



University of Kentucky
UKnowledge

Theses and Dissertations--Early Childhood,
Special Education, and Counselor Education

Early Childhood, Special Education, and
Counselor Education

2022

THE EFFECTS OF SYSTEM OF LEAST PROMPTS ON PRESCHOOL CHILDREN'S PLAY SKILLS

Hailey D. Helton

University of Kentucky, hailey.helton@jessamine.kyschools.us

Digital Object Identifier: <https://doi.org/10.13023/etd.2022.275>

[Right click to open a feedback form in a new tab to let us know how this document benefits you.](#)

Recommended Citation

Helton, Hailey D., "THE EFFECTS OF SYSTEM OF LEAST PROMPTS ON PRESCHOOL CHILDREN'S PLAY SKILLS" (2022). *Theses and Dissertations--Early Childhood, Special Education, and Counselor Education*. 124.

https://uknowledge.uky.edu/edsrc_etds/124

This Master's Thesis is brought to you for free and open access by the Early Childhood, Special Education, and Counselor Education at UKnowledge. It has been accepted for inclusion in Theses and Dissertations--Early Childhood, Special Education, and Counselor Education by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.

STUDENT AGREEMENT:

I represent that my thesis or dissertation and abstract are my original work. Proper attribution has been given to all outside sources. I understand that I am solely responsible for obtaining any needed copyright permissions. I have obtained needed written permission statement(s) from the owner(s) of each third-party copyrighted matter to be included in my work, allowing electronic distribution (if such use is not permitted by the fair use doctrine) which will be submitted to UKnowledge as Additional File.

I hereby grant to The University of Kentucky and its agents the irrevocable, non-exclusive, and royalty-free license to archive and make accessible my work in whole or in part in all forms of media, now or hereafter known. I agree that the document mentioned above may be made available immediately for worldwide access unless an embargo applies.

I retain all other ownership rights to the copyright of my work. I also retain the right to use in future works (such as articles or books) all or part of my work. I understand that I am free to register the copyright to my work.

REVIEW, APPROVAL AND ACCEPTANCE

The document mentioned above has been reviewed and accepted by the student's advisor, on behalf of the advisory committee, and by the Director of Graduate Studies (DGS), on behalf of the program; we verify that this is the final, approved version of the student's thesis including all changes required by the advisory committee. The undersigned agree to abide by the statements above.

Hailey D. Helton, Student

Dr. Jennifer Grisham, Major Professor

Dr. Melinda Ault, Director of Graduate Studies

THE EFFECTS OF SYSTEM OF
LEAST PROMPTS ON
PRESCHOOL CHILDREN'S PLAY SKILLS

THESIS

A thesis submitted in partial fulfillment of the
requirements for the degree of Master of Science in Education
in the College of Education at the University of Kentucky

By

Hailey D. Helton

Lexington, Kentucky

Director: Dr. Jennifer Grisham, Professor of IECE

Lexington, Kentucky

2022

Copyright© Hailey D. Helton 2022

ABSTRACT OF THESIS

THE EFFECTS OF SYSTEM OF LEAST PROMPTS ON PRESCHOOL CHILDREN'S PLAY SKILLS

This research study utilized a multiple probe design to teach pretend play skills while embedding the system of least prompts teaching strategy during pretend play. Four preschool-aged children with and without disabilities participated in the study. When the system of least prompts was embedded within pretend play, play skills increased.

KEYWORDS: System of least prompts, pretend play, preschool, communication delays, typically developing

Hailey D. Helton
July 27, 2022

THE EFFECTS OF SYSTEM OF
LEAST PROMPTS ON
PRESCHOOL CHILDREN'S PLAY SKILLS

By
Hailey D. Helton

Dr. Jennifer Grisham
Director of Thesis

Dr. Melinda Ault
Director of Graduate Studies

July 27, 2022

Table of Contents

List of Figures.....	iv
Introduction.....	1
Research Question.....	4
Methods.....	5
Participants.....	5
Instructional Setting.....	7
Materials and Equipment.....	8
Dependent Variable.....	8
Experimental Design.....	9
Screening Procedures.....	9
Procedures.....	10
General Procedures.....	10
Baseline Condition.....	10
Independent Variable.....	11
Maintenance and Generalization.....	13
Reliability.....	13
Inter-Observer Agreement.....	14
Procedural Fidelity.....	14
Results.....	15
Discussion.....	18
Limitations.....	19
Future Direction.....	19
Conclusion.....	20
Appendix.....	21
References.....	22
Vita.....	24

