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EVALUATION OF PRESCHOOL LIFE SKILLS (PLS) PROGRAM TO TEACH SOCIAL SKILLS IN A PRESCHOOL CLASS

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EVALUATION OF PRESCHOOL LIFE SKILLS (PLS) PROGRAM TO TEACH
SOCIAL SKILLS IN A PRESCHOOL CLASS

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THESIS

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A thesis submitted in partial fulfillment of the
requirements for the degree of Master of Science in Education in the
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By

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Lexington, Kentucky

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ABSTRACT OF THESIS

EVALUATION OF PRESCHOOL LIFE SKILLS (PLS) PROGRAM TO TEACH
SOCIAL SKILLS IN A PRESCHOOL CLASS

The purpose of the study was to evaluate the effectiveness of a Tier 2 PLS program on increasing critical social skills (i.e., requesting for attention, framed requesting for materials and assistant, and delay and denial tolerance) and decreasing problem behaviors for the participants with risk of delay in social domain. A multiple probe across behaviors design replicated across participants was employed. The intervention terminated due to the end of school year before skill 3 could be introduced. Two of three participants met criteria for two taught skills, while one participant did not acquire all skills. Decrease of problem behavior accompanied for all participants through the intervention.

KEYWORDS: Preschool life skills, social skills, Tier 2 intervention, behavioral skills training, problem behavior

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SECTION 1: INTRODUCTION

While kindergarten has become more academically oriented in the past few years, teachers perceive social skills as the most important abilities for children's readiness for school (Lin et al., 2003; Sahin et al., 2013; Hustedt et al., 2018). Meanwhile, a population study conservatively estimated that 174,309 preschoolers were suspended, and 17,248 children were expelled because of challenging behavior in 2018-2019 school year based on parental report (Zeng et al, 2019). Teachers' belief on children's readiness for school, and the fact that many children are still expelled from school because of various interfering behaviors, highlights the importance of increasing proper social skills and decreasing problem behavior before children enter kindergarten.

According to a number of recent surveys on both teachers and parents' views about school readiness, social skills have priority over academic skills (Gregory et al., 2021; Harrington et al., 2020; Rouse et al., 2020; Miller & Kehl, 2019; Williams et al., 2019). In a survey of 3,305 kindergarten teachers, over 70% rated social skills, including following instructions, requesting attention or help, being not disruptive, and sharing and taking turns, as most essential skills to school readiness (Lin et al., 2003). A meta-analysis of classroom-wide interventions to build social skills indicated that resources in classroom-based social skills interventions are best invested in younger students before elementary (January et al., 2011). Teaching social skills to children at an early age can decrease problem behaviors which may bring children adverse school experiences as well as increase social competence which is a significant predictor of life-long academic functioning (Maleckiet al., 2002; Zins et al., 2007; Denham et al., 2010).

Meanwhile, the time spent in center-based childcare is associated with higher levels of problem behaviors in the long term (Magnuson et al., 2007; Loeb et al., 2007).

This is because children are exposed to more situations that evoke problem behavior and teachers do not have adequate skills to manage problem behavior and provide behavioral support (Stormont et al., 2005; Benedict et al., 2007). Teachers in center-based childcare tend to use proactive strategies to create an environment which can prevent problem behaviors. Teachers provide frequent supervision, high-levels of noncontingent attention, free-choice opportunities, immediate response and interaction, and multiple sets of toys (Aksoy, 2020; Allen et al., 2020). However, critical social skills for preschoolers are still out of children's repertoire because they are protected from evocative situations.

Hanley et al. (2007) developed a comprehensive curriculum which was named Preschool Life Skills (PLS) program, which was intended to promote critical social skills with excess return on reducing problem behaviors among preschoolers. Although functional assessment (FA) has proven to increase the effectiveness of interventions on problem behaviors, FA and function-based interventions are not widely accepted or sufficiently practiced in classroom environments due to complicated procedure, substantial time cost, and inapplicability in natural environments (Lloyd et al., 2016; Ducharme et al., 2011). Another drawback is that although regular access to professional's support (e.g., behavioral consultant or mental health consultant) is effective in reducing challenging behaviors in the preschool classroom (Albritton et al., 2019; Koivunen et al.,2017), a nationwide study showed that only 22.9% of teachers had regular access to a psychologist or psychiatrist, and 16.8% had no access at all (Gilliam, 2005). Lack of professional support leads increased rate of challenging behavior in the school and teachers' difficulties with providing evidence-based interventions.

