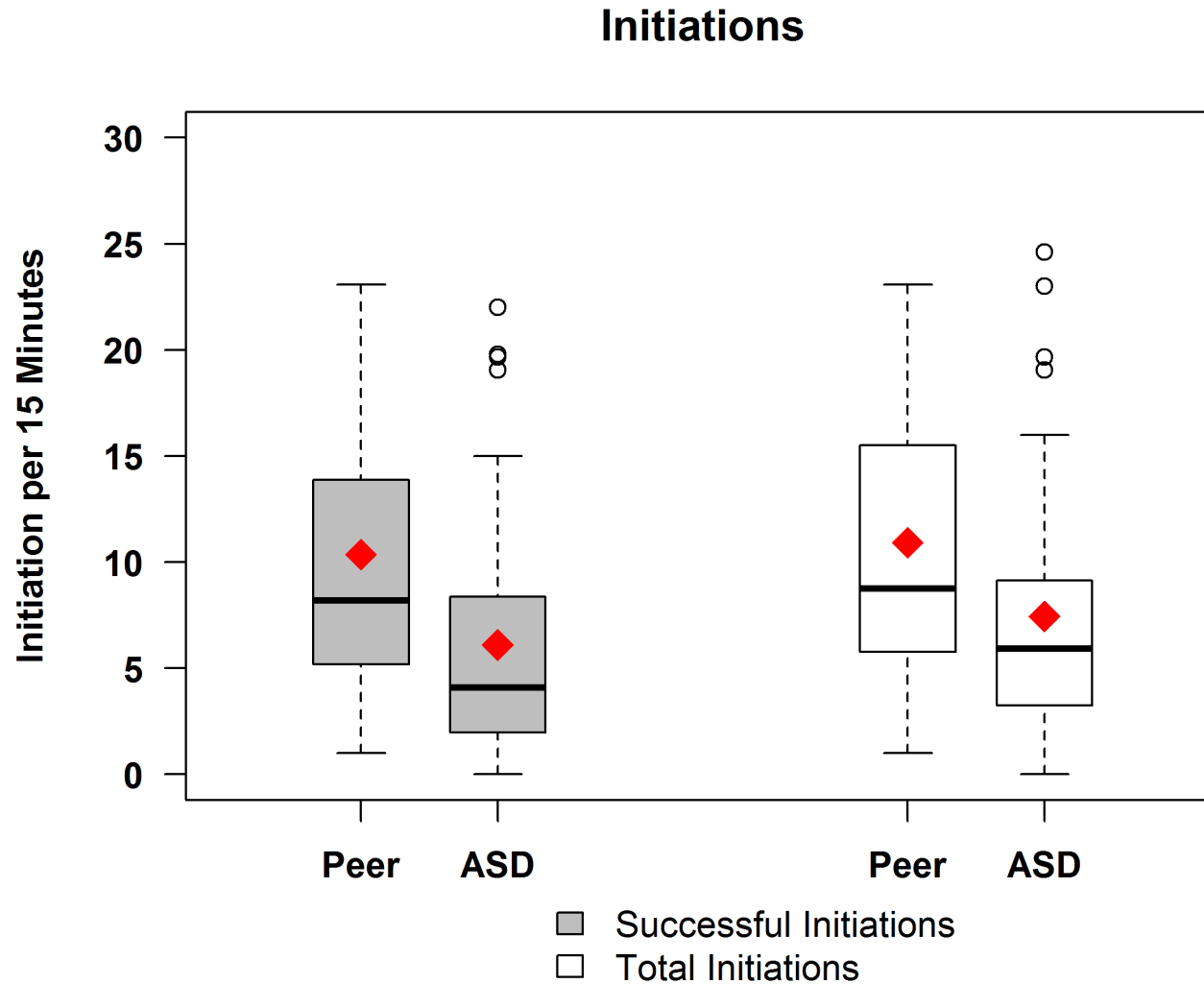
# Initiations and Responses

- Children with ASD
  - ▣ make fewer attempts to engage other children
  - ▣ are less responsive to others' bids for social interaction
  - ▣ often show increased levels of stress in response to peer initiations



# Initiations

(Locke, Shih, Kretzmann, & Kasari, 2016)

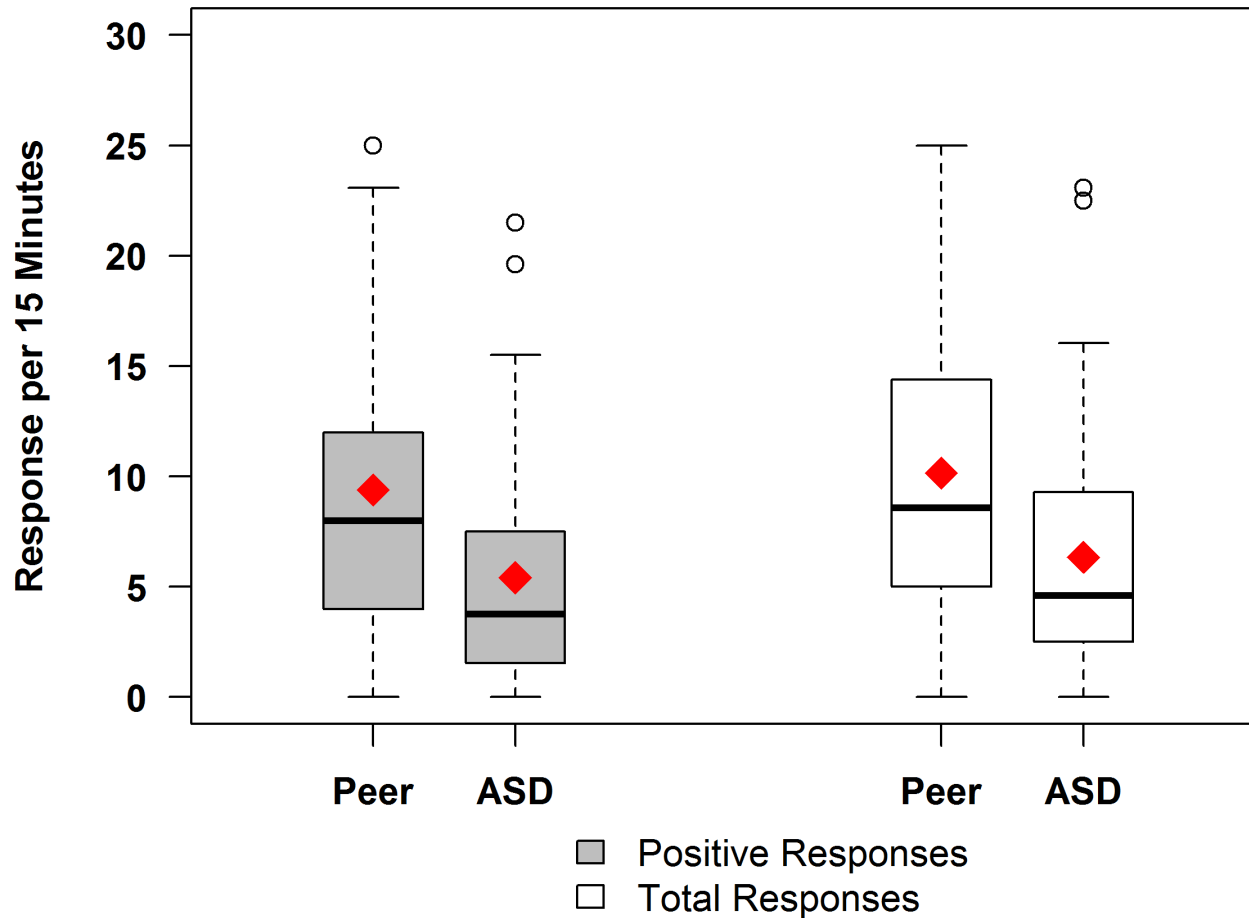




# Responses

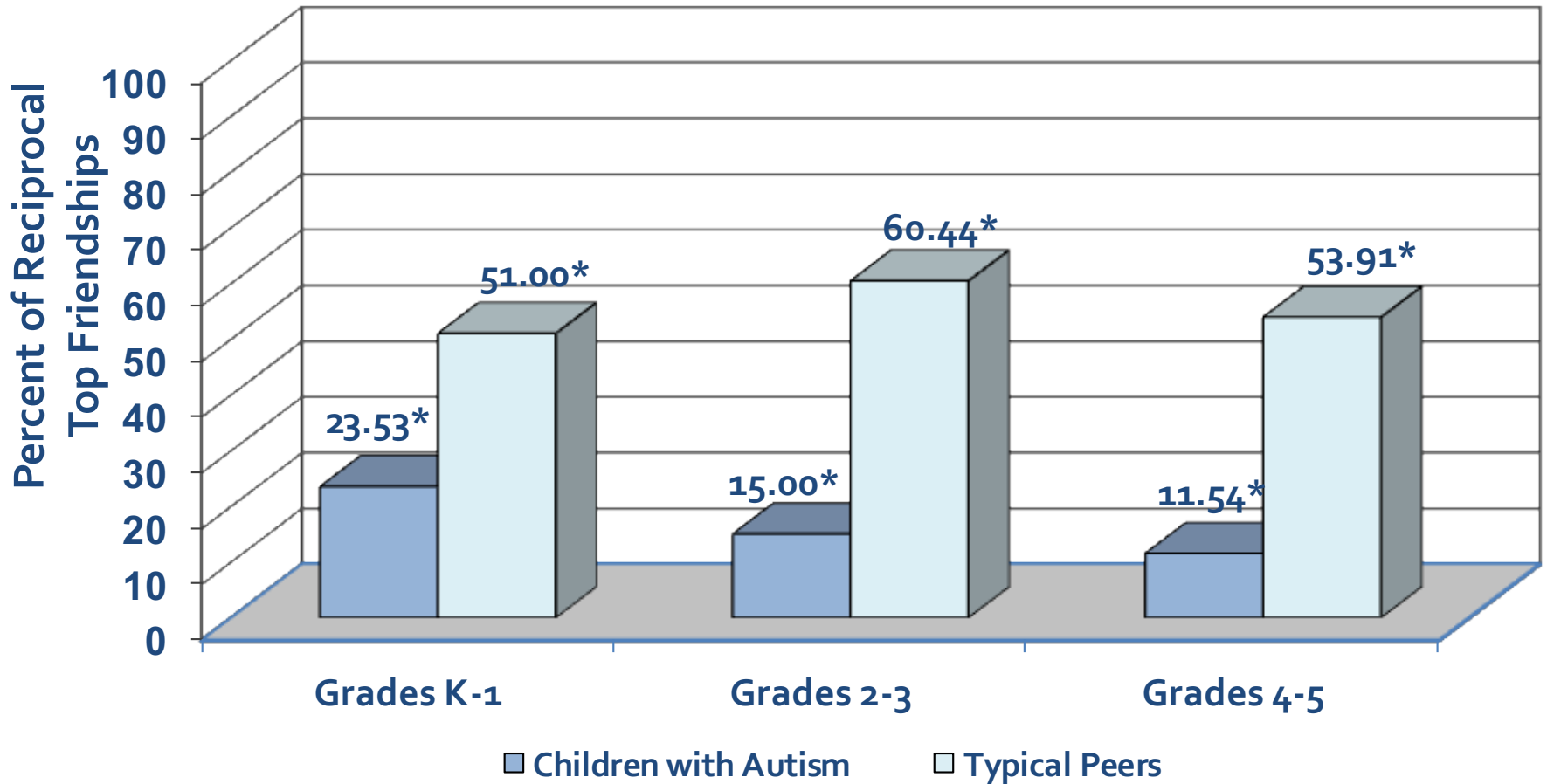
(Locke, Shih, Kretzmann, & Kasari, 2016)