LIST OF FIGURES

Figure 1, Graph of Results.....17

Introduction

Across disciplines, professionals agree that play is important and has many academic and social-emotional benefits for children. The United Nations High Commissions for Human Rights argued that play is the right of every child because it "is essential to the cognitive, physical, social and emotional wellbeing of children" (Ginsburg, the Committee on Communications, & the Committee on Psychosocial Aspects of Child and Family Health, 2007, p.182). Broadly, play is defined as an activity done for one's own benefit. It has no end; it is characterized by the process and the positive effect on children (Zosh et al., 2018). Play, in today's world, often consists of children engaging with electronics from a young age. Because of this, children are not experiencing each stage of play or are bypassing the stage completely. There are many stages of play (Smith et al., 2008). Play changes and evolves as a child moves from infancy to toddler to adolescence. Play begins as unoccupied play, which occurs when the child is 0 to three months old and is characterized by the child moving with no clear purpose. The next stage of play occurs during the toddler years and is called onlooker play. This is when the child watches others play (Smith et al., 2008). As the child continues to develop and mature so does their play. The next stage of play is parallel play, which is when children begin to play alongside another peer. As a child enters their preschool years they start to engage in social play and constructive play. Social play is when the child interacts with other children by sharing toys and play settings. Constructive play is when a child begins to create things, such as building with blocks or drawing. During their late preschool years, children begin to engage in fantasy and cooperative play. Fantasy play is when children learn to try new roles, and situations.

Cooperative play is when the child is playing in an organized group and there is one clear leader of the group (Smith et al., 2008).

The study focused on pretend play skills for children with and without disabilities using the intervention of system of least prompts (Collins, 2012). System of least prompts allows the child to perform a behavior independently before a prompt is given. After a period of waiting (usually seconds), a prompt is provided from the least intrusive (e.g., verbal prompt) to the most intrusive (e.g., physical prompt) (Collins, 2012). Pretend play serves a variety of purposes for children with and without disabilities. Children receive practical and developmental benefits while engaging in pretend play. Pretend play is defined by the Assessment, Evaluation, and Program System (AEPS) as “enacting roles or identities, planning and acting out recognizable event, theme, or storyline and using imaginary props” (pg. 166). For most typically developing children, pretend play is acting out routines, such as going to the grocery store or taking care of patients at the doctor’s office while pretending to be a nurse. Pretend play also looks like children taking on roles, like being a doctor or teacher. Pretend play can include children using objects not intended for their original purpose, like a banana as a phone. Pretend play promotes peer interactions, improves communication skills, and enhances engagement across natural contexts (Barton, 2010). For children with disabilities, play may not be occurring at all.

Children with disabilities often engage in less complex and have fewer play behaviors than their typically developing peers (Barton, 2015). Children with Autism consistently demonstrate less frequent and varied pretend play than children with typical development (Ungerer & Sigman 1981) or children with other disabilities (Charman &

Baron-Cohen, 1997). Play for children with disabilities can be playing parallel to a peer while using an object as intended. Children with disabilities may also imitate their teacher or peers, completing an action like stirring or stacking blocks. Teacher interactions alone will not fully facilitate participation in pretend play for children with disabilities (Leister et al., 1995). While most children know how to pretend play successfully, others do not. That is why teaching play skills to children with and without disabilities is critical.

Teaching play skills to young children has been researched for decades. The researchers have studied the play skills of children with and without disabilities in many settings, clinics, schools, and homes. This study examined play skills in an early learning school setting. While play can look different in each setting, the common goal across settings is to improve the child's interactions with peers, promote communication, improve expressive language, and increase engagement. Although there have been studies completed on play in which the participants have Autism, there are limited studies in which the participants are children with a developmental or cognitive delay (Lee et al., 2017).

The research on play with children with and without disabilities (i.e., autism spectrum disorder) indicates that intentional, systematic interventions are needed to increase play skills (Barton & Wolery, 2008). Play-focused interventions have been evaluated, such as adult-implemented modeling and prompting (Barton, 2015). When adult modeling and prompting have been used in research, the intervention least-to-most prompting was often implemented (Qiu, Barton, & Choi, 2019). System of least prompts can effectively teach pretend play because it supports interactions, lets the child respond independently, and limits the child's reliance on prompts. (Ulke-Kurkcuoglu, 2015). In

the study conducted by Qui, Barton, and Choi, had three participants, all of whom had a disability other than Autism. In this study, they started baseline by saying, “let’s play” during the baseline session, the implementor observed the child’s play and made sure they did not leave the center. When in the intervention session the implementor provided contingent imitation, and a prompt hierarchy of verbal, model, and hand over hand if the desired behavior was not initiated within 30 seconds. In this study the data showed a steady increase of unprompted play behaviors. Another study that used system of least prompts and pretend play sequences was conducted by Barton, Choi, and Mauldin in 2018. In this study, they had 3 participants, all of whom had a disability. In this study, they used constant time delay and system of least prompts based on the child’s need in intervention. In this study one child received system of least prompts as their intervention. The implementor provided a visual schedule and waited for 3 to 8 seconds before providing a prompt. The prompt hierarchy of this study was verbal, model, and physical. The participant in this study engaged in pretend play sequences of stirring a spoon in a bowl, feeding a baby, then rocking a baby. The data showed a slow increase but did not meet mastery.