The PLS program involves arranging for controlled exposure of preschoolers to

evocative situations while teaching appropriate social skills categorized into 4 units (i.e., instruction following, functional communication, tolerance for delay and friendship skills) (Hanley et al., 2007). Behavioral skills training (BST, Himle et al., 2004; Nigro-Bruzzi & Sturmey, 2010) consisted of instruction, modelling, role-play and feedback was used to introduce and practice target skills in the program, which was effective in teaching novel skills in multiple areas for young children. The PLS program in the initial study was used as a whole-class intervention and shown to be effective as Tier 1 instruction within response-to-intervention (RTI) model (Gresham, 2004). Subsequently, the PLS program was replicated in Tier 1 with the modification of a classwide lottery-based token contingency (Beaulieu & Hanley, 2014). The PLS program was also proved to be effective in Tier 2 (Beaulieu, Hanley, & Roberson, 2012, 2013; Luczynski & Hanley, 2013; Luczynski, Hanley, & Rodriguez, 2014) and Tier 3 (Francisco et al., 2012; Kraus et al., 2012) for the preschoolers who did not respond to Tier 1 instruction well or those with developmental delays and disabilities within the RTI model. To maximize the acquisition of target skills, these studies used performance-based criterion instead of time-based criterion in the initial study (Luczynski & Hanley, 2013; Luczynski et al., 2014; Mckeown et al., 2021), which provided students more practice opportunities. For example, Luczynski & Hanley (2013) and Luczynski et al (2014) required each participant to exhibit the skill on 85% or more of the trials across three nonconsecutive sessions.

The initial study did not measure maintenance and generalization of the PLS program (Hanley et al., 2007). Luczynski et al. (2014) found that not all taught skills were maintained in a 3-month period, and the generalization was shown to be low or highly variable. Falligant & Pence (2017) and McKeown et al. (2021) also showed poor generalization across peers and adults with all participants. Luczynski et al. (2014)

incorporated modifications to the program to improve generalization and maintenance. They found satisfactory generalization was observed only when the teacher was informed of the target skills and teaching procedures. The study also indicated that continual teaching was necessary for the children to maintain the acquired social skills in a long term. In other studies, the modification including gradually increased intertrial intervals (Francisco & Hanley, 2012), intermittent delivery of preferred items or tokens (Beaulieu et al., 2012; Kraus et al., 2012) and peer mediation (Beaulieu et al., 2013) were suggested to be effective ways to improve the generalization and maintenance of the social skills.

The purpose of the current study was to evaluate the effectiveness of the PLS program implemented in Tier 2 on the acquisition of functional communication skills with teacher and skill of tolerating with delay or denial from teacher with preschoolers who showed low compliance or at risk of delay in social domain. The research questions for this study are as follows:

Research Question 1: Is an adapted PLS program implemented in Tier 2 effective for increasing social skills and decreasing problem behaviors of preschoolers from 4 to 5 years old in a center-based childcare setting?

Research Question 2: What is the average number of sessions spent to meet the performance-based criteria?

Research Question 3: To what extent do children maintain and generalize skills learned with the adapted PLS program?

Research Question 4: To what extent is the adapted PLS program socially valid?

SECTION 2: METHOD

2.1 Participants

2.2 Setting and Materials

2.3 Target Behaviors

2.4 Measurement System

2.5 Experimental Design

2.6 Procedures

The independent variable was a teaching package adapted from Hanley et al. (2007) including instructions, modelling, role-play, and feedback. The independent variable was described below as teaching procedures. The examples of learning opportunities, evocative situation and feedback contingent on correct and incorrect response were described in Appendix A.