## Responses

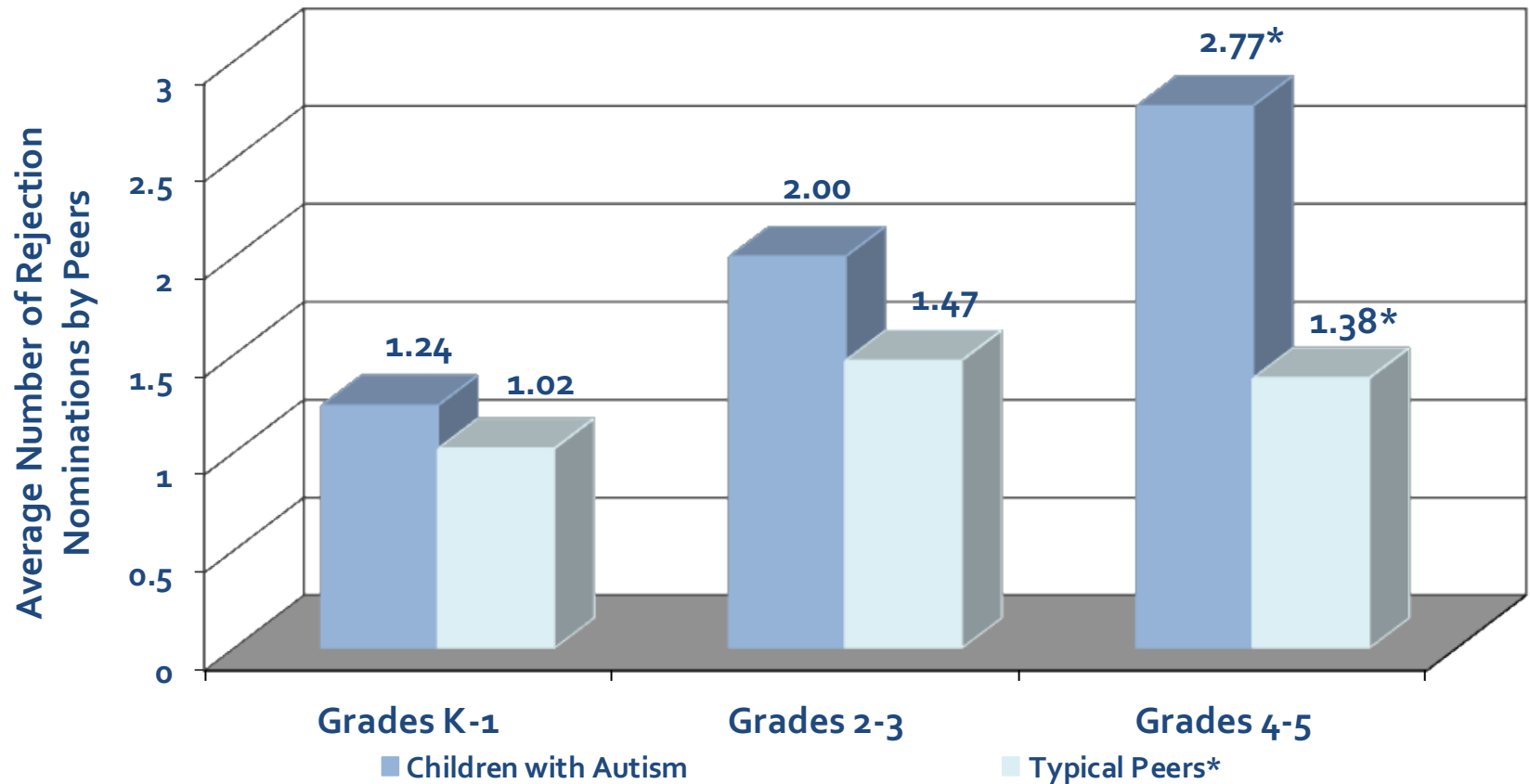


# Reciprocal Friendships by Grade Group

(Rotheram-Fuller, Kasari, Chamberlain, & Locke, 2010)



# Rejection Nominations from Peers by Grade Group



(Rotheram-Fuller, Kasari, Chamberlain, & Locke, 2010)

# Social Network

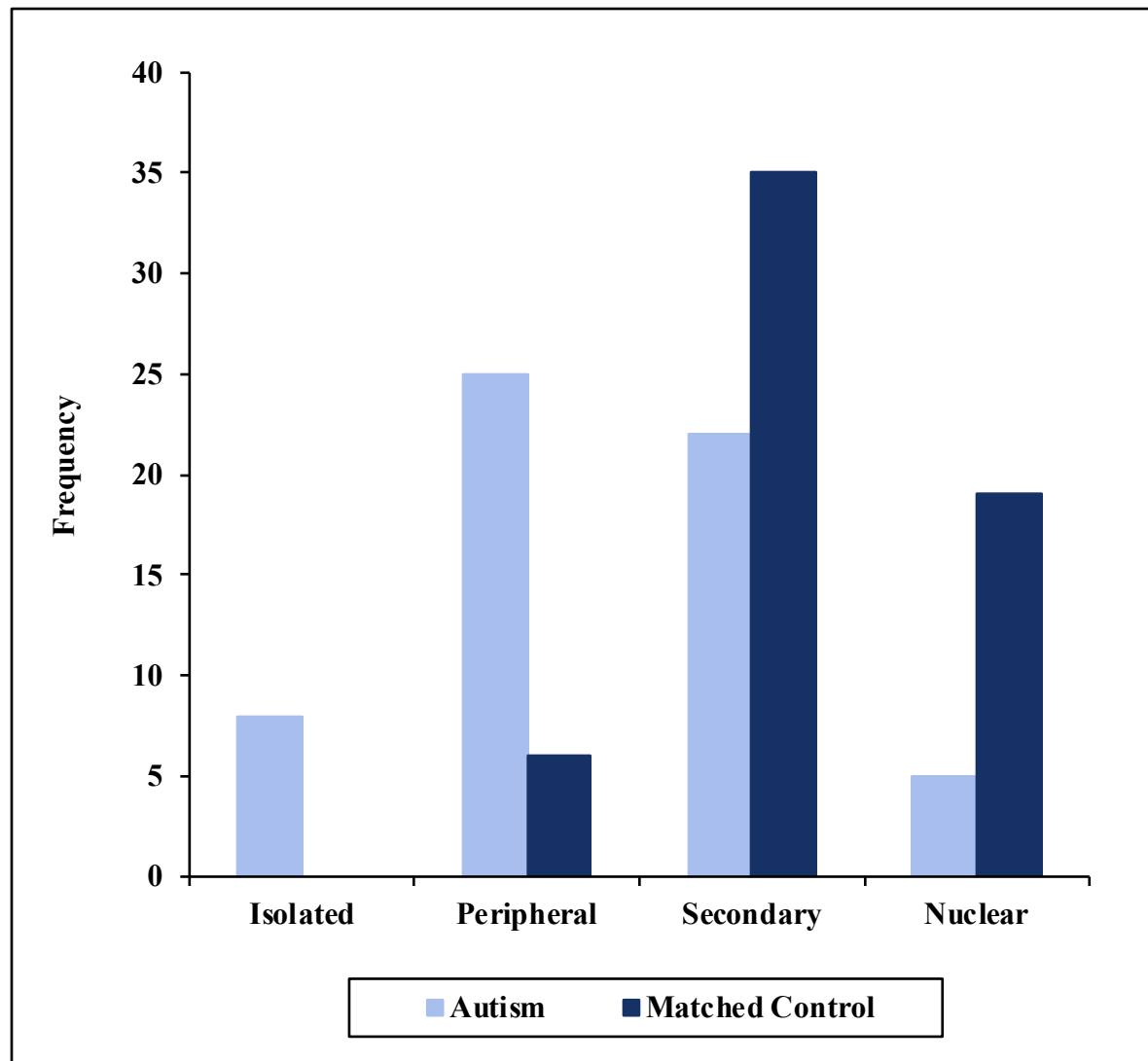
- Social networks refer to the peer groups to which a particular student belongs



(Boutot & Bryant, 2005; Farmer & Farmer, 1996)

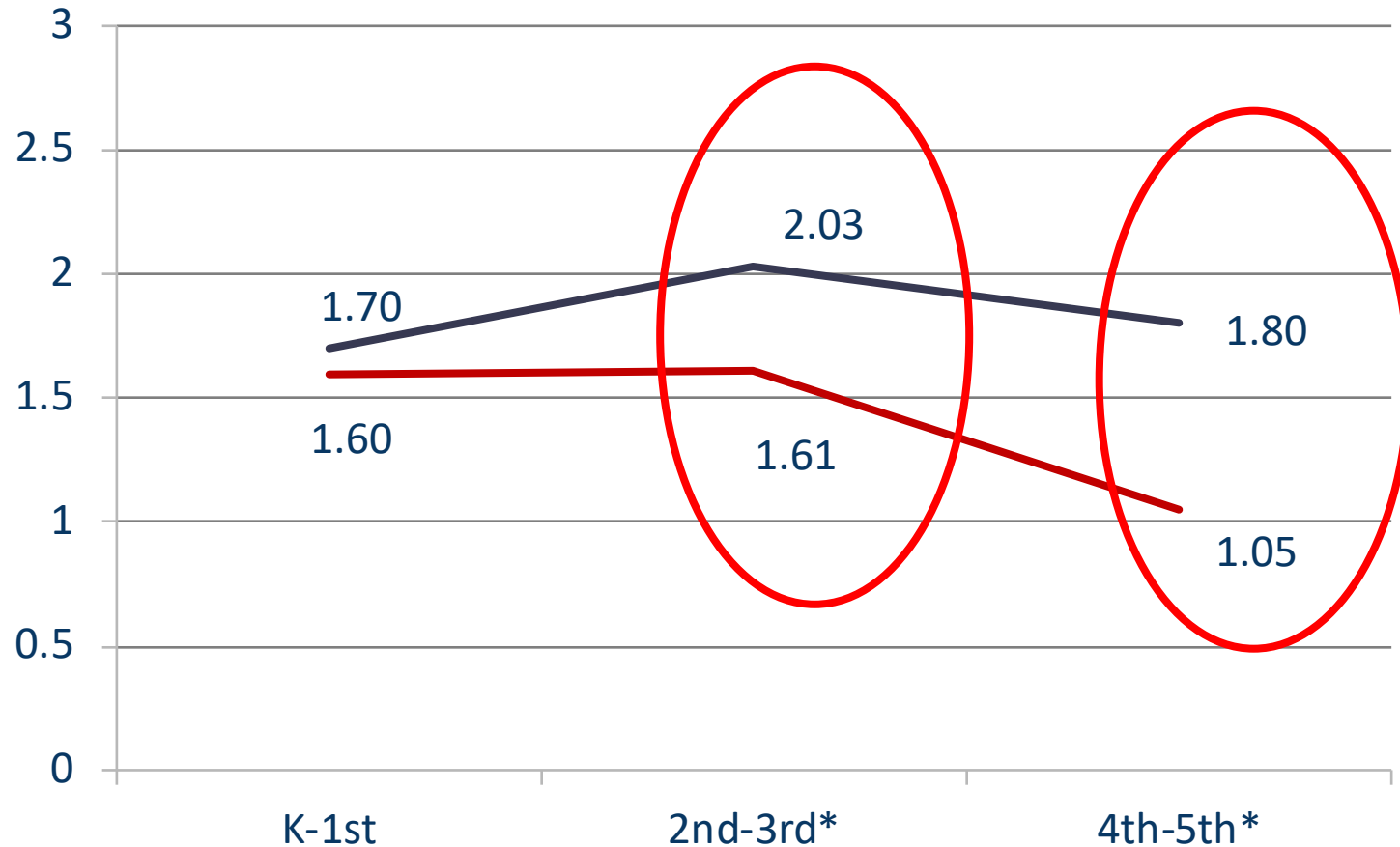
# Social Network Centrality

(Kasari, Locke, Gulsrud, & Rotheram-Fuller, 2011)



# Social Network Inclusion

(Rotheram-Fuller, Kasari, Chamberlain, & Locke, 2010)

