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THE APPLICATION OF ECOPRINT TO ENHANCE PROSOCIAL BEHAVIOR IN CHILDREN AGED 5-6 YEARS

Harpina[1], Sri Mulianah[2], Syarifah Halifah[3], Tien Asmara Palintan[4]
[124]Institut Agama Islam Negeri Parepare (91132), Indonesia
[3]Universiti Sains Islam Malaysia (71800), Malaysia
E-mail: [1]harpina@iainpare.ac.id, [2]srimulianah@iainpare.ac.id,
[3]4241728@raudah.usim.edu.my, [4]tienasmarapalintan@iainpare.ac.id

ABSTRACT
This study focuses on 10 children aged 5–6 years in Group B3 at Lerang State Kindergarten, including 6 boys and 4 girls. Initial observations indicate that the children's prosocial behavior is still relatively low. The children often refuse to share, are uncooperative because they disturb peers working on tasks, and show little appreciation for their peers' work. This Classroom Action Research (PTK) adopts the Kemmis and McTaggart model, which includes four stages: planning, acting, observing, and reflecting. The instruments used are non-test instruments, including observation sheets and documentation. In the pre-reflection cycle, the children's prosocial behavior achievements reach only 40% in the Beginning to Develop (MB) category. Improvement begins in Cycle I, with a 50% success rate, the category Developing as Expected (BSH), and the ecoprint technique implementation rated good. Furthermore, in Cycle II, the success rate increases to 80% with the category Very Good Developing (BSB), and the ecoprint technique implementation is rated very good. These achievements meet the defined success indicators, namely a minimum of 76% in the BSB category. Thus, the ecoprint technique can improve the prosocial behavior of 5–6-year-old children at Lerang State Kindergarten.

Keywords: *Early Childhood; Ecoprint Pounding; Prosocial Behavior*

ABSTRAK
Studi ini berfokus pada 10 anak berusia 5–6 tahun di Grup B3 di Taman Kanak-kanak Negeri Lerang, termasuk 6 anak laki-laki dan 4 anak perempuan. Observasi awal menunjukkan bahwa perilaku prososial anak-anak masih relatif rendah. Anak-anak sering menolak untuk berbagi, tidak kooperatif karena mengganggu teman sebaya yang sedang mengerjakan tugas, dan menunjukkan sedikit apresiasi terhadap pekerjaan teman sebaya mereka. Penelitian Tindakan Kelas (PTK) ini mengadopsi model Kemmis dan McTaggart, yang mencakup empat tahapan: perencanaan, tindakan, observasi, dan refleksi. Instrumen yang digunakan adalah instrumen non-tes, termasuk lembar observasi dan dokumentasi. Pada siklus pra-refleksi, pencapaian perilaku prososial anak-anak hanya mencapai 40% pada kategori Mulai Berkembang (MB). Perbaikan dimulai pada Siklus I, dengan tingkat keberhasilan 50%, kategori Berkembang Sesuai Harapan (BSH), dan implementasi teknik ecoprint dinilai baik. Selanjutnya, pada Siklus II, tingkat keberhasilan meningkat menjadi 80% dengan kategori Berkembang Sangat Baik (BSB), dan implementasi teknik ecoprint dinilai sangat baik. Prestasi ini memenuhi indikator keberhasilan yang telah ditetapkan, yaitu minimal 76% pada kategori BSB. Dengan demikian, teknik ecoprint dapat meningkatkan perilaku prososial anak usia 5-6 tahun di Taman Kanak-kanak Negeri Lerang.

Kata kunci: Pendidikan Anak Usia Dini; Teknik Ecoprint; Perilaku Prososial

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INTRODUCTION

In the contemporary era, the aspiration to realize a "golden generation" is frequently voiced. This reflects parents' high expectations for their children's future quality, encompassing both cognitive abilities and behavior. Early childhood is a critical period of growth and development spanning ages 0 to 6 (Sembiring & Simatupang, 2024). During that period, teaching children prosocial behavior is crucial to help them adapt to their social environment.

Prosocial behavior is positive conduct related to social or community expectations and is voluntary behavior that benefits others, such as helping, sharing, and comforting (Li & Shao, 2022). Prosocial behavior develops through ongoing learning through interpersonal interactions and interactions between the individual and society. Therefore, observing all prosocial behavior issues in children is important so they can be addressed promptly and developed positively.