2.6.1 General procedures

2.6.2 Baseline procedures

2.6.3 Intervention procedures

2.6.4 Generalization procedures

2.6.5 Maintenance procedures

2.7 Inter-Observer Agreement

2.8 Procedural Fidelity

2.9 Modification

SECTION 3: RESULTS

The performance of three participants on skill chains (i.e., skill 1, skill 1+2 and skill 1+2+3) and each target skill (i.e., skill 1, skill 2 and skill 3) are depicted in Figure 1 and 2, respectively. The results of problem behaviors throughout the study are depicted in Figure 3. The mastery criteria pertained to the data for skill chains.

Therefore, the analysis was mainly focus on Figure 1 in this section. Two participants reached criteria, while one of them did not respond to the intervention in tier 2. It should be pointed out that after all participants reached criterion for tier 1 in 75% or above trials within 3 sessions, one participant was absent from school for one week so that the small-group teaching procedure for skills 2 could not be delivered without the presence of all participants. When the participant returned to school, an additional intervention session for tier 1 was conducted to examine whether all participants maintained skill 1 in 75% or above trials.

3.1 Participant 1: Jack

3.2 Participant 2: Henry

3.3 Participant 3: Andy

Based on Figure 1, Andy's graph for baseline demonstrated zero level and trend for skill chain 1 and 3. He showed low level for skill chain 2 in 2 sessions, but the graph was stable at zero in the majority of sessions. His graph for skill 2 in Figure 2 showed different pattern in the first 4 sessions, which was low to moderate level with variable trend. Overall, he did not acquire any skill chain during baseline.

After introducing intervention in tier 1, the immediacy of effect was observed for skill chain 1. He met criteria for tier 1 with 7 sessions, and the data continued in an accelerating trend, and he reached 100% in the following sessions.

After introducing intervention on skill 2, the graph of skill chain 2 showed low to moderate level and the trend was variable. Andy did not show any trend to meet criteria for tier 2 in Figure 1. The pattern for skill 2 in Figure 2 was the same. His data suggested that a modification for intervention would be required for him.

The last column in Figure 3 shows Andy's problem behavior for each tier during baseline and intervention. His problem behavior was low during baseline in tier 1, but

the extinction burst was observed right after the intervention was introduced. It recovered and was stable at zero after 7 intervention sessions. The problem behavior was variable and moderate during baseline in tier 2, and it decreased after intervention was introduced. The problem behavior in tier 3 was moderate to high during baseline.
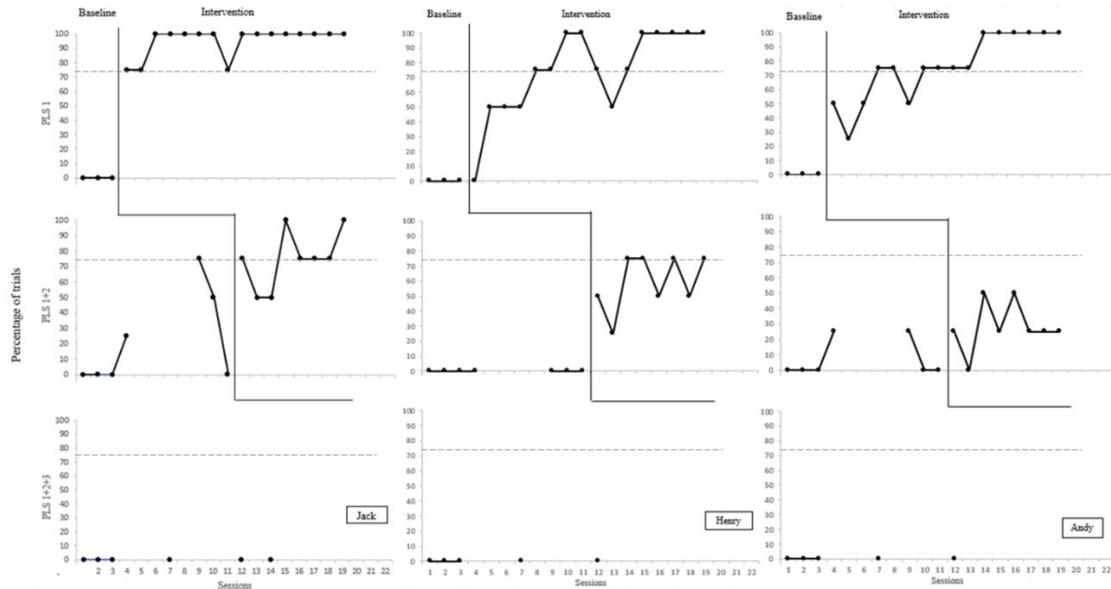
Figure 1: Results of baseline and intervention on skill chains