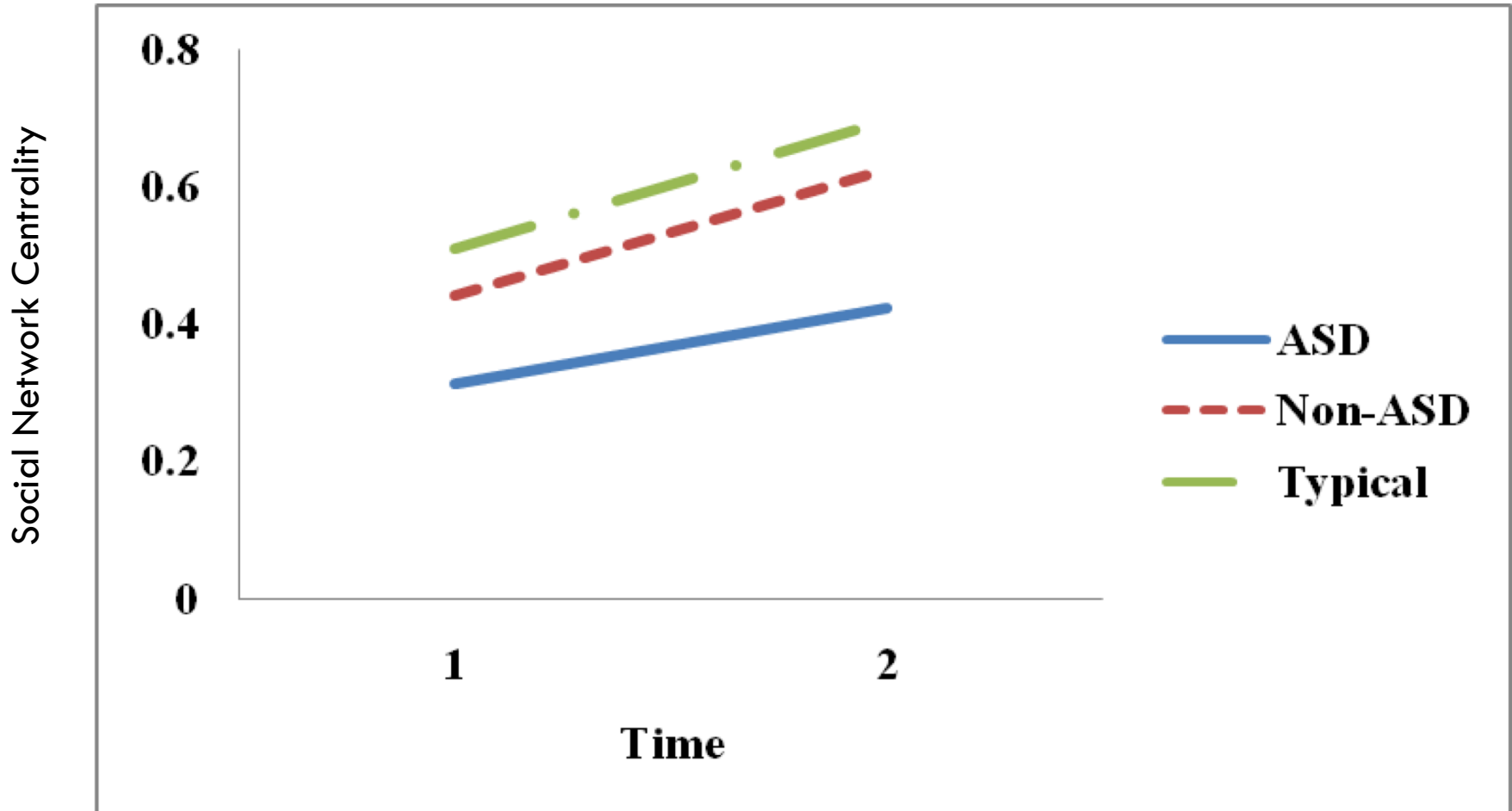


- Typical Peers
- Children with ASD

\* $p < .05$

# Social Network Centrality Over Time

(Locke, Kasari, Rotheram-Fuller, Kretzmann, & Jacobs, 2013)



# Intervention Strategies





# Social Skills Interventions



Peer  
Mediated



Child  
Assisted



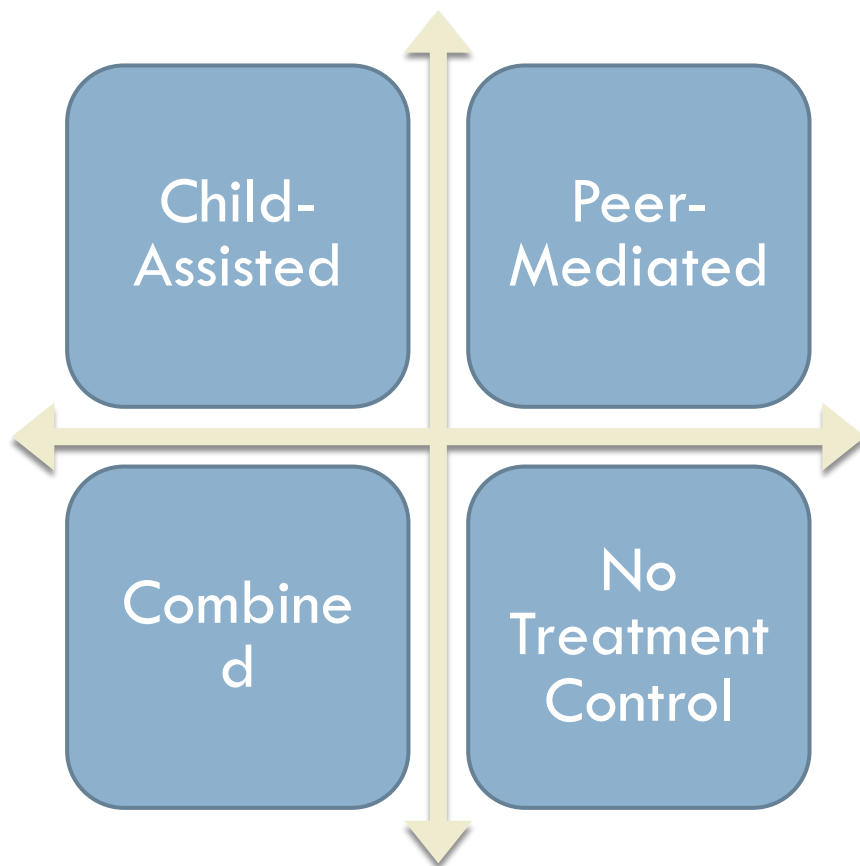
Social  
Skills  
Groups

(Kasari, Rotheram-Fuller, Locke, & Gulsrud, 2012; Kasari et al., 2016)

# What We Did First: Test the Intervention

(Kasari, Rotheram-Fuller, Locke, & Gulsrud, 2012)

- 60 children with ASD (56 classrooms, 30 schools)
  - ▣ Randomized children to:



2x p/week during  
recess and lunch

**Goal: Increase children's  
engagement on the  
playground and social  
inclusion in the classroom**

# Playground Observation

- Independent observers:
  - ▣ Conducted two observations: baseline, exit, follow-up
  - ▣ Once per week throughout intervention
- Timed interval behavior coding system
- Engagement states
  - ▣ Solitary and joint engagement

Playground Observation of Peer Engagement

Int	State	Chi Initiations Gen = I, Peer R = +, Peer NR = -	Chi Responses App Res = + Miss opp = -	Comments (note affect, activity, atypical behavior, who the child engages with (aide, adult, peers) and anything of importance or interest)
1				
2				

# Playground Engagement

	Baseline		Exit		Follow-Up	
	CHILD	PEER	CHILD	PEER	CHILD	PEER
Solitary Engagement Mean	.36	.34	.33	.28	.33	.19
Joint Engagement Mean	.41	.43	.43	.44	.43	.51

# FRIENDSHIPS SURVEY

What is your name? \_\_\_\_\_

Date: \_\_\_\_\_

School Name: \_\_\_\_\_

Teacher Name: \_\_\_\_\_

Birthday: \_\_\_\_\_

Are you a **BOY** or a **GIRL**? (circle one)

1. Are there any kids in your class that you like to hang out with?  
Who are they? (Use first names only; plus last initial if needed)

2. Circle the names of the 3 kids you most like to hang out with.

3. Put a STAR \* next to the name of the ONE kid you most like to hang out with.

4. Are there any kids in your class that you don't like to hang out with?  
Who are they? (Use first names only, plus last initial if needed)

5. Are there kids in your class who like to hang out together?  
Who are they?

Remember to think about Boys and Girls !

Remember to put yourself if you hang out with a group!

Draw a  CIRCLE around each group!

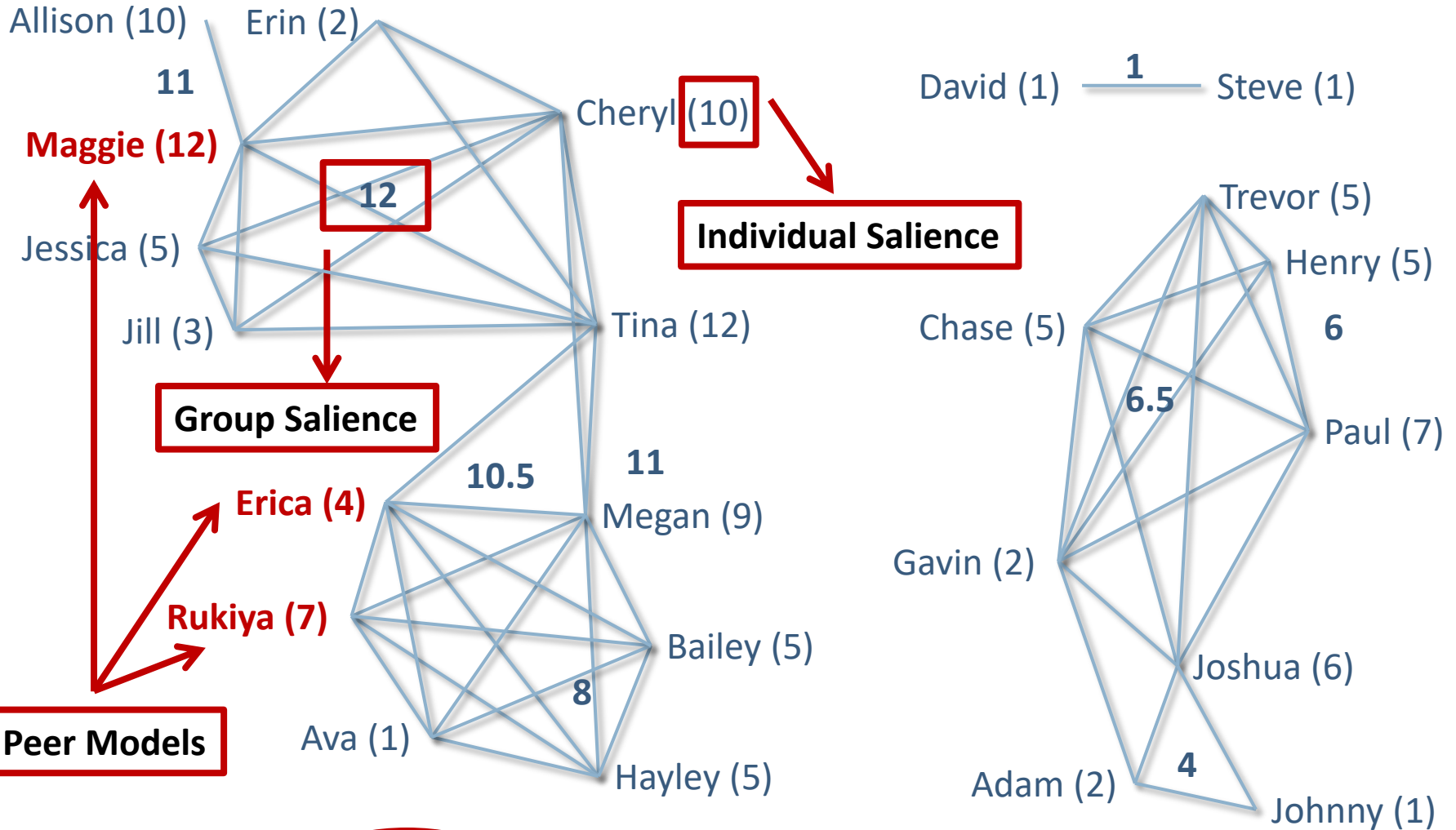
Information We Get:

Friendship Nominations  
Friendship Reciprocity  
Non-Preferred Nominations

Information We Get:

Social Network Inclusion  
Classroom Connections

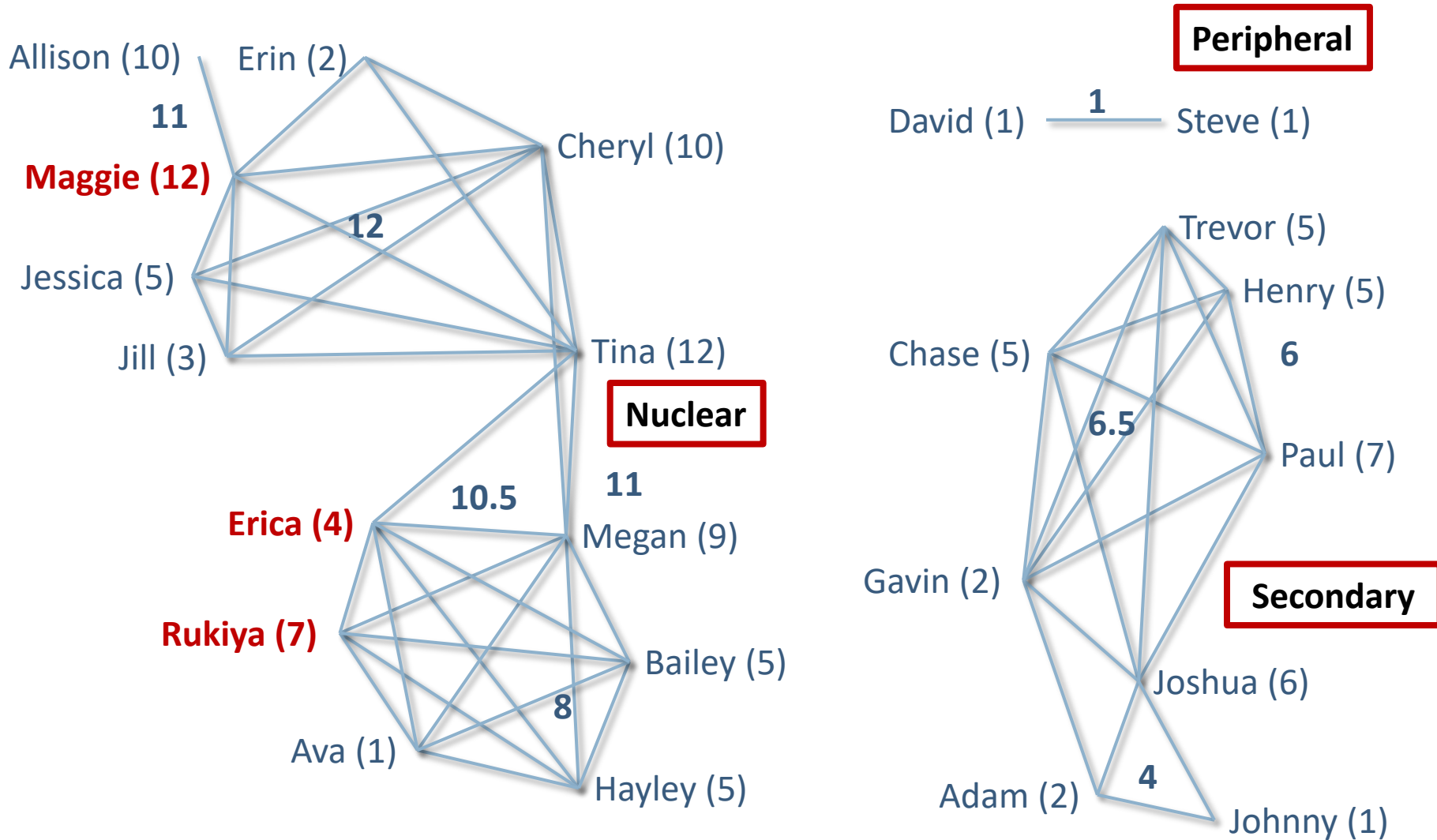
# Baseline Social Network



Isolates: Billy (0), Susie\*\*\* (0)