Researchers' initial observations indicate that 5–6-year-olds' prosocial behavior in Lerang State Kindergarten remains relatively low. Children are often reluctant to share, uncooperative, and unappreciative of a friend's work. Forms of non-sharing include reluctance to lend scissors or crayons, and unwillingness to share glue with peers. Meanwhile, non-cooperative behavior includes actions that disturb peers who are working on tasks (such as pulling from behind or teasing) and not helping to tidy up the toys. Forms of disrespect for a friend's work are shown through demeaning remarks, such as “Very bad.”

The reluctance to share and the disruptive actions toward peers can trigger tension among children, hinder cooperation, and affect the overall classroom atmosphere (Lestari & Aziz, 2024). Additionally, ridicule can lower a child’s self-esteem, making them feel unable to complete the tasks assigned (Anggraeni & Muchlisin, 2023).

Here is the core of sharing, cooperative, and respectful behavior according to Eisenberg and Mussen (1997). The core of sharing is giving something owned or obtained through effort to someone in need. A child with a good foundation of prosocial behavior will develop and can easily exhibit other prosocial behaviors in the future. Cooperation relates to joint play activities, achieving common goals, obtaining shared benefits, shared ownership, and self-serving behavior that also helps others. In the home, school, and community

environments, praise, increased self-competence, or recognition of their maturity can be given for prosocial behavior in children.

A child is less enthusiastic and motivated to engage in prosocial behavior due to a lack of activities that build familiarity and limited opportunities to apply that behavior in real life. Additionally, less varied learning methods lead to children feeling bored. Therefore, providing solutions to build positive social interactions among children is very important. These interactions are manifested through giving attention and support to healthy and safe friendships, as well as teaching social-emotional skills formulated by the school as an effort to improve the child's behavior (Widaningtyas & Sugito, 2022).

Social interaction must meet two conditions: social contact and communication. Social contact relates to actions and reactions between both parties. Meanwhile, communication relates to conveying thoughts and feelings, both verbally and nonverbally, which can be understood by others (Umairi, 2023). Through social interaction, relationships, cooperation, and mutual understanding of feelings can be established well (Nisya et al., 2025). At the pre-cycle stage, the researcher observes several children who like tapping the table and are highly enthusiastic when engaging in activities using natural materials.

Previous research has revealed that the use of natural materials to enhance children' s social skills can help them cooperate in group activities, train communication, foster sharing of tools and materials, increase willingness to help each other, get used to queuing and obeying rules, develop self-confidence when showing work results, and create enjoyable activities that can foster enthusiasm for learning (Adelia et al., 2026).

Other research shows that ecoprint effectively enhances children's socio-emotional abilities to recognize and regulate emotions, cooperate, queue or wait for their turn, and be responsible during learning (Sari et al., 2026). Therefore, the researcher selects the ecoprint pounding technique, a method of creating fabric motifs by striking natural materials, such as fresh leaves and flowers. The advantage of this technique lies in the use of readily available natural materials in the surrounding environment, the ease of implementing a method that children enjoy, and functional creations that can be applied to patterned fabric for shirts and drawstring backpacks.

This activity is designed to stimulate social-emotional skills while supporting social interaction to develop children's prosocial behavior. In addition, the method has never been implemented at Lerang State Kindergarten, making it a new experience that can spark children's curiosity and enthusiasm. Based on this, the study was conducted to observe the

application of ecoprint techniques in enhancing the prosocial behavior of children aged 5–6 years at Lerang State Kindergarten.

METHOD

This study is a Classroom Action Research (CAR) aimed at addressing problems in learning practices as well as improving and enhancing students' learning quality (Purwanto, 2023). CAR is situational to help teachers find solutions to problems in their classrooms; however, the results are not necessarily the same if applied in different locations and with different subjects. In other words, the results cannot be generalized (Norlaila & Hermina, 2025). CAR can be conducted independently or in collaboration with other parties (Machali, 2022). This research is participatory, meaning the researcher acts as a facilitator and observer, while the teacher acts as the implementer of the action. This study uses non-test instruments tailored to data collection techniques, namely observation and documentation.