Note. PLS1+2 refers to the percentage of trails in which the participant gave correct response for both skill 1 and skill 2. PLS1+2+3 refers to the trails in which the participant gave correct response for all skills.
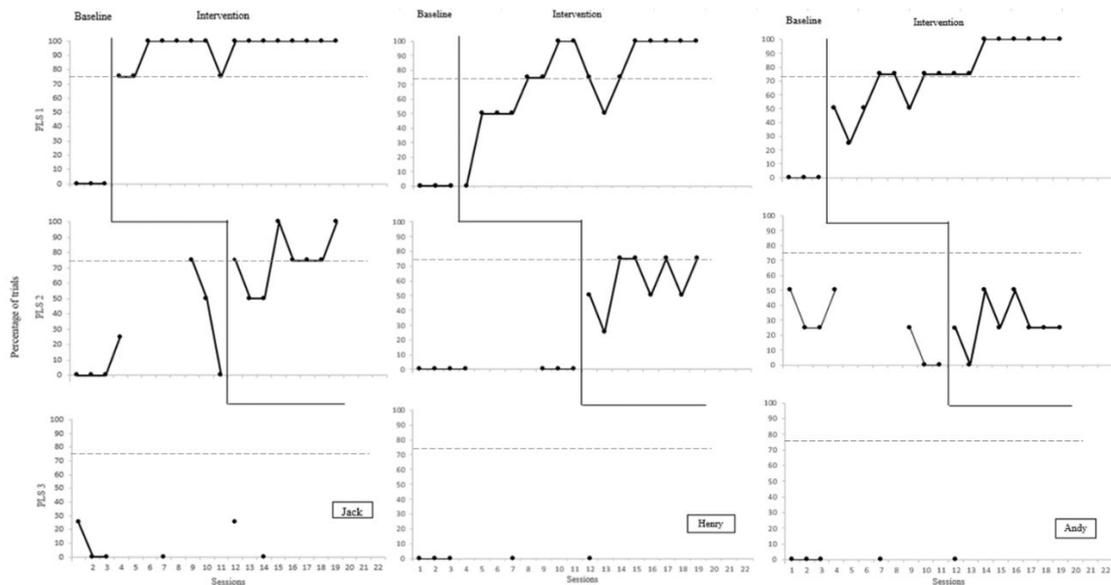
Figure 2: Results of baseline and intervention on each target skill
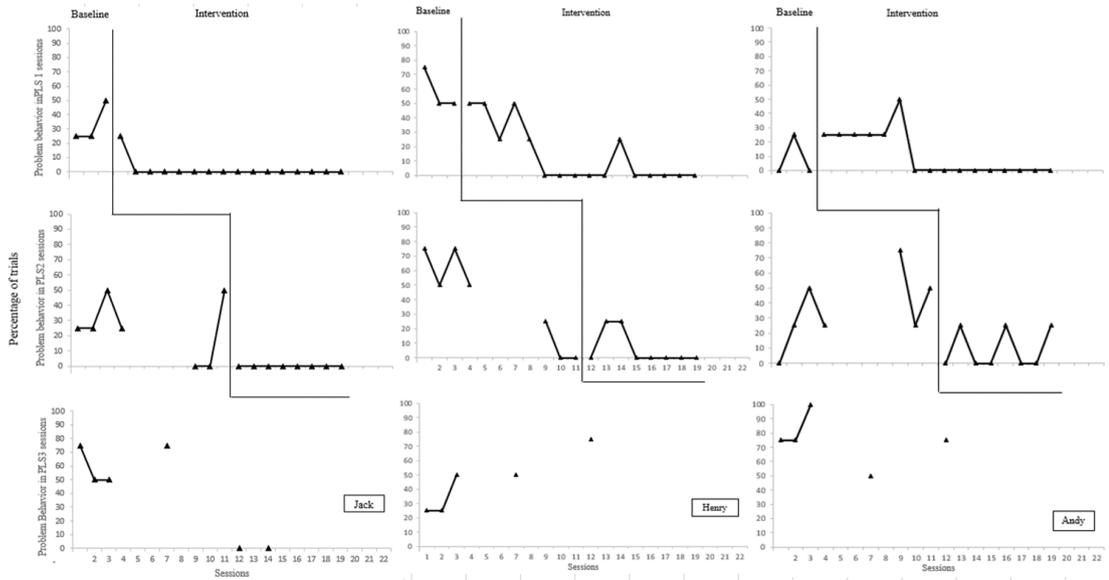
Figure 3: Results of problem behavior in baseline and intervention on each skill