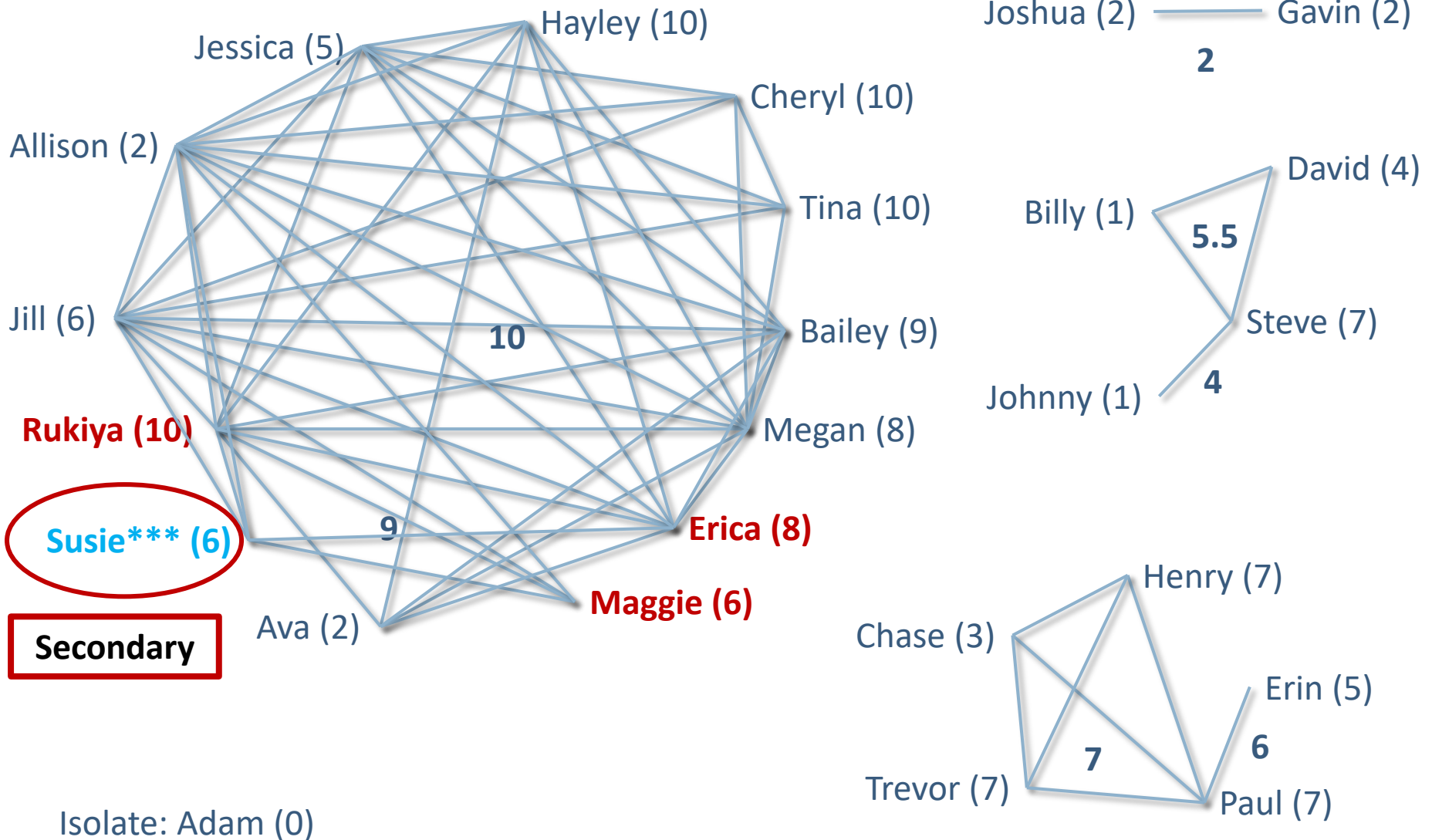
Target Student

# Baseline Social Network



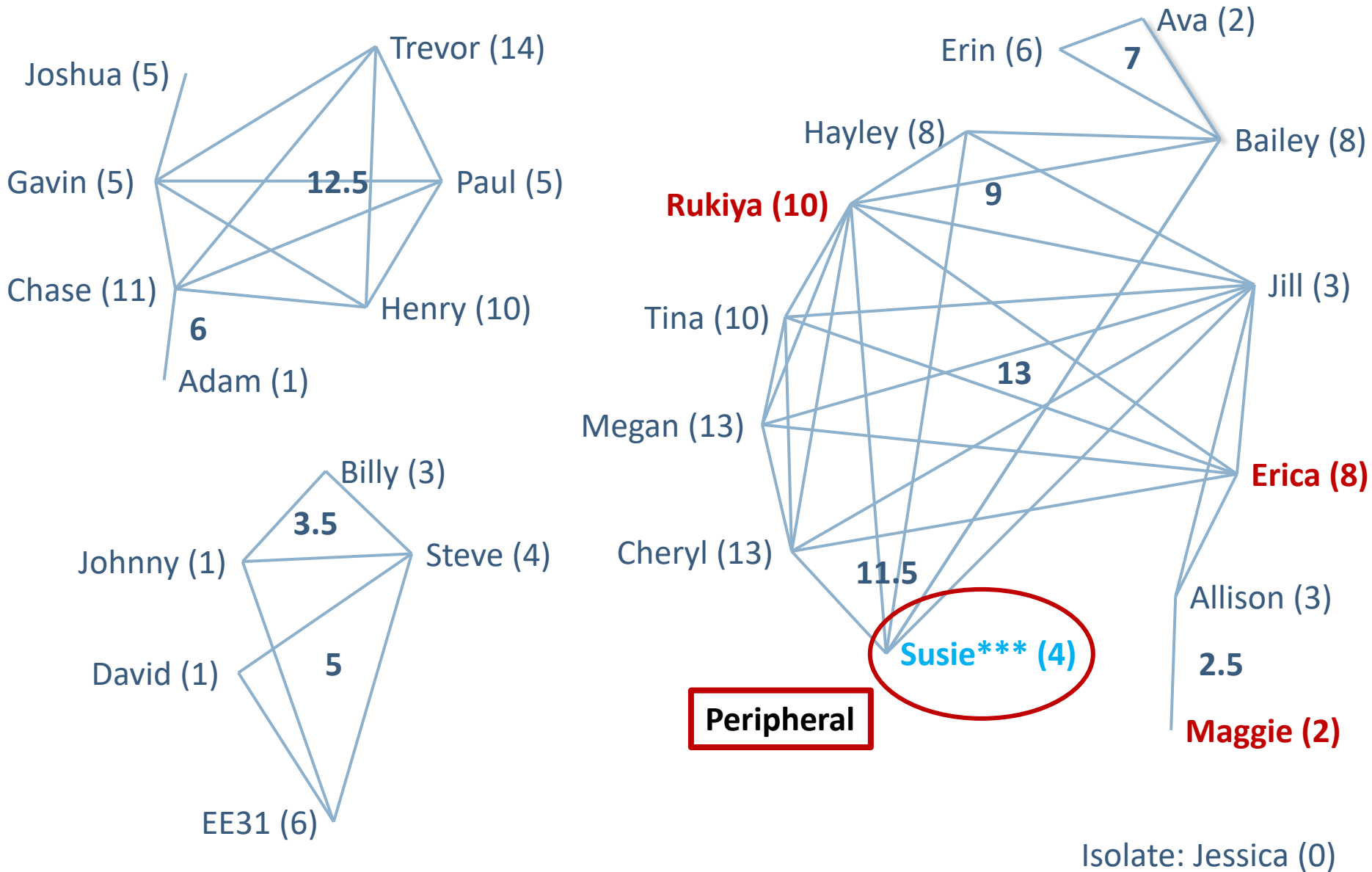
**Isolate** Billy (0), Susie\*\*\* (0)