Research Question

In a preschool classroom setting, can children with and without disabilities who have a deficit in their pretend play skills, acquire new pretend play skills using system of least prompts?

Methods

Participants

Children

Four preschool aged children from a Kentucky early learning school participated in the study. The children included in the study were typically developing, had a developmental delay, and/or had a cognitive or speech delay. The inclusion criteria for the study included: (a) received a rating of a 0 on the AEPS for pretend play under the cognitive domain; (b) independently complete gross and fine motor skills (e.g., walk throughout the center, put on clothing, pick up toys); (c) follows prompts, and tolerates a physical prompt if needed; (d) parents/guardians informed consent for their child to participate in the study; (e) attendance at school for 80% of days for the school year; and (f) between the ages of 3-5 years. Children with autism were excluded from the study.

The first participant was a 4-year-old Hispanic/Latino English speaking, male named GH. This was GH's second year of preschool. He qualified to attend preschool with a communication delay. GH received services for both articulation and language. He saw a speech therapist twice a week, for 15 minutes sessions. GH's play included engaging in the art and fine motor centers. GH loved play with puzzles and cutting and gluing.

The second participant was a 5-year-old White, English speaking, male named BZ. This was BZ's first year in preschool. BZ qualified for preschool based on income. BZ received no therapies. BZ's play skills included sensory play and engaging with fine motor toys such as the gears.

The third participant was a 4-year-old White, English speaking, female named AD. This was AD's second year in preschool. She qualified for preschool under the

social emotional and cognitive domains. She received services from a special education teacher, for 20 minutes daily. Her goals included engaging with peers appropriately, asking for help when needed, and identifying shapes and the letters in her name. AD's play consisted of playing with the musical instruments and completing puzzles.

The fourth participant was a 5-year-old English speaking, White male, named JE. This was JE's first year in preschool. JE qualified for public preschool based on income. JE received no therapies. JE's play skills included math and literacy games such as matching numbers to quantities and matching upper and lower letters.

Research Personnel

The principal investigator (PI) of the study was a 25-year-old female who taught preschool. She had her bachelor's in interdisciplinary early childhood education obtained from The University of Kentucky. She held a teaching certificate in working with children birth-5-years-old with and without disabilities. She was pursuing a master's degree in interdisciplinary early childhood education. She had 2 and a half years of teaching experience.

A 32-year-old, graduate student, who observed in the classroom regularly, was recruited to collect reliability data. She received training from the teacher on the independent and dependent variables before collecting data. This was accomplished by practicing the independent and dependent variables on children who did not qualify for the study. She held a bachelor's degree and teaching certification in elementary and special education in moderate and severe disabilities and learning and behavior disabilities. She also held a certificate in teaching English language learners. During the time of the study, she was pursuing a master's in applied behavior analysis.

Instructional Setting and Arrangement

The study was conducted in a Kentucky elementary school. This school served preschool and kindergarten children. The study was collected in one classroom during two different sessions. The morning session ran from 7:30 am to 10:45 am. The morning sessions consisted of 18 students. Of those 18 students four were ELL students whose first language was Spanish. There were 7 students who received speech services. There were 7 students who received special education services. Of the 18 students 3 had a diagnosis of Autism, one student had a 504. The afternoon sessions ran from 11:30 am to 2:40 pm. The afternoon sessions consisted of 16 students. Of those 16 students 1 was ELL whose first language was JingPo. There were 5 students who received special education services. There were also 4 students who received speech services. Of the 16 students in the afternoon session 2 had a diagnosis of Autism. One student in the afternoon session was homeless.

During the study, the PI collected baseline and intervention data in the dramatic play center of the preschool classroom. The dramatic play center was 3 meters by 4 meters. Data were conducted one-on-one with the PI and the participant. While the data were collected, the other children in the classroom (19) were monitored by the two instructional assistants and the special education teacher. During the study all children in the classroom were playing with blocks, music, art, science, math, literacy, and pretend play materials. The study was conducted in two different preschool sessions. Across the two sessions there were 12 children that received special education services. The

additional adults were able to control for distractions while the participant and the PI engaged in pretend play in the dramatic play center

Materials/Equipment

The study was conducted in the dramatic play center of the classroom during free choice center time. The dramatic play center contains a play sink, refrigerator, stovetop, and pantry. It also included storage for pretend play clothes, a table, chairs, a rug, a mirror, a dollhouse, a baby crib, baby dolls and accessories, food of different varieties, such as bread, fruit, vegetables, and meats.