SECTION 4: DISCUSSION

SECTION 5: LIMITATION AND FUTURE DIRECTION

SECTION 6: SUMMARY

The purpose of this study was to examine the effectiveness of a Tier 2 PLS program on increasing three critical social skills and decreasing problem behavior. Two of the three participants met the criteria of acquisition through the acceptable number of sessions. The other participant did not respond to the intervention for the second skill. It was recommended that he could be moved to a Tier 3 intervention with modification in the future study. The problem behavior decreased to zero for all participants, in which problem behavior in lower tiers for two participants decreased before intervention was introduced to the tier. It indicated teaching some of the critical social skills on preschoolers could decrease their problem behaviors across activities and situations. The future study is needed to evaluate the PLS program within MTSS framework as a whole day curriculum on children with variable background.

APPENDIX A. DEFINITION OF TARGET SKILLS AND EXAMPLES OF

EVOCATIVE SITUATIONS AND FEEDBACKS

Skill	Evocative situation	Examples of Teaching/ probe opportunities	Feedback
Skill 1: Requesting attention	Teacher's attention was needed but withdrawn	When the participant was doing a difficult task during free play or transition	***Following correct response*** Instructor turned toward to the participant, provided attention by saying "Yes", and said "I like the way you got my attention by calling Ms. [instructor's name]"
		When the participant and the instructor were taking turns and the instructor's attention was withdrawn	
		When the participant could not access to necessary materials or preferred items during small group or free play	***Following incorrect response*** When you want something from the teacher, and she is doing something else, say 'Ms. [instructor's name] to get her to look at you
Skill 2: Framed requesting materials and assistant	Teacher's assistant was needed	When some materials were not working, difficult to use or not present during free play or small group	Instructor said, "Nice job saying, 'Can I have the [item] please,'" or "Nice job saying, 'Can you help me please,'" and then provided tangible or assistant requested in the situation
		When the participant was doing a difficult task during free play or transition	
		When preferred toy was held by the instructor during free play	***Following incorrect response*** When the teacher has something you need, say "Ms. [instructor's name]" to get her attention, and then say, "Can I have the [item] please" to get what you want

Skill 3: Delay and denial tolerance	Teacher delayed or denied the delivery of materials or assistance by vocal cues	Teacher said "Okay but give me a second" or "Not now. I am using it" when the participant request for materials or assistant	***Following correct response*** Teacher said, "Nice job saying, 'Okay' and waiting patiently", and provided materials or assistant after approximately 2 mins only when teaching tolerance with delay
			Following incorrect response When the teacher asks you to wait, say, "Okay" and wait quietly. You can get what you want after waiting

APPENDIX B. DATA SHEET FOR ALL CONDITIONS

Data sheet for PLS program (baseline, intervention, generalization, and maintenance)												
Student:			Instructor:			Collector:			Date:			
Condition:			Session #:			Target skills:						
Directions: Record + for correct response independently; Record – for correct response with prompts or incorrect response; Record PB for problem behaviors.												