# Exit Social Network

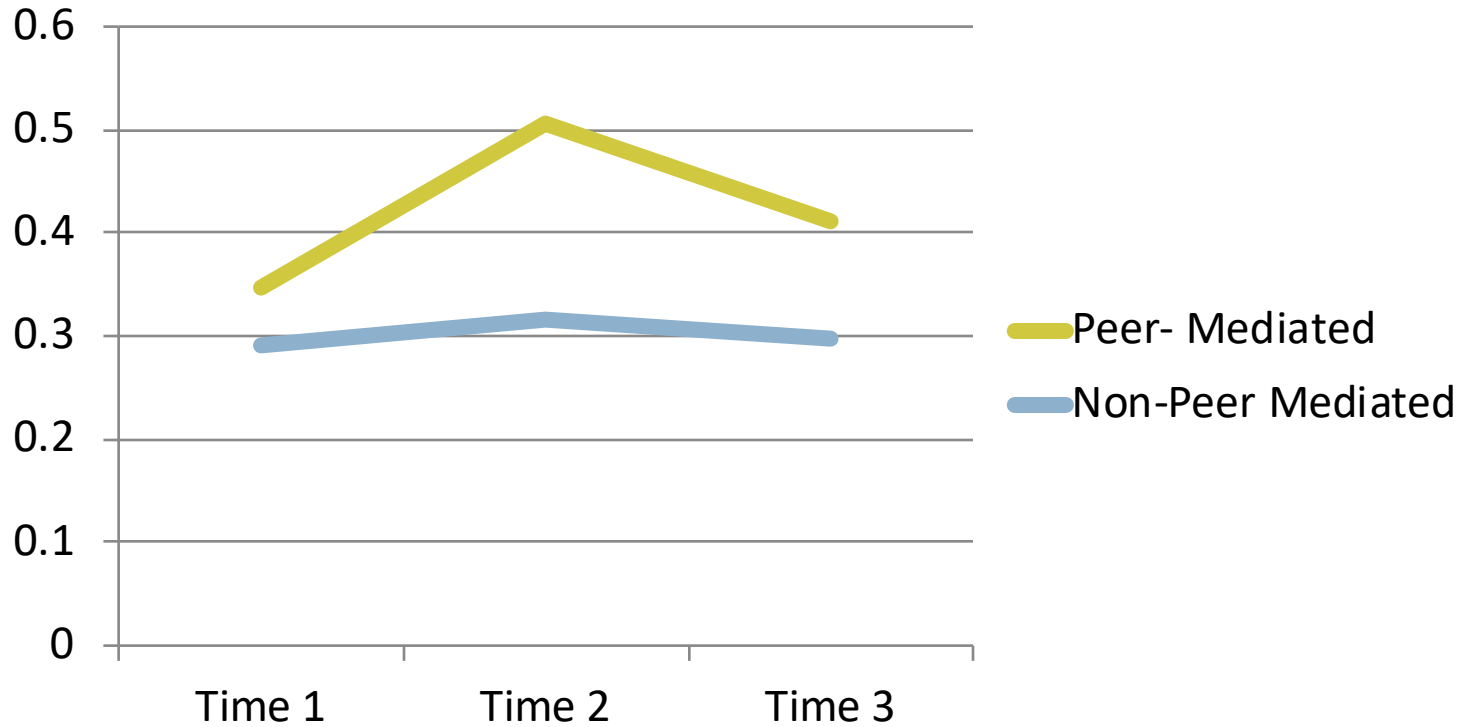




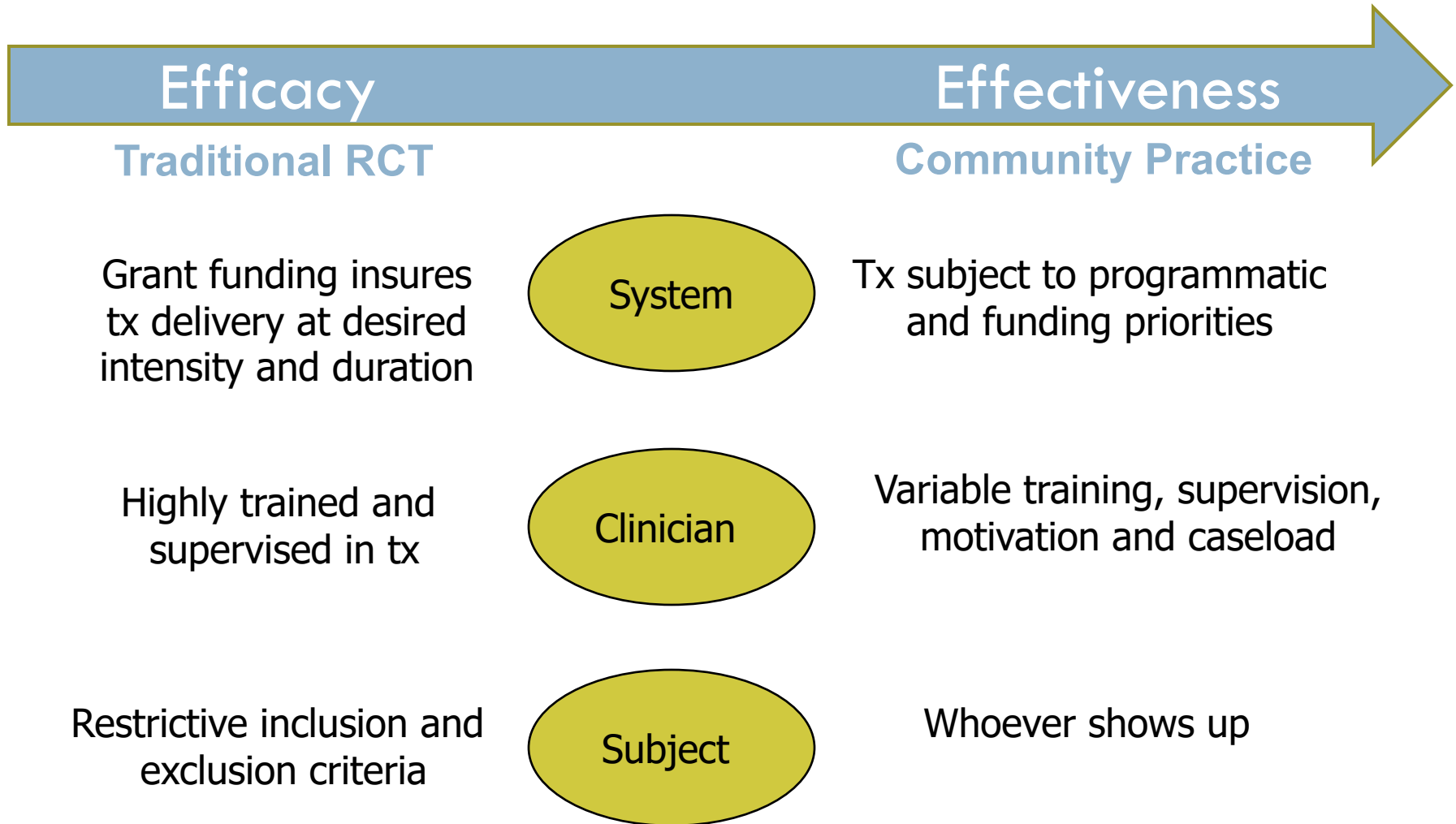
# Follow-Up Social Network



# Social Network Centrality



# The Test of Any Intervention is the Test of That Intervention in a Context



# Remaking Recess

<http://www.remakingrecess.org>

- School-based social engagement intervention to train staff during the recess period to facilitate social opportunities for children
  
- Modules include:
  - scan and circulate
  - identify children's engagement states with peers
  - follow children's lead, strengths, and interests
  - provide developmentally and age appropriate activities and games
  - support children's social communication
  - sustain children's engagement within an activity or game
  - coach children through difficult situations with peers
  - provide direct instruction on specific social engagement skills
  - work with typically developing peers to engage children with autism
  - fade out of an activity/game so children learn independence

# Building Engagement

## Engagement States:

Solitary/Isolated	Alone
Proximity	Near
Onlooker	Watching
Parallel	Similar activity but no social behavior
Parallel aware	Similar activity and mutually aware
<u>Joint engagement</u>	Engaged in a joint activity with at least one other child
<u>Games with rules</u>	Engaged in a game with clear rules with at least one other child

# Transitioning & Setting up an Activity

- Be prepared with a plan and materials
  - ▣ Think of recess as another instructional period of the day...like math but more fun!
- Provide appropriate support and structure
  - ▣ Materials
  - ▣ Physical boundaries

# Providing Popular, Developmentally Appropriate Games & Activities

- Following the Child's Choice
  - Ensure children's motivation to interact and engage
- Selecting developmentally and age appropriate games
  - Build off children's strengths and interests
- Review rules
- Participate in the game until the game gets rolling
- Model desired behaviors

# In Vivo Social Skills Coaching

- Be neutral in your tone
- Use clear, direct, and simple cues
  - ▣ Focus on what is most useful
  - ▣ Use visuals if needed
- Identify “instructionally ripe moments”
  - ▣ Address the issue immediately and briefly
  - ▣ Validate how children are feeling but give children what you want them to do
- Continue the interaction
- Praise behaviors you want to see increase



# Sustaining Engagement

- Participate in the game to model appropriate social behavior – often children just want the extra adult attention
- Use reinforcers as needed
- Use peer models to sustain engagement
  - Have them:
    - Call out the child's name
    - Check in with the child throughout the game
    - Pay attention and be mindful
    - Complement and praise the child

# Fading Out of an Activity

- After child is engaged:
  - ▣ Fade back to a “monitoring” role
  - ▣ Continue to provide support
  - ▣ Continue to praise
- Always a goal, but some days you will be able to fade out and others you will not

# Coaching

Didactic



Model



Feedback



# Implementation Strategies

Powell et al. *Implementation Science* (2015) 10:21  
DOI 10.1186/s13012-015-0209-1



**RESEARCH**

**Open Access**

## A refined compilation of implementation strategies: results from the Expert Recommendations for Implementing Change (ERIC) project

Byron J Powell<sup>1\*</sup>, Thomas J Waltz<sup>2</sup>, Matthew J Chinman<sup>3,4</sup>, Laura J Damschroder<sup>5</sup>, Jeffrey L Smith<sup>6</sup>, Monica M Matthieu<sup>6,7</sup>, Enola K Proctor<sup>8</sup> and JoAnn E Kirchner<sup>6,9</sup>

Implementation strategy is a “method or technique used to enhance the adoption, implementation, and sustainability of a clinical program or practice” – Proctor, Powell, & McMillen (2013), p.2

# Implementation Strategy

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Identify and  
prepare  
champions

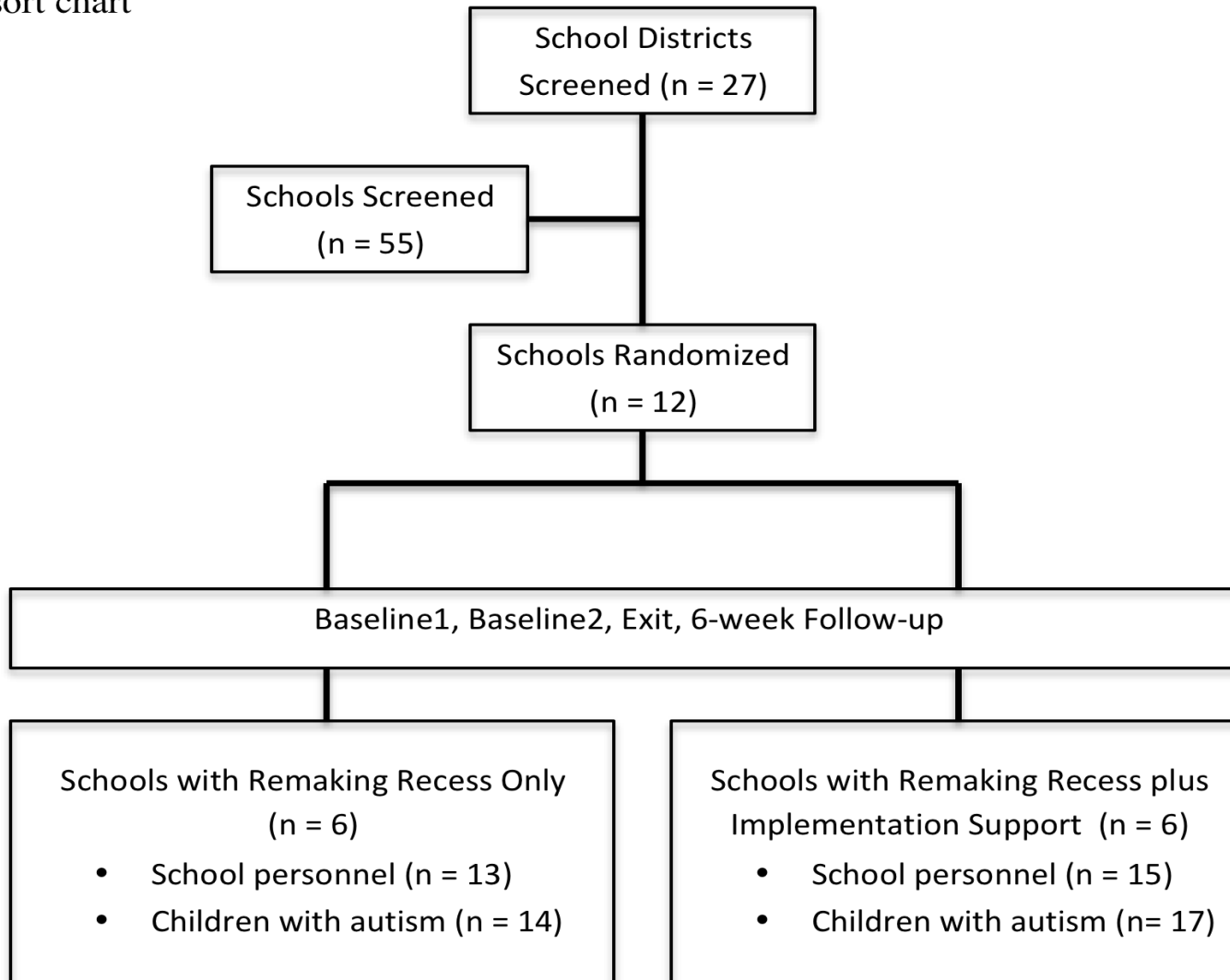
Tailor  
strategies

# Implementation Support

- 3 Consultation Sessions
  - scheduling staffing during recess
  - building internal capacity
  - amending school-wide policies for recess
  - providing tangible support and resources
  - improving implementation climate
  - adapting and modifying the intervention to fit the needs of the school
  - embedding Remaking Recess within the school culture