During the study, the data sheets (appendix A) were kept in a locked drawer of the PI's desk. When in use the PI used pen and paper to collect data.

Dependent Variable

The dependent variable of the study was imaginative play skills. The AEPS defines pretend play skills as: "Child engages in the following play behaviors with peers enacts roles or identities; plans and acts out recognizable event, theme, or storyline; uses imaginary props" (AEPS, Bricker, 2002,166). The participants were required to plan and act out recognizable events using a task analysis. The event and role the child acted out **was** being a chef in a restaurant. For the child to successfully act this role out they had to first put on the chef costume, and then they pass out the menus. After the menus were passed out the child would ask what their patron would like to eat. After they asked their patron what they would like to eat, the child would then cook/prepare the food on the stove, in the microwave, etc. After the food was prepared the child would then give the patron the food on a plate. After the food was given on the plate the child would then pour the patron a drink. After the patron was finish eating the child would then gather the

dirty dishes, wash the dish, and put the dishes away. After the area was cleaned up the child would thank the patron for coming by saying “thank you for coming to my restaurant.”

Experimental Design

The study used a multiple probe design across participants (Ledford & Gast, 2018). Experimental control was demonstrated if the data in each baseline tier remained stable until the intervention of systems of least prompts was applied. A multiple probe design across participants was used for the study because this was a short study to be completed within 6 weeks, due to the school year ending. By completing the study in 6 weeks, maturation was avoided. Being the classroom teacher and the PI, using this classroom teacher and the PI, using this design was more feasible in the classroom environment because taking continuous data would be nearly impossible while meeting all the other requirements in the classroom requirements. Baseline data were collected for the first child over 4 sessions. Once the first child reached stable baseline data the intervention began. During this time the other three children remained in baseline. Once child one’s intervention data increased by 40% child two began intervention. The same steps were completed for all child participants. The child reached mastery when the task analysis was completed independently at 100% over three sessions.

Screening Procedures

To determine which students would participate in the study, the PI analyzed the AEPS data. If the student received a 0, in the cognitive domain goal number 1; engages in cooperative, imaginary play, they were considered for the study. For students to receive a 0 on this portion of the AEPS, they engaged in none of the criteria which included,

enacting roles or identities, plans and acts out recognizable event, theme, or storyline, uses imaginary props. From those children, the PI then examined whether the children independently completed gross and fine motor skills (e.g., walk throughout the center, put on clothing, pick up toys), and if the children tolerated a physical prompt if needed. The PI was able to complete the screening procedures from classroom data. Once the PI chose students for the study, parental consent was obtained.

Procedures

General Procedures

In the study event recording was used to collect data across all conditions. When the participant completed a step of the task analysis independently, they received a (I). If the participant received a prompt, they received a (V) for a verbal prompt, a (M) for a model prompt, a (P) for a physical prompt, and an (R) if the child refused all the prompts. The data from both conditions would be graphed by the percent of independent responses.

Baseline Condition

During the baseline condition the PI prompted the child to join her in the dramatic play center to play restaurant, by saying, "Let's play restaurant". Once the PI and the child were in the dramatic play center, the PI started the time. During baseline the PI and the reliability data collector watched what the child did. The PI engaged with the child if the child initiated the play. The PI gave no prompts during the baseline condition. If the child completed any of the task analysis independently, the PI and the reliability data collector marked an (I) next to the step. After the timer went off the PI thanked the child for playing with her and she gave the child a high five.

Independent Variable

A system of least prompt procedure was used as the intervention of the study. The PI implemented the intervention during free choice in the dramatic play center. The intervention occurred every week of the study, Tuesday thru Friday, for at least 10 minutes for each session. The intervention occurred during the 8-9 o'clock hour and the 12 to 1 o'clock hour. Two participants were enrolled in the morning and two were enrolled in the afternoon sessions.

The prompt hierarchy that was implemented was first a verbal prompt, then a model prompt then a physical prompt. The prompt hierarchy was chosen based off not only on the knowledge of the participants and their prompting needs. In studies done by Barton and colleagues the prompting levels chosen were verbal, model, and physical (or hand-over-hand) (Qui & Barton, 2019; Barton, Choi, Mauldin, 2018). System of least prompt levels are selected based on the participants learning history and can be adapted to each participant (Barton, 2015). In this study the participants did not require any additional prompting.