The subjects of this study are 10 children aged 5–6 years in group B3 of Lerang State Kindergarten, consisting of 6 boys and 4 girls. This study procedure applies the Kemmis and McTaggart model, which includes four stages: planning, acting, observing, and reflecting. The actions were carried out in two cycles, with each cycle consisting of two meetings.

Planning involves preparing strategies, developing activity plans, establishing success criteria, and creating assessment instruments or observation sheets in the form of checklists. The implementation phase entails procuring the necessary tools and materials, as well as carrying out the planned activities (Machali, 2022). Concurrently with the implementation, observations are conducted, and the checklists are filled out. The assessment system for each child’s prosocial behavior (sharing, cooperating, and showing respect) is as follows.

Planning is carried out by preparing strategies, drafting activity plans, determining success criteria, and creating assessment instruments or observation sheets in the form of a checklist. The action implementation is the stage of procuring tools and materials and carrying out the prepared activity plans (Machali, 2022). Concurrent with the action implementation, observations are also conducted, accompanied by filling out the checklist. The behavioral assessment system for social behavior observed in each child (sharing, cooperation, and respect) is as follows.

Table 1. Criteria for Assessing Children's Prosocial Behavior

Category	Score	Description
Developing Very Well (BSB)	4	The child exhibits active prosocial behavior without

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		teacher guidance
Developing as Expected (BSH)	3	The child is capable of prosocial behavior, but sometimes requires instruction and encouragement from the teacher
Beginning to Develop (MB)	2	The child exhibits prosocial behavior when receiving guidance or direction from a teacher
Not Yet Developed (BB)	1	The child is reluctant to engage in prosocial behavior or is not yet capable of doing so

The following are indicators of children's prosocial behavior based on observation aspects and methods of assessment.

Table 2. Indicators of Prosocial Behavior in Children

Aspects of Observation	Indicator
Sharing	Sharing leaves and/or flowers with friends
	Taking turns using the wooden mallet
Cooperating	Helping to arrange the plastic sheets
	Helping to hold a friend's plastic sheet
	Assisting a friend who is having difficulty with the pounding technique
	Helping to clean off leaf and/or flower remnants adhering to the fabric and plastic
	Tidying up ecoprint tools and materials together
Showing Respect	Acknowledging a friend's prosocial behavior by saying "Thank you"
	Exercising care during the ecoprint pounding technique to avoid damaging the collaborative artwork
	Appreciating the finished collaborative work with positive remarks, such as "Our work looks great"
	Exchanging high-fives as a gesture of appreciation after completing the ecoprint pounding technique

Table 3. Assessment of Children's Prosocial Behavior

Category	Score Range
BSB	$X \geq 33$
BSH	$33 > X \geq 27.5$
MB	$27.5 > X \geq 22$
BB	$X < 22$

Data from the checklist are analyzed using the following formula (Fajarwati & Harahap, 2024). The resulting percentage values are interpreted based on the score ranges and categories presented in the table below.

$$\text{Percentage value} = \frac{\text{number of children in the same category}}{\text{total number of children}} \times 100^{\%}$$ or $$P = \frac{f}{N} \times 100\%$$

Table 4. Success Percentage in Enhancing Children's Prosocial Behavior

Category	Score Range
BSB	76% - 100%
BSH	51% - 75%
MB	26% - 50%
BB	≤ 25%

Action during the second cycle is implemented when the percentage of improvement in prosocial behavior in the first cycle does not reach the target set, namely 76%–100% with the category "Developing Very Well" (BSB).

Observers assess teachers' performance in ecoprint pounding activities designed with sharing, cooperation, and mutual respect. The evaluation includes the Q&A interaction between teachers and children about the activities to be carried out; demonstrations of ecoprint pounding techniques; instructions and modeling of sharing, cooperative, and respectful behavior; and guidance to children in carrying out ecoprint pounding or exhibiting prosocial behavior.

Table 5. Assessment of Teacher Success

Category	Score (X)
Very good	$X \geq 12$
Good	$12 > X \geq 10$
Enough	$10 > X \geq 8$
Not enough	$X < 8$

The observed data are used to address shortcomings and plan subsequent improvements at the next meeting. Quantitative data from the checklists are analyzed using descriptive statistics to obtain useful information, then presented in tabular and graphical form. Meanwhile, qualitative data in the form of subject behavior notes and documentation at the research site are reduced, then presented in descriptive sentences (Murhadi, 2025).