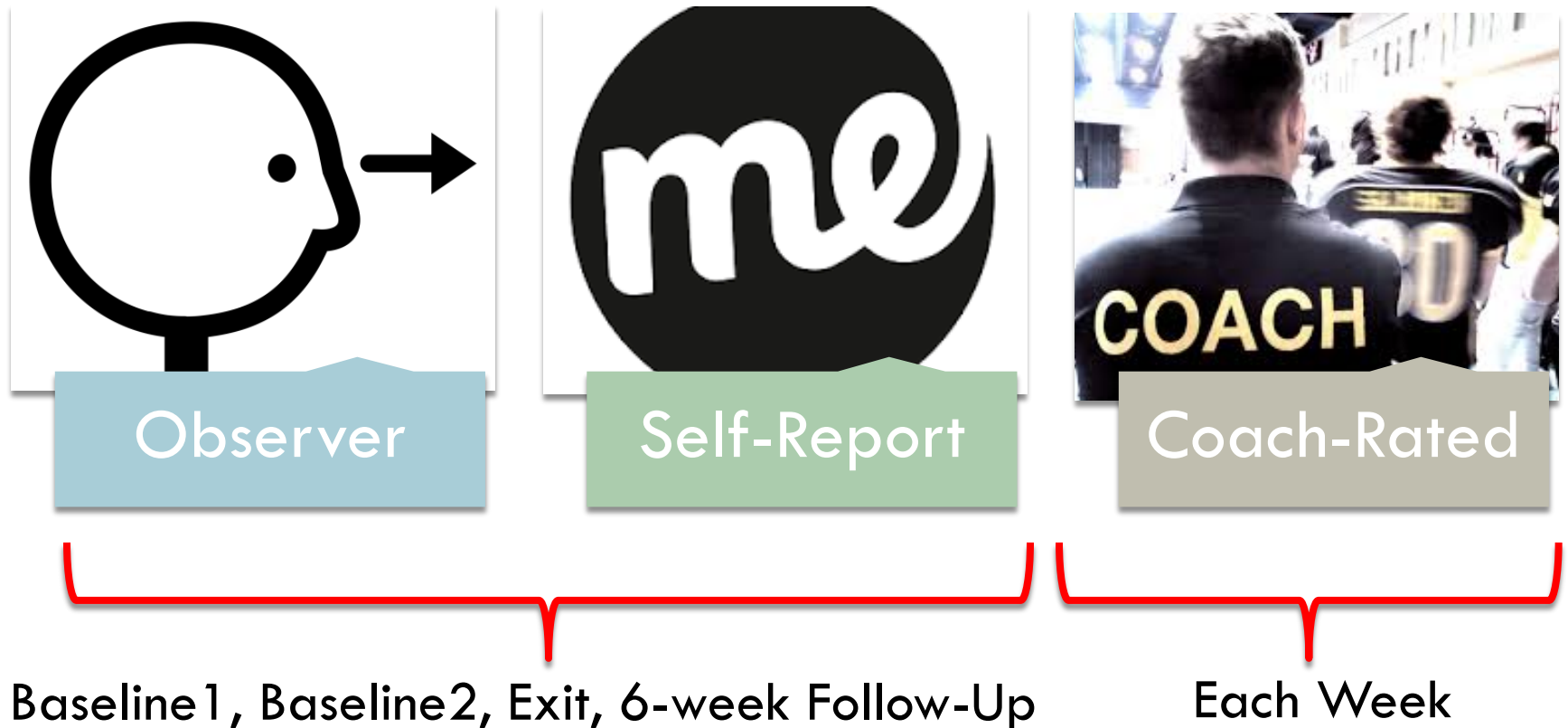
# Recruitment

Consort chart



# Implementation Fidelity

- Use and Quality of Intervention Delivery





# Implementation Fidelity

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Schools did not use any aspect of Remaking Recess prior to receipt of training

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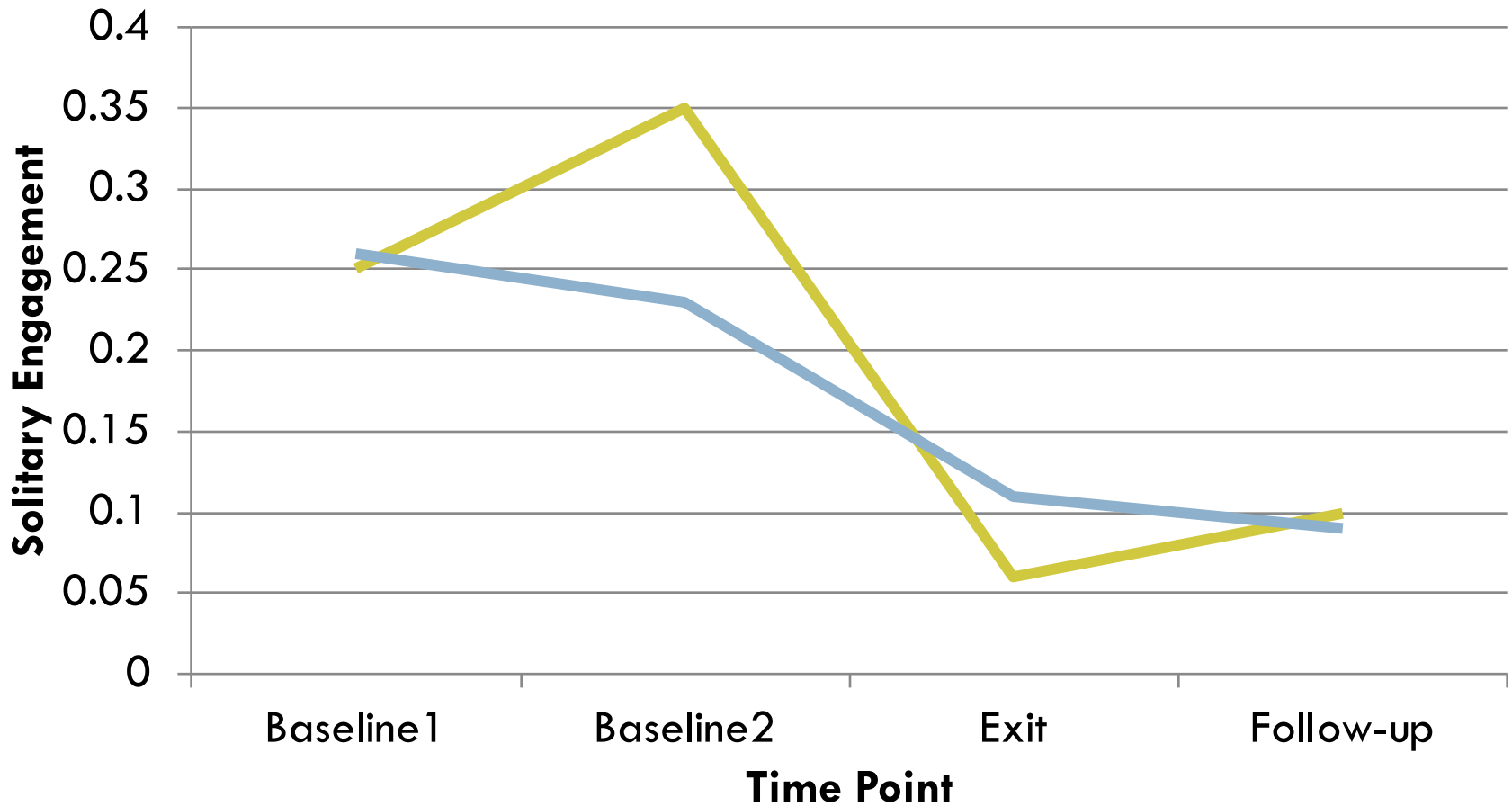
Fidelity increased over the six-week training and follow-up periods

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Overall use and quality of intervention delivery was low

# Solitary Engagement

(Locke et al., 2019)

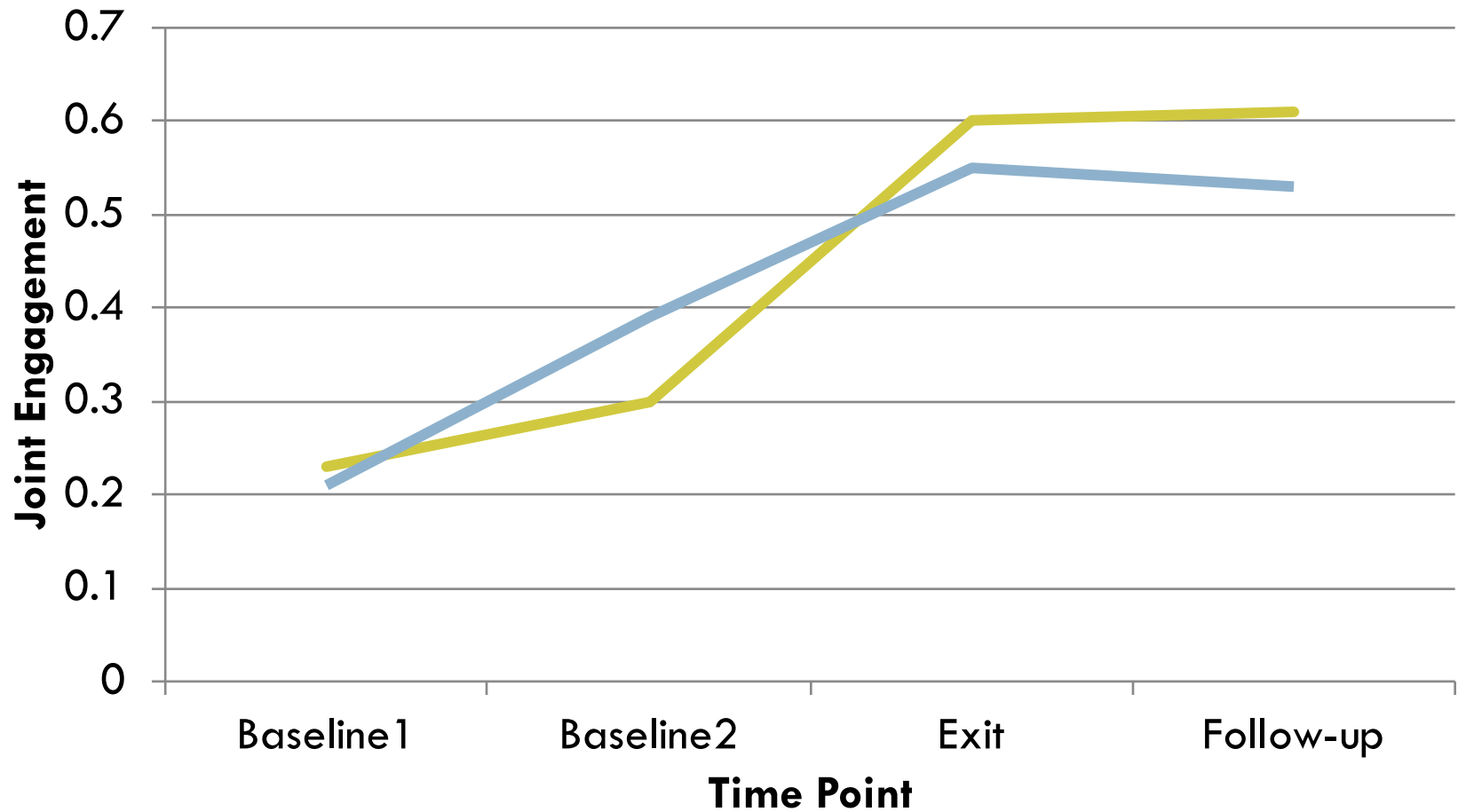


— Remaking Recess Only

— Remaking Recess with Implementation Support

# Joint Engagement

(Locke et al., 2019)

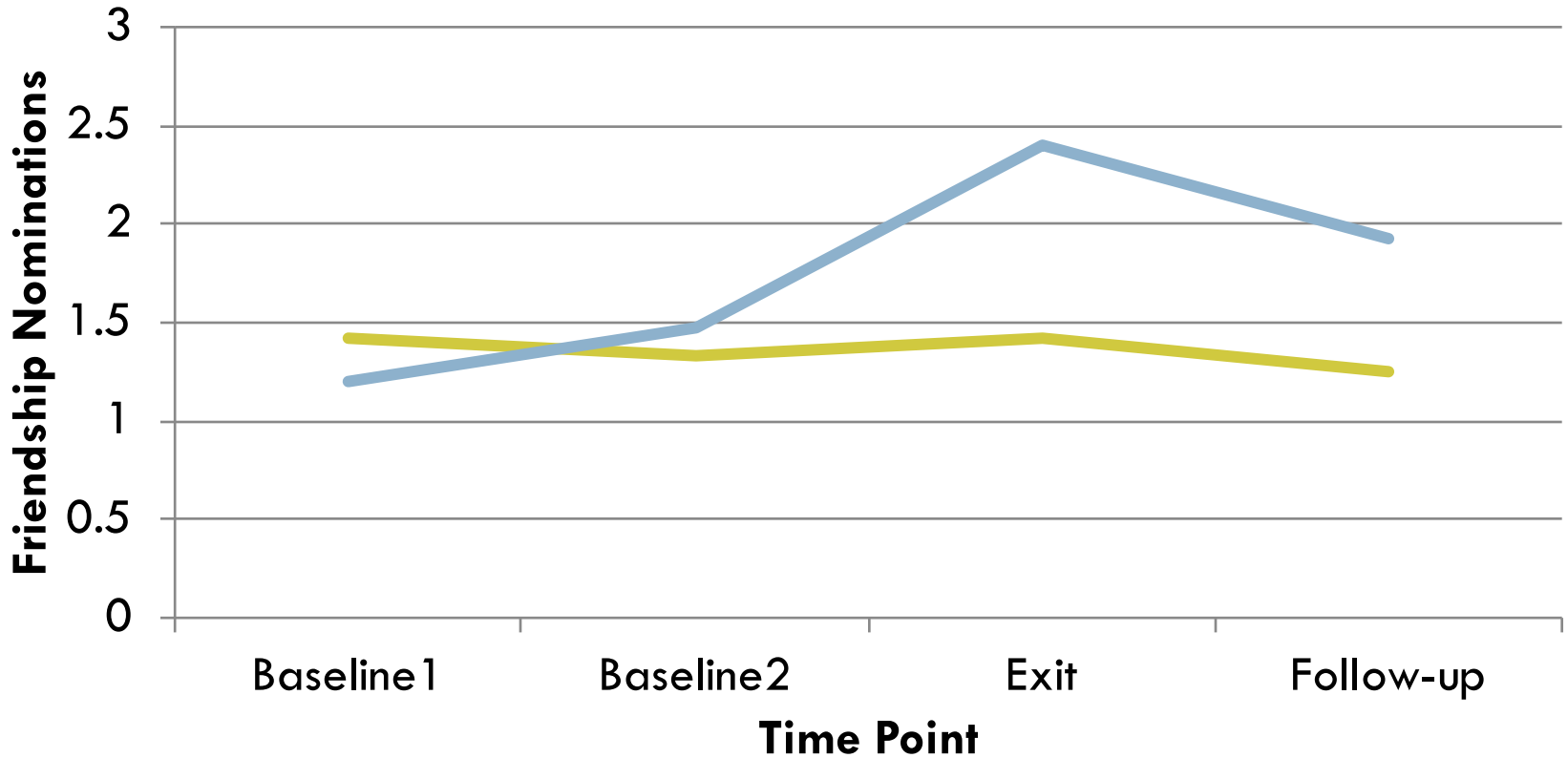


— Remaking Recess Only

— Remaking Recess with Implementation Support

# Received Friendship Nominations

(Locke et al., 2019)