A verbal prompt was defined as anytime the PI told the child what to do. Examples of this were if the PI said to the child “put on the chef costume” or “pass out the menus.” The next prompt that was provided was a model prompt. A model prompt was defined as anytime the PI showed the child was to do. Examples of this were if the child did not pass out the menus after a verbal prompt was given the PI stood up and showed the child how to get the menus and pass them out. If a model prompt was not followed the PI provided a physical prompt. A physical prompt was defined as anytime the PI provided hand over hand support to complete the task. Examples of this was if the

PI took the child's hand to grab the menus and pass them out. In the study one participant did refuse a task. A refusal was defined as anytime the child said "no, no" or pulling away from a physical prompt or not completing the step.

During the intervention condition the PI first prompted the child to join her in the dramatic play center to play by saying "let's play restaurant". Once the child and the PI were in the dramatic play center, the PI started the first timer for 10 minutes. The goal of the intervention was for the child to complete the steps of the task analysis independently.

If the child completed any of the steps independently, they received an (I) on their data sheet for that step. If the child did not complete a step independently the PI provided the first prompt of a verbal prompt, if the verbal prompt was followed within 10 seconds the PI recorded a (V) on the data sheet. If the child gave an incorrect response or did not complete the step within 10 seconds the PI provided the next prompt in the hierarchy. A model prompt was then given. If the model prompt was followed within 10 seconds the PI recorded a (M) on the data sheet. If the child gave an incorrect response or did not complete the step after a model prompt was given the PI moved on to the next prompt. A physical prompt was provided. If the physical prompt was followed the PI recorded a (P) on the data sheet. If the child gave an incorrect response or did not follow the prompt that was considered a refusal and was marked as a (R) on the data sheet.

If a correct response was given when the task was completed independently or after a prompted correct response the PI provided a descriptive verbal praise, such as "wow you did a great job putting on that chef outfit." These steps were followed for the entire task analysis. If the 10-minute timer went off and the child had not completed the pretend play tasks analysis the PI started a second timer and counted time. The child's

play was not interrupted it was recorded on the data sheet how much additional time was used to complete the task analysis.

Procedural fidelity and inter-observer agreement data were collected using the data sheet in appendix A. During baseline the PI started a 10-minute timer to observe and collect data on the participant. During intervention the PI used the same 10-minute timer for reference. If, during intervention, the participant was not finished playing the PI used an additional timer to keep track of any additional time needed.

Maintenance and generalization

Maintenance and generalization data were not collected during the study. Because the study was started 6 weeks prior to school ending the PI ran out of time to complete this data.

Reliability

The reliability data collector collected data in both the baseline and intervention conditions. During the baseline condition she collected procedural fidelity and inter-observer agreement.

The reliability data collector also collected data for inter-observer agreement, during this time she marked what prompt level was provided for each step of the task analysis. The reliability data collector was trained by the PI to collect IOA data. IOA data were calculated by taking the number of agreement and dividing by the number of agreements plus the number of disagreements, then multiplying by 100. IOA greater than 80% was considered acceptable (Ledford et al., 2018). IOA was collected during all conditions. In baseline IOA was collected at least 20% of the sessions for each child. During the intervention condition the reliability data collected procedural reliability data

on the following behaviors: 1) PI prompted the child to come play; 2) started the start timer; 3) provided descriptive verbal praise; and 4) if the PI waited 10 seconds between prompts.

Interobserver-agreement

The reliability data collector was trained by the PI to collect IOA data. IOA data were calculated by taking the number of agreement and dividing by the number of agreements plus the number of disagreements, then multiplying by 100. IOA greater than 80% was considered acceptable (Ledford et al., 2018). IOA was collected during all conditions. In baseline IOA was collected at least 20% of the sessions for each child. GF had 2 out of 4 baseline sessions of IOA data collected. BZ had 3 out of 6 baseline sessions of IOA data collected. AD had 3 out of 7 baseline sessions of IOA data collected. JE had 2 out of 7 baseline sessions of IOA data collected. The mean IOA for baseline was 90%. For GF the mean IOA was 90% in baseline. For BZ the mean IOA was 80% in baseline. For AD the mean IOA was 90% in baseline, and for JE the mean IOA in baseline was 100%.

In the intervention condition IOA was collected at least 20% of the sessions for all children. GF had 6 out of 15 intervention sessions of IOA data collected. BY had 4 out of 10 intervention sessions of IOA data collected. AD had 2 out of 6 intervention sessions of IOA data collected. The mean IOA for intervention data was 96%. The mean IOA in intervention for GF was 100%. The mean IOA in intervention for BZ was 95%. The mean IOA in intervention for AD was 95%. JE did not reach intervention therefore he has no IOA data in intervention.