Student	PLS 1: Request for attention				PLS 2: Framed request for material/assistant				PLS 3: Delay/denial tolerance			
	1	2	3	4	1	2	3	4	1	2	3	4

Student	# Correct response			% Correct response			# Problem behaviors			% Problem behaviors		
	PLS 1	PLS 2	PLS 3	PLS 1	PLS 2	PLS 3	PLS 1	PLS 2	PLS 3	PLS 1	PLS 2	PLS 3
Note:												

APPENDIX C. CHECKLIST FOR PROCEDURAL FIDELITY (BASELINE, GENERALIZATION, AND MAINTENANCE CONDITIONS)

Procedural Fidelity for PLS Program (Baseline, Maintenance, Generalization)													
Student:	Collector:		Date:				Condition:			Session #:			
Directions: Record presence (+) or absence (-) of each behavior for the duration of the session. If a behavior could not occur due to child's behavior, then record not applicable (n/a).													
The teacher's behavior	**Result**												
	PLS #/ Trial												
	PLS 1				PLS 2				PLS 3				
	1	2	3	4	1	2	3	4	1	2	3	4	
Before each trial began, the materials needed for creating evocative situation were presented within the sight or reach of the participant based on the situation.													
The instructor approached the participant and presented the evocative situation.													
Allowed the participant having approximate 1 min to respond to the evocative situation. Teacher gave vocal prompts when the participant had no reaction after 1 min. Nonexample would be the teacher prompted immediately or continually when the evocative situation was presented.													
After the participant engaged in a target skill, the teacher provided a verbal praise and naturally occurring reinforcer related to the situation.													
When the participant did not emit the target skill, the teacher interacted with him/her in typical way. The schedule of delay or denial was not changed during skill 3.													
Reactive strategies were used when problem behaviors occurred.													
# Correct steps													
% Correct steps (of total + and -)													

APPENDIX D. CHECKLIST FOR PROCEDURAL FIDELITY

(INTERVENTION-INSTRUCTION, MODELING, ROLE-PLAY)

Procedural Fidelity for PLS Program (Instruction, Modeling, Role-play)	
Student:	Date:
Instructor:	Collector:
PLS 2: Requesting for items or assistant from teacher	
Activity: A new board game	
Directions: Record presence (+) or absence (-) of each behavior for the duration of the session. If a behavior could not occur due to child's behavior, then record not applicable (n/a).	
The instructor's behavior	**Result**
During the small group activity, the instructor got all children's attention.	
The instructor described the new target skill and its rationale in an age-appropriate way.	
The instructor delivered an evocative situation and modelled the skill independently or with a teacher assistant when needed.	
Before role-play began, the materials needed for creating evocative situation were presented within the sight or reach of the participant based on the situation.	
Allowed the child the designated time (3s for skill one; 5s for skill two; 45s for skill three) to respond to the evocative situation. Nonexample would be the instructor provided demands repeatedly without a pause or prompts.	
After the child engaged in a target skill, the instructor provided a verbal praise and reinforcement related to the situation.	
When the participant did not emit the skill, the researcher described the skill to the child again and provided additional opportunities to practice during small group until the child engaged the target skill.	
After the child engaged in a target skill, the instructor provided a verbal praise and reinforcement related to the situation.	
The instructor role-played with each child.	
Reactive strategies were used when disruption and aggression occurred.	
# Correct steps	
% Correct steps	
Note:	

APPENDIX E. CHECKLIST FOR PROCEDURAL FIDELITY

(INTERVENTION-FEEDBACK)

Procedural Fidelity for PLS Program (Practicing & error-correction)													
Student:	Instructor:		Collector:			Date:			Session:				
Target Skill:													
Directions: Record presence (+) or absence (-) of each behavior for the duration of the session. If a behavior could not occur due to child's behavior, then record not applicable (n/a).													
The teacher's behavior	Result												
	1	2	3	4	1	2	3	4	1	2	3	4
Before each trial began, the materials needed for creating evocative situation were presented within the sight or reach of the participant based on the situation.													
The teacher approached the student and presented the evocative situation.													
Allowed the participant having approximate 1 min to respond to the evocative situation. Teacher gave vocal prompts when the participant had no reaction after approximately 1 min. Nonexample would be the teacher prompted immediately or continually when the evocative situation was presented.													
After the child engaged in a target skill, the teacher provided a descriptive praise and naturally occurring reinforcer related to the situation.													
When the child did not emit the target skill, the teacher gave error-correction until a target skill was emitted.													
After the child engaged in a target skill, the instructor provided a verbal praise and reinforcement related to the situation.													
Reactive strategies were used when disruption and aggression occurred.													
# Correct steps													
% Correct steps (of total + and -)													

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