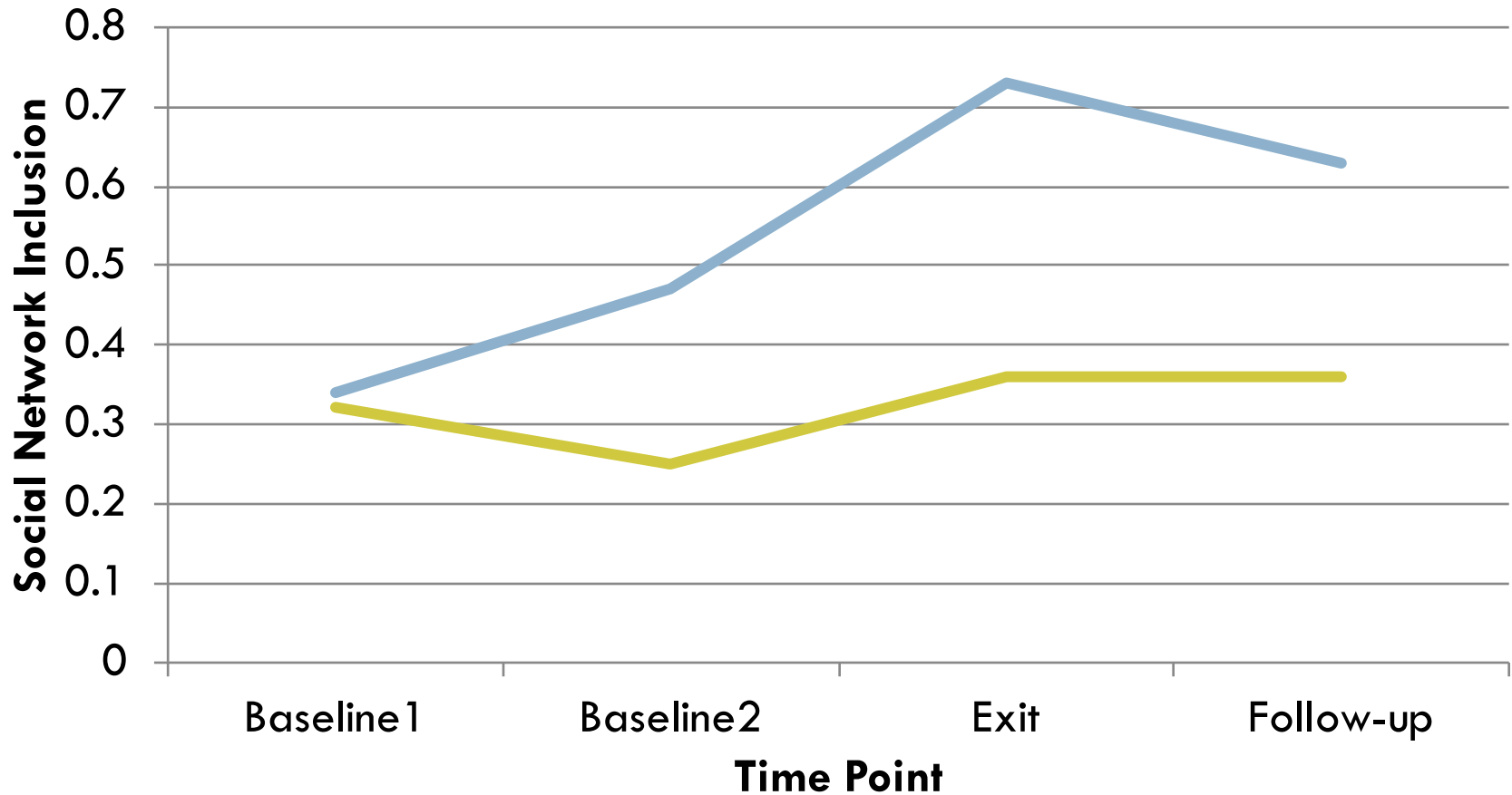


— Remaking Recess Only

— Remaking Recess with Implementation Support

# Social Network Inclusion

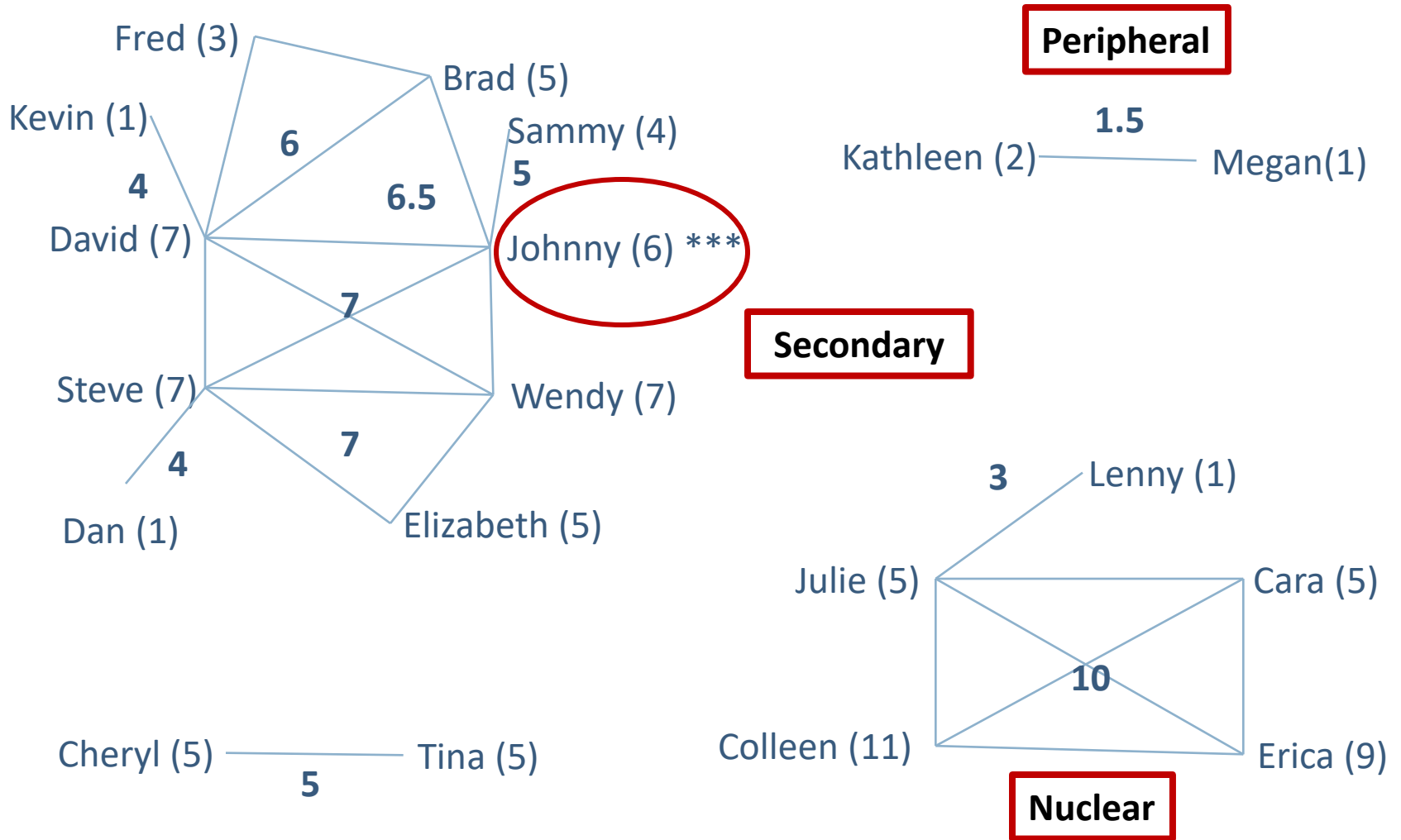
(Locke et al., 2019)



— Remaking Recess Only

— Remaking Recess with Implementation Support

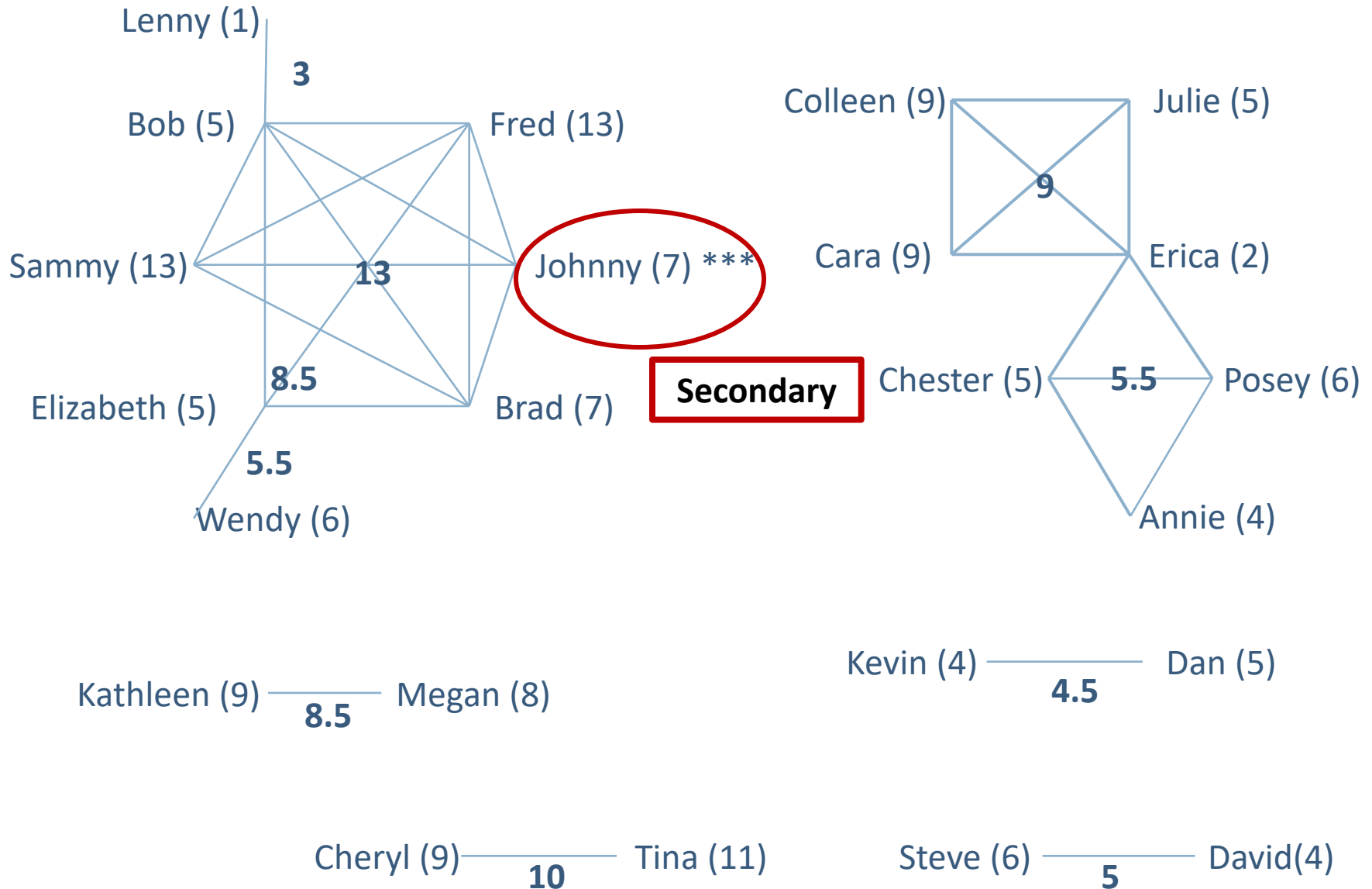
# Baseline 1 Social Network



Isolates: Posey (0), Bob (0), Annie (0), Chester (0)