Procedural Fidelity

Procedural fidelity data were collected for a minimum of 20% of the baseline and intervention conditions. Procedural fidelity was calculated by the number of observed behaviors by the PI divided by the number of planned behaviors, then multiplied by 100 (Ledford et al., 2018). An acceptable percent of procedural fidelity was anything greater than 80%. If the percentage was below 80%, the classroom observer and the PI would be retrained. Procedural fidelity was collected at least 20% of all sessions in all conditions. GF had 2 out of 4 baseline sessions of PF data collected. BZ had 3 out of 6 baseline sessions of PF data collected. AD had 3 out of 7 baseline sessions of PF data collected. JE had 2 out of 7 baseline sessions of PF data collected. The mean procedural fidelity for baseline was 100%. Procedural fidelity reliability was 100% for all participants.

Procedural fidelity was collected for 20% of the intervention sessions. GF had 6 out of 15 intervention sessions of PF data collected. BY had 4 out of 10 intervention sessions of PF data collected. AD had 2 out of 6 intervention sessions of PF data collected. The mean procedural fidelity in intervention was 95%. The procedural fidelity for GF was 95% in intervention. The procedural fidelity for BZ was 90% in intervention. The procedural fidelity for AD was 100% in intervention. JE did not reach intervention there for he has no procedural fidelity data.

Results

The data recorded for the study was percent independent. Meaning if the child completed the pretend play task analysis independently with no prompts the child received a 100%. Mastery criteria for the study was 100% independent play over 3 consecutive sessions.

GH

GH baseline data is low and stable during the time of baseline. GH data trends in a therapeutic direction in the intervention condition. He had a steady increase of independent behaviors throughout the study. When looking at the anecdotal data GH received more verbal prompts than model, or physical prompting. It also shows that he had 4 sessions that a refusal occurred.

BZ

BZ baseline data is low and stable during the time of baseline. BZ data has an immediacy of effect from baseline condition to intervention. BZ intervention data trends in a therapeutic direction. He had a steady increase of independent behaviors. When looking at the prompting data BZ also received more verbal prompts compared to the other prompts. BZ was the only child to reach mastery. Mastery was achieved after 10 sessions over 14 days.

AD

AD baseline data is low and stable during the time of baseline. AD intervention data trends in a therapeutic direction. When analyzing the anecdotal prompting data compared to GH, and BZ, AD needed more model prompts. If this study was to have continued, she would have reached mastery, based on the trend in which he intervention data was moving. From session 19 to 21 she had a 20% increase in independent behaviors.

JE

JE did not reach intervention. When the criterion for him to move into the intervention condition occurred, JE had to quarantine for COVID-19, when he returned the school year had ended. JE baseline data stayed stable during the study duration.

