

Table A1. Coding alternatives for shared COP/TOP categories.

<i>Category</i>	<i>Codes</i>	<i>Definition</i>	
Proximity	Small group with teacher	Child/teacher is near at least one child and a teacher	
	Small group	Child/teacher is near at least two children and no teacher	
	Self	Child/teacher is alone or set apart from others	
	Child	Child/teacher is near a single child	
	Whole group teacher	Child/teacher is near the whole group and (other) teacher is present.	
	Teacher	Child/teacher is near (another) teacher, but not other children.	
	Whole group	Child/teacher is near whole group ( $\geq 75\%$ ), without (other) teacher	
Verbal	No	Child/teacher is neither talking nor listening	
	Yes	Child/teacher is talking (understandable words or other sounds)	
	Listening	Child/teacher is listening to person (not tape recorder, TV, or video)	
	Fussing/crying (COP)	Child is fussing, whining, crying, arguing, or yelling	
To whom	Not talking/listening	Not talking or listening to anyone	
	Teacher	A single teacher	
	Child	A single child	
	Small group	At least two children, and no teacher	
	Small group teacher (COP)	At least one child and a teacher	
	Whole group	Most of the group ( $\geq 75\%$ ), and no teacher	
	Whole group teacher (COP)	Most of the group ( $\geq 75\%$ ) and teacher	
	Self	Child/teacher is talking to self (understandable words or noises)	
	Parent (TOP)	Parent or external adult	
	Materials	None <sup>a</sup>	No activity with learning-related materials
		Toys/games	Manufactured toys or materials related to play or fine motor activities
Music movement/Gross mot.		E.g., musical instruments, singing, dancing, balance board	
Drama		Related to pretend play. E.g., clothes, pretend stoves	
Literacy		Related to reading/writing print, vocabulary and comprehension	
Art		Related to the arts. E.g., crayons, play doh, scissors	
Science		Related to physical science. E.g., pouring cup, magnifying glass	
Math		Designed for math. Incl., numbers, measurement, puzzles, shapes	
Computer/tablet		Incl., computer, iPad, SMART board	
Social studies		Related to understanding people, emotions. E.g., globes, maps	
TV/Video		Incl. any mechanical source of sound	
Worksheet		Any prepared piece of paper. Usually including instructions	
Focus		None <sup>b</sup>	No learning-related (non-academic) content
	Other	Else. E.g., non-pretend with toys, building with blocks, art/music	
	Drama	Pretend play. E.g., roles are enacted, play resolves around a theme	
	Gross motor	Large muscle movement. E.g., climbing, running, bicycling	
	Fine motor	Fine motor activities. E.g., beading pearls on a string or pegboard	
	Reading	Connected text with meaning	
	Math	Related to numbers, shapes, measurement, patterning, classification	
	Literacy	Language arts + reading. E.g., name writing/recognizing	
	Science	Physical science and nature. E.g., color mixing, exploring senses	
	Social studies	Related to understanding people, history, behaviour, emotions	
	Language arts	Letter sounds/names. E.g., writing single letters, alphabet puzzles	

<sup>a</sup>Automatically coded when interaction state is coded 'Routine-based activity', 'Social', 'Unoccupied', or 'Time Out'.

<sup>b</sup>As above and when interaction state is coded 'Onlooker'.

Table A2. Coding alternatives for single COP or TOP categories.

<i>Category</i>	<i>Codes</i>	<i>Definition</i>
Schedule (COP)	Free play inside	Relatively large freedom what to do and where. Location ≠ Outdoors
	Free play outside	Relatively large freedom what to do and where. Location = Outdoors
	Transition	Child group is transitioning, e.g., lining up, washing hands, waiting
	Mealtime	Child group can start to eat or pass the food/snack.
	Whole group	Child group is meeting together, and content is being discussed
	Small groups	All children are in small groups, each led by teacher. Non-optional
	Small group & free play	Some children are in small group/s and some in free play.
Interaction state (COP)	Other	Else not listed. E.g., rest times (but not sleeping), gym, specials.
	Routine-based activity	Non-academic. E.g., dressing, eating without interaction
	Parallel	Learning activity without interaction but similar materials as others
	Associative	Interaction without fixed rules. E.g., tower-building, sharing book
	Alone	Child is involved in a unique activity and not interacting
	Unoccupied	Not involved in learning activity. Demands 2x3 seconds observation
	Social	Informal interaction. E.g., talking about a television show, hugging
	Cooperative	Interaction with fixed rules. E.g., formal games, restaurant scenario with role speech
Type task (COP)	Onlooker	Child is observing a learning activity but does not participate
	Time out	The child is isolated from the group. E.g., out of the room, corner
	Non-sequential	No obvious sequence. E.g., doodling on a paper, pushing toy trucks
	Other	Other expected tasks. E.g., washing hands, lining up, setting the table
	Sequential	Sequence of steps. E.g., working a puzzle, recognizable drawing
	None	Not involved in learning or social talk
	Passive instruction	Child is recipient of instruction rather than active participant
	Social	The child is interacting but not on a learning topic.
	Time Out	The child is isolated from the group. E.g., out of the room, corner
	Disruptive	Any behaviour that draws others off-task
Engagement (COP)	Fantasy Drama	Sequenced, predictable pretend play enacting familiar stories together
	Wrongly accused	Wrongly accused as disruptive
	Low to Medium Low <sup>a</sup>	Child is not attending at all, clearly not interested, to looking inconsistently at teacher/materials, flat affect, looking bored
	Medium	Child pays attention to the activity. May look up but returns immediately. Seems interested in the activity but could give it up
Location (COP)	Medium High to High	Child shows eager expression, positive affect, to intensely focused on the activity, displays genuine engagement, oblivious to noise
	Group room	Room suited for a smaller group of children
	Outdoors	The preschool playground, or playground/woods outside preschool
	Play hall	Room used for activities where most children are present
	Dining room	Room used for mealtime
Teacher task (TOP)	Hallway	Hallway, incl. bathroom area
	Managing	Activity that is required to run a classroom. E.g., teacher is active in organizing children, providing materials
	Instructing	Teacher is interacting with child/children on a learning topic
	Monitoring	Passively observing children
	Social	Personal/informal conversation. E.g., talking about home life
	None	No task (or unrelated to the class).
	Administrating	E.g., paperwork, talking on the phone (work-related)
	Behaviour approving	Approving verbal comments, facial expressions, physical contact
	Personal care	E.g., tying shoes, fixing clothes, help blowing nose
	Behaviour disapproving	Disapproving facial expressions, verbal comments, physical contact

<sup>a</sup>Automatically coded when interaction state is coded 'Routine-based activity', 'Unoccupied', or 'Time Out'.