RESULTS AND DISCUSSION

Based on pre-cycle observations conducted by the researcher over two weeks as an accompanying teacher, various problems related to children's prosocial behavior in the

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classroom are evident. The findings cover three main aspects: sharing, cooperation, and showing respect. In the sharing aspect, children are reluctant to share glue and take turns using or lending scissors. Meanwhile, in the cooperation aspect, children are reluctant to let friends work on tasks quietly, provide encouragement during play or study, tidy up toys after use, and cooperate in keeping the classroom environment clean, such as helping to collect and dispose of trash in its place. Additionally, in the appreciation aspect, children are reluctant to thank friends who help, protect joint work from damage, and appreciate friends' work, either through praise or applause.

Table 6. Results of Observations on Children's Prosocial Behavior in the Pre-cycle Phase

No.	Child's Initials	Score	Category
1.	AI	24	MB
2.	AF	17	BB
3.	AL	12	BB
4.	AZ	17	BB
5.	DZ	13	BB
6.	KH	23	MB
7.	KY	22	MB
8.	RH	14	BB
9.	SF	24	MB
10.	SQ	19	BB

The results of the pre-cycle observation data show that the prosocial behavior of children aged 5–6 years in Lerang State Kindergarten is still relatively low; there are 6 children (60%) in the BB category and only 4 children (40%) in the MB category. Therefore, further development through the implementation of ecoprint in Cycle I is considered necessary.

In the first meeting of Cycle I, the children made ecoprints using the pounding flower technique on the front of a patterned fabric. The activity began with a mystery box game to foster children's curiosity about the activities to be undertaken. Previous research has shown that magic boxes, which are opaque cubes filled with specific objects, can encourage children to be more active and enthusiastic in learning (Mulyono et al., 2025).

In this study, the term "mystery box" is used based on the usefulness and shape of objects that have been modified to meet the needs. Alternatively, children place their hands into the box, then guess the tools and materials inside. The children show great enthusiasm, asking questions about items such as garment front-panel patterns, flowers, a wooden mallet, and plastic sheets. The teacher addresses these inquiries by explaining the learning activity,

while first prompting the children to consider the purposes of the available tools and materials. Through this interactive Q&A process, the teacher also demonstrates the "ecoprint pounding" technique.



Figure 1. All the Children Help Hold the Plastic

Certain prosocial behaviors began to emerge early in the activity, fostered by the teacher's guidance and direction. These included taking turns using a wooden mallet, helping to hold a piece of plastic in place, assisting peers who were struggling, acknowledging others' prosocial actions by saying "thank you," and exercising care while applying the ecoprint pounding technique to avoid damaging their collaborative work. During the first session of the first cycle, one instance of frustration arose when a child was given a large hibiscus flower to pound, which proved exhausting for them. Initially, the peer who provided the flower did not fully grasp the other child's frustration. However, the teacher, being attentive to the situation, promptly suggested that other children step in to help. The children responded with enthusiasm, taking turns pounding the hibiscus flower. The teacher also encouraged them to offer collective praise for the final result. Feeling noticed and valued in this way ultimately makes children more receptive to moral guidance (Hartati, 2026).

Nevertheless, careful observation at each stage of the activities shows that children are starting to get bored waiting for their turn. They also tend to be passive and only become spectators because group activities were rarely carried out before. Previous studies indicate that the lack of interaction within the group causes children to become passive and not take the initiative to take on roles to achieve common goals (Wilyanita et al., 2026).

This situation ultimately prompted the children to tease one another through physical contact, which frequently escalated into fights. This phenomenon aligns with previous research showing that physical assaults on children often begin with a calm seating activity before eventually leading to hitting actions (Asnia & Muthohar, 2024).



Figure 2. Children Begin Teasing Each Other

Here are the results of the children's prosocial behavior observations in Cycle I, first meeting.

Table 7. Observation results of Prosocial behavior of children in Cycle I, First Meeting

No.	Child's Initials	Score	Category
1.	AI	26	MB
2.	AF	19	BB
3.	AL	21	BB
4.	AZ	24	MB
5.	DZ	19	BB
6.	KH	24	MB
7.	KY	24	MB
8.	RH	26	MB
9.	SF	24	MB
10.	SQ	26	MB

The results of observing the implementation of cycle I of the first meeting in the ecoprint pounding activity to develop prosocial behavior in children of group B3 at Lerang State Kindergarten show improvement. The results include 3 children (30%) in the BB category and 7 children (70%) in the MB category.