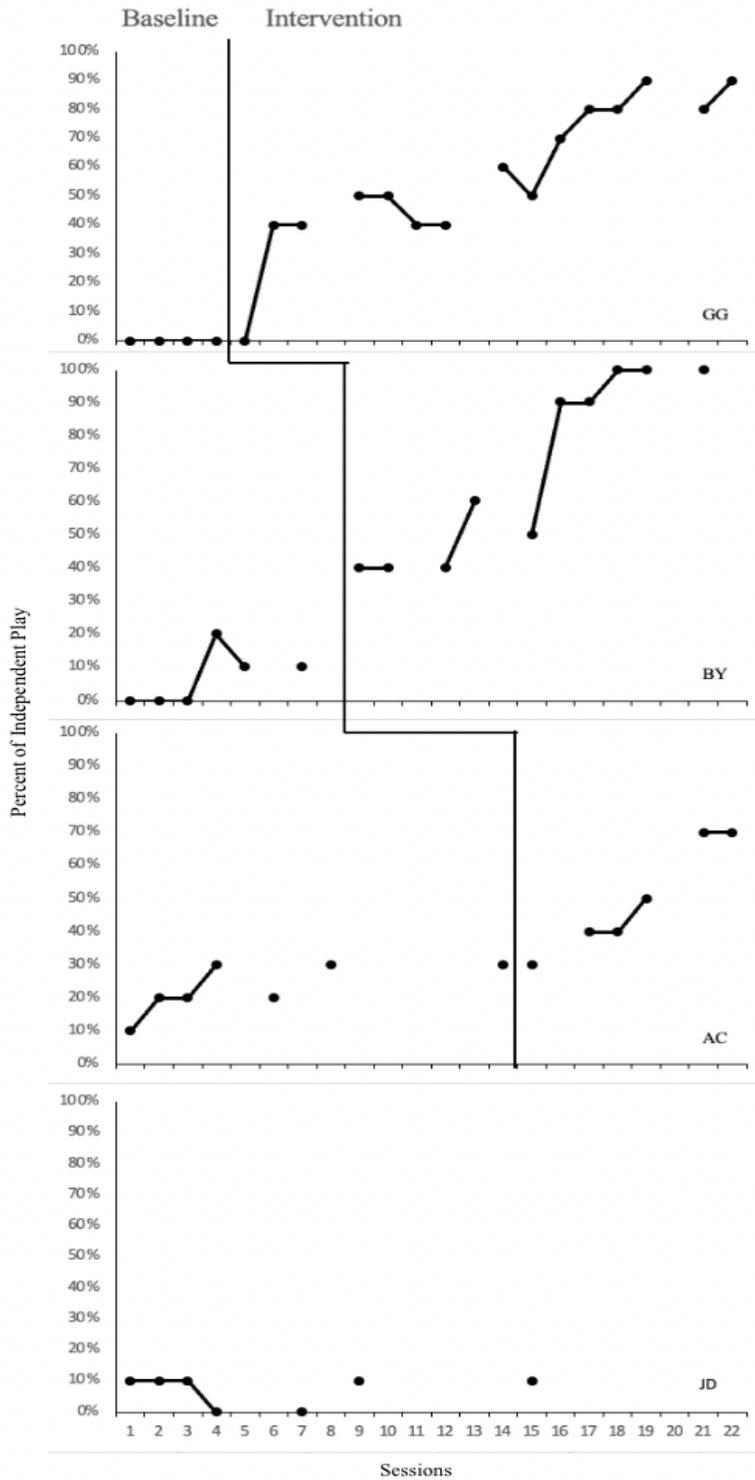


Figure 1: Graph of Results. The results indicate steps of the task analysis completed independently.

Discussion

The results indicated that when using the intervention of system of least prompts there was an increase of pretend play skills from baseline data to intervention data for children with and without disabilities acquiring pretend play skills. The purpose of the study was to determine if children with and without disabilities could acquire new pretend play skills by using system of least of least prompts. Based on the data from the study the children in the study made progress over baseline. One child did reach criterion and acquired the skill.

In the results GH had 4 sessions where he refused to complete a task even after a physical prompt. I tried to give him a physical prompt of putting the chef costume on, but he said “no stop” so the physical prompt was discontinued. I gave a descriptive verbal praise each time of “hey bud thank you for trying to put the chef costume on.” Even though he did not get it on during the first 4 sessions he did listen to the verbal prompt, watched the model, and attempted the physical prompt. During the 5th session of intervention, he had a mindset change and after the model prompt he put on the chef costume. During the 6th session of intervention, he started to put on the chef costume independently. Some common themes I noticed between all the children is after a few sessions it started to feel more like a routine rather than play. Both the children in the study and in the classroom would watch for me to grab a peer from the study to conduct a session. They would ask questions if they did not participate on a given day. In the intervention condition the children in the study would start to hand out menus then correct themselves to put on the chef’s costume first. If the PI or reliability data collector

was not present would the child hand out the menus, take orders, then come back and put on a chef's costume, before they started to "cook" the food.

Throughout the study the PI took anecdotal notes, to reflect on as progress for each child. GH and AD began to describe what they were doing throughout the session. For example, "Oh no, I burnt it", or "Watch out it is hot" Before the study GH was using one and two words sentences. Before the study AD struggled with her self-confidence and throughout the study and even after the sessions were over for the day she began to communicate more with her peers and adults in the classroom about what she was doing.

Limitations

The study was conducted in a publicly funded preschool classroom and that alone presented challenges. Being the lead teacher while also conducting a study during the least structured part of the day was a challenge. Having to make sure all my classroom support was in place during each session was crucial. The study was also conducted in April and May of the school year, because of this the children whom I could select from was low because of they had already acquired the skill. The timing also effected the length of the study, because of this maintenance and generalization data were not able to be collected. If maintenance data were to have been collected, I would have been able to determine if system of least prompts was an effective intervention. If the study was to be conducted again, I would change the time of day each session would be conducted. Another limitation of the study was the children treating it more as a routine than play. I did see many improvements in their play skills overall.

Experimental control was not achieved with the study because only one child achieved mastery. Although the other children did make progress.

Future Direction

To extend the study more research is needed to determine whether system of least prompts is an effective teaching strategy for acquiring new play skills. In future studies, the study could be completed during the first month of school for a new three-year-old preschool student, a 4-year-old preschool student, both with and without disabilities to see if age factors into the strategy as well. Also, future studies find if students maintain and generalize their new skills.

Conclusion

Based on the data from the study, it cannot be determined at this time, if the independent variable of system of least prompts was effective for children with and without disabilities in acquiring new pretend play skills.