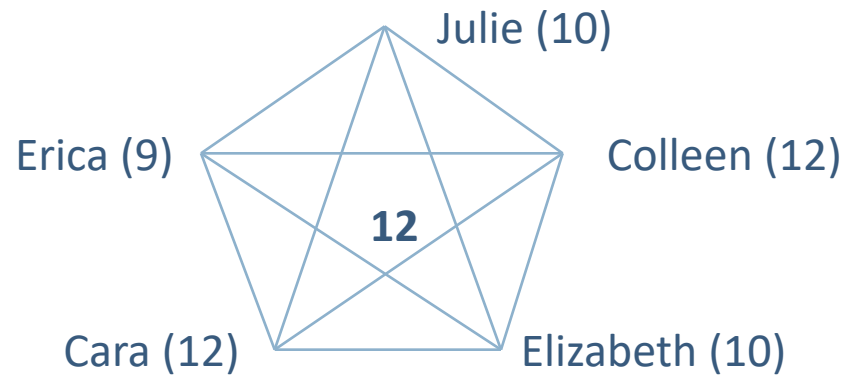
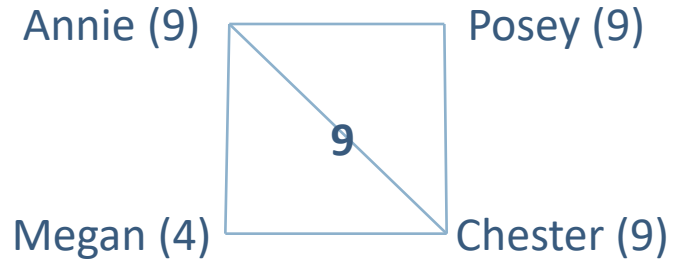
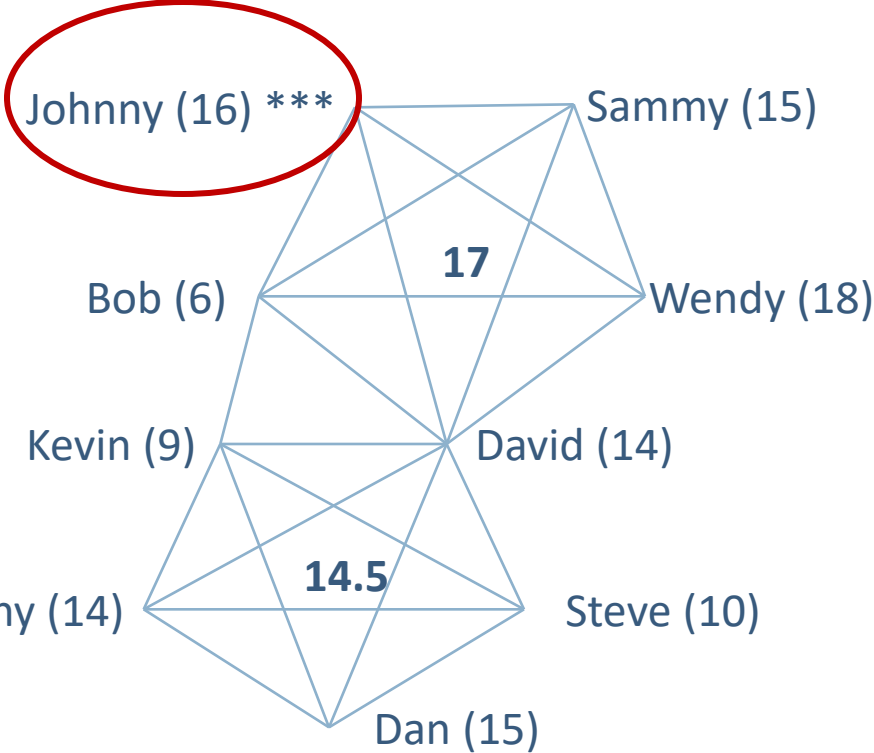
**Isolate**

# Baseline 2 Social Network



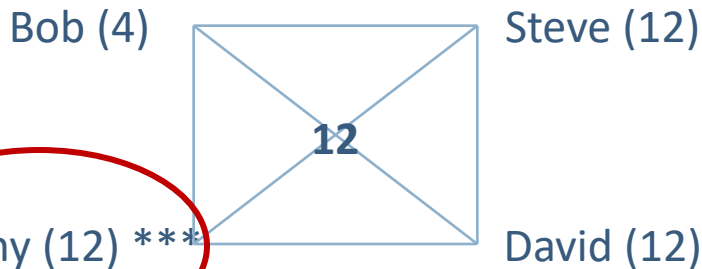
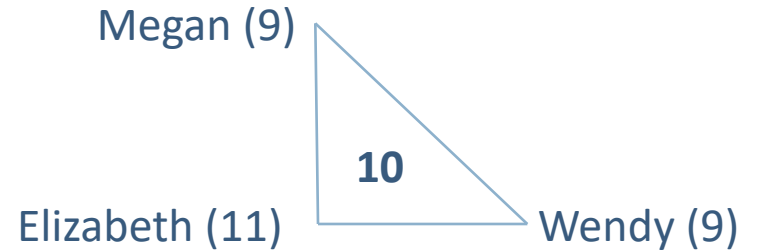
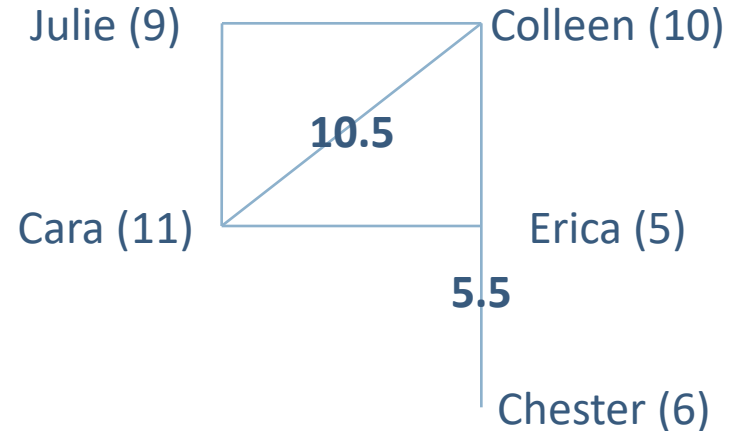
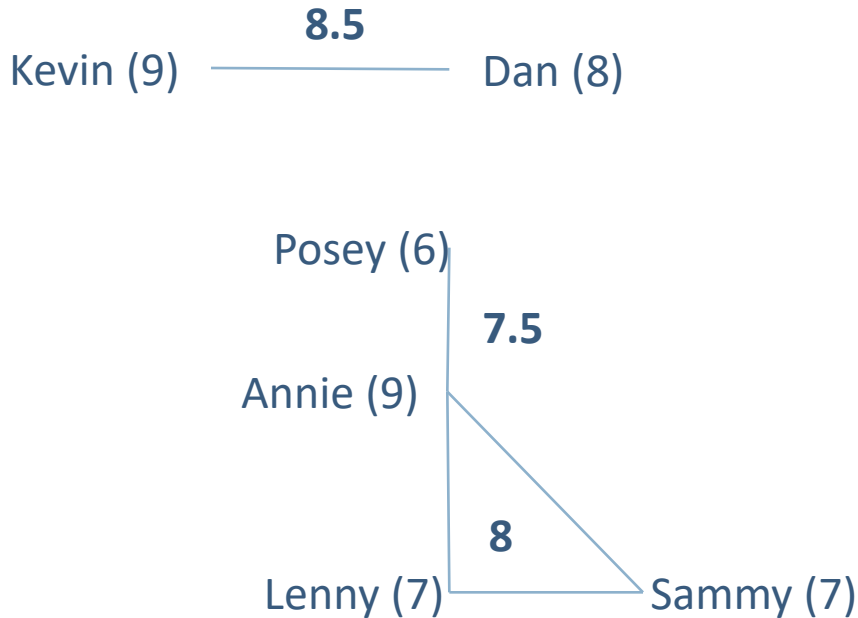
**Nuclear**

# Exit Social Network





# Follow Up Social Network



**Nuclear**

# Discussion

- Implementation fidelity is low
- Remaking Recess improves peer engagement
- Remaking Recess **may be necessary but not sufficient** in improving friendship nominations and social network inclusion
- Implementation support may be needed
  - May change the classroom context and complement the ways in which Remaking Recess changes the playground context

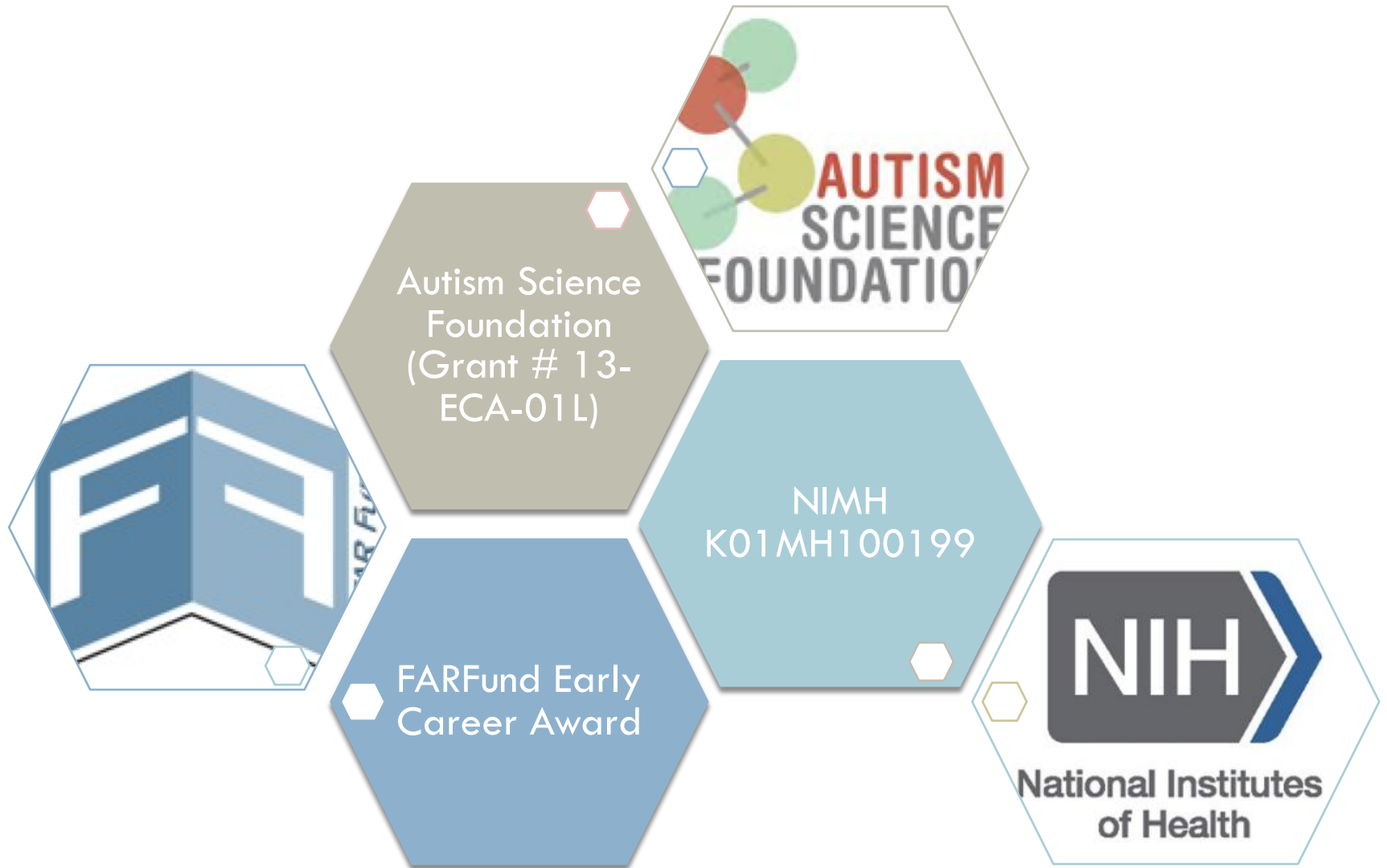
# What Steps Can We Take in Schools?

- Reset expectations
  - ▣ Viewing socialization as an important objective for all kids
  - ▣ Structured social activities could provide immense benefit to students and staff
- Set up a Schedule
  - ▣ Work together to facilitate social activities during recess
- Delineate Roles
  - ▣ Facilitator
  - ▣ Coach
  - ▣ Floater

# Incorporate...

- Friendship Club or “Lunch Bunch” with typically developing peers
- Use objects to help with conversations during lunch
  - Conversation starters
    - Who would win in a battle between...
  - Topic boxes
  - Social menus
    - Can be downloaded at: <http://www.remakingrecess.org>
  - Comic books, joke books, anything of interest really!

# Acknowledgments



# Thank You!

## Questions?



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