Prosocial behavior with the highest development is demonstrated in the indicator of appreciation, especially in appreciating a friend's prosocial behavior by saying thank you and being careful when applying ecoprint pounding techniques to ensure the collaborative work is not damaged. Appreciating a friend's prosocial behavior by saying thank you is the easiest action to perform because it only requires words without substantial effort and sacrifice. Children tend to offer help when the cost or risk of the prosocial action is low (Eisenberg & Mussen, 1997). In addition, the presence of friends who remind the child when they forget to say thank you becomes a driving factor for the improvement of those indicators. Previous

studies have revealed that the presence of a child who is brave enough to remind their friend can help children interact more positively with ease (Prastyo et al., 2026).

Careful consideration when applying ecoprint pounding techniques is required to prevent damage to the collaborative work. This activity is carried out on a piece of patterned fabric for the front part of the shirt to foster a sense of togetherness among children in creating a piece. In addition, the fabric also displays the work of the teacher and peers. Previous research shows that parental and peer participation in finger painting art activities can foster interaction, sharing, cooperation, respect, and strengthen emotional bonds in togetherness. (Henawati et al., 2025).

Another factor that makes a child cautious in completing ecoprint pounding is the motivation to produce good work after seeing the achievements and praise received from friends. The desire to follow in the footsteps of peers who receive appreciation for their active participation motivates the child to be more careful in the learning process (A. A. Usman & Rohmah, 2024).

The ecoprint pounding method activity, being relatively new, requires children to pay attention to all stages of the process carefully. This activity also integrates guidance for prosocial behavior. Therefore, children who are still in the habituation phase need intensive guidance from teachers because they often forget and are still rigid in applying prosocial behavior.

Some improvement steps for Cycle I, second meeting include: (1) starting activities with a playful approach through the game “Find the Smile Coin” to boost children's enthusiasm; (2) providing continuous guidance so that children exhibit prosocial behavior and can complete the ecoprint stages well; and (3) arranging alternating seating between boys and girls to minimize disturbances.

In the first cycle I, during the second meeting, the activity began with the game "Find the Smile Coin" as an opening activity. Previous research has revealed that learning that includes challenge elements and activities to find hidden objects can motivate children to actively participate in learning (Ekawati & Hadratullah, 2025). In line with that research, children show high enthusiasm as they search the classroom to find 10 smile coins made of cardboard that are pasted in several places.

The activity revealed that five children did not manage to find any coins, while some others found more than one. The teacher then gave the children with more coins the opportunity to share with their friends. The coins can then be exchanged for leaves that will be used for ecoprint pounding. In this second meeting, the children already have an idea of the stages of ecoprint

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pounding activities and the prosocial behaviors practiced. Here are the observations of the children's prosocial behavior in Cycle I of the second meeting.

Table 8. Results of Observations on Children's Prosocial Behavior in Cycle I, Second Meeting

No.	Child's Initials	Score	Category
1.	AI	31	BSH
2.	AF	25	MB
3.	AL	22	MB
4.	AZ	29	BSH
5.	DZ	24	MB
6.	KH	26	MB
7.	KY	30	BSH
8.	RH	24	MB
9.	SF	30	BSH
10.	SQ	28	BSH

The results of the observation of the implementation of cycle I of the second meeting in the ecoprint pounding activity to develop prosocial behavior of children in group B3 at Lerang State Kindergarten show improvement. The improvement is indicated by 5 children (50%) in the MB category and another 5 children (50%) in the BSH category.

The most developed prosocial behavior is cooperative behavior, especially in indicators of helping to hold the plastic and helping to clean up leaves or flowers stuck to fabric and plastic. As a prevention effort against disorders caused by physical contact that could trigger fights among boys, as occurred at the first meeting, the seating arrangement alternates between boys and girls. This seating arrangement can increase children's discipline, allowing them to help hold the plastic when performing the ecoprint pounding technique.