Appendix A: Data Sheet

PARTICIPANT: _____ BASELINE DATE: _____ INTERVENTION DATE: _____ IOA DATE: _____ PROCEDURE FIDELITY DATE: _____ Start Time: _____ Finish Time: _____							
	BASELINE		INTERVENTION				
Target Behaviors Teacher behaviors	Participant Behavior	Procedure Fidelity	Target Behaviors Teacher behaviors	Procedure Fidelity	Prompt Level (I, V, M, P)	Wait 10 seconds between prompt levels Y/N	Provided descriptive verbal praise. Regardless of prompt level.
<i>Teacher will provide initial prompt "Let's play restaurant"</i>			<i>Teacher will provide initial prompt "Let's play restaurant"</i>				
<i>Start 10-minute timer</i>			<i>Start 10-minute timer</i>				
Put on dress-up clothing			Put on dress-up clothing				
Give out menus			Give out menus				
Ask "What would you like to eat"			Ask "What would you like to eat"				
Cook on the stove, or in oven			Cook on the stove, or in oven				
Give food on a plate			Give food on a plate				
Pour drink			Pour drink				
Gather "dirty" dishes			Gather "dirty" dishes				
Wash dishes			Wash dishes				
Put dishes away			Put dishes away				
Say "Thank you for coming"			Say "Thank you for coming"				
Data Summary	Independent: /10 IOA:	PF:	Data Summary	PF	Independent /10 Verbal /10 Model /10 Physical /10 IOA: /10	PF:	PF:
*Key: I- Independent, V- Verbal, M- Model, P- Physical							

References

- Barton, E. E., & Wolery, M. (2008). Teaching pretend play to children with disabilities. *Topics in Early Childhood Special Education, 28*, 119-125.
- Barton, E. E. (2010). Development of a taxonomy of pretend play for children with disabilities. *Infants & Young Children, (23)*, 247-261.
- Barton, E. E. (2015). Teaching generalized pretend play and related behaviors to young children with disabilities. *Exceptional Children, (81)*, 489-506.
- Barton, E.E., Choi, E., & Mauldin, E.G. (2018). Teaching Sequence of Pretend Play to Children With Disabilities. *Journal of Early Intervention, 41*(1), 13-29.
- Bricker, D. (Series ed.). (2002). Assessment, Evaluation, and Programming System (AEPS®) for Infants and Children (2nd ed., Vols. 1–4). Baltimore: Paul H. Brookes Publishing Co.
- Collins, B. C. (2012). *Systematic instruction for students with moderate and severe disabilities*. Baltimore, Maryland: Paul H Brookes Publishing Co.
- Charman T., & Baron-Cohen S. (1997). Brief study: Prompted pretend play in autism. *Journal of Autism and Developmental Disorders, 27*, 325–332.
- Ginsburg, K. R., the Committee on Communications, & the Committee on Psychosocial Aspects of Child and Family Health. (2007). The importance of play in promoting healthy child development and maintaining strong parent–child bonds. *Pediatrics, (119)*, 182–191.
- Ledford, J. R., & Gast, D. L. (Eds.). (2018) *Single case research methodology*. New York, NY: Routledge.
- Lee, S. Y., Lo, Y. Y., & Lo, Y. (2017). Teaching functional play skills to a young child

with autism spectrum disorder through video self-modeling. *Journal of Autism and Developmental Disorders*, 47, 2295–2306.

Leister, C. A., Langenbrunner, M., & Walker, D. (1995). Pretend Play: Opportunities to teach Social Interaction Skills to young children with developmental disabilities. *Australian Journal of Early Childhood*, 20(4), 30-33.

Ulke-Kurkcuoglu, B. (2015). A comparison of least-to-most prompting and video modeling for teaching pretend play skills to children with autism spectrum disorder. *Educational Sciences: Theory & Practice*, 15(2), 499–517.

Ungerer J., & Sigman M. (1981). Symbolic play and language comprehension in autistic children. *Journal of the American Academy of Child Psychiatry*, 20, 318–337.

Qui, J., Barton, E. E., & Choi, G. (2019). Using System of Least Prompts to Teach Play to Young Children With Disabilities. *The Journal of Special Education*, 52(4), 242-251.

Zosh, J. M., Hirsh-Pasek, K., Hopkins, E. J., Jensen, H., Liu, C., Neale, D., Solis, S. L., & Whitebread, D. (2018). Accessing the inaccessible: Redefining play as a spectrum. *Frontiers in Psychology*, 9. <https://doi.org/10.3389/fpsyg.2018.01124>

VITA

University of Kentucky: Bachelor's Degree in Interdisciplinary Early Childhood

Education: 2019

Preschool Teacher: 2019-2022

Hailey D. Helton