Figure 3. Alternating seated position

The teacher shares tissues so that children can help their friend clean up the leaves or flowers that stick to the cloth and plastic. This action reflects the assignment of tasks and responsibilities to the children. Existing literature suggests that assigning tasks and

responsibilities from an early age tends to foster prosocial behavior (Eisenberg & Mussen, 1997). Furthermore, young children who are given responsibilities generally derive pleasure from carrying out tasks assigned by their teacher (Winarsih & Wahyuningsih, 2024). Assigning roles or tasks within a group can also cultivate a sense of interdependence, encouraging collaboration to achieve optimal team outcomes (Hendrayana, 2026).

Nevertheless, some children occasionally still require reminders from the teacher. Meanwhile, the issue of passive behavior observed during the first session persisted into the second. Additionally, two boys were seen teasing each other, a situation stemming from their close seating proximity. This was influenced by an imbalanced group composition, consisting of six boys and four girls.



Figure 4. Child Uncooperative in Holding the Plastic

At the end of Cycle I, children's prosocial behavior reached its highest level in the BSH category, at 50%. However, this result did not yet meet the established success indicator, which requires a minimum of 76% in the BSB category. Therefore, corrective actions must be implemented in the subsequent cycle.

The improvement measures in Cycle II involved implementing a cooperative learning model. Previous research indicates that small-group learning, involving at least two children, can improve fine motor skills, sharing, turn-taking, cooperation, and social interaction during collage-making activities (Nasution et al., 2026). In this study, the class was divided into five groups, with two children in each group. This arrangement enabled five children from different groups to perform the ecoprint pounding technique simultaneously while continuing to receive appropriate guidance. The teacher served as a facilitator and supervisor, monitoring the activity without directly intervening in the group work. The children were also given ample opportunities to interact in an open-air environment. In addition, the teacher consistently guided and educated children who had not yet demonstrated appropriate prosocial behavior.

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In the second cycle, the first meeting's group division was conducted through a balloon-picking activity inside the mystery box to boost children's enthusiasm for starting the ecoprint pounding activity with their groupmates on the terrace. Previous research shows that using a magic box in opening learning activities can increase children's enthusiasm (Hartati et al., 2026). The cooperative learning model of five groups applied in this first meeting conditions children to face their work partners in the ecoprint pounding activity. This aligns with Eisenberg and Mussen's view that individuals tend to offer help more quickly if they are the only helper at the scene (Murisal & Sisrazeni, 2022).

Considering that this activity aims for children to share, cooperate, respect, and not only focus on prosocial behavior toward groupmates, a rotation system is also implemented. This system encourages children to collaborate with different partners as they create ecoprint pounding designs on five drawstring backpacks. Previous research has shown that a rotation system makes it easier for teachers to observe children's social-emotional development, while also providing each child with the opportunity to take on different roles and engage in social interaction (Musthofiyyah et al., 2025). Here are the observations of children's prosocial behavior in Cycle II, first meeting.

Table 9. Results of Prosocial Behavior Observation in Children during Cycle II, First Meeting

No.	Child's Initials	Score	Category
1.	AI	38	BSB
2.	AF	36	BSB
3.	AL	30	BSH
4.	AZ	34	BSB
5.	DZ	27	MB
6.	KH	34	BSB
7.	KY	37	BSB
8.	RH	27	MB
9.	SF	38	BSB
10.	SQ	35	BSB

The results of the observation of the implementation of Cycle II, the first meeting of the ecoprint pounding activity to develop prosocial behavior of children in group B3 at Lerang State Kindergarten, show improvement. The improvement is indicated by 2 children (20%) in the MB category, 1 child (10%) in the BSH category, and 7 children (70%) in the BSB category.

The highest development of prosocial behavior is sharing, especially in indicators of leaf and/or flower sharing. In a structured classroom setting, children often become

accustomed to waiting for a teacher's instructions rather than relying on their own intrinsic motivation to make decisions. Conversely, outdoor learning environments can trigger spontaneous responses and actions in children (Fauziyyah & Pratiwi, 2026). Consequently, activities such as gathering leaves and flowers directly boost children's enthusiasm. Previous research reveals that children generally display generous attitudes and enjoy helping when they feel happy (Eisenberg & Mussen, 1997). Furthermore, the opportunity to breathe fresh air makes outdoor learning more enjoyable, while also serving as a platform to foster social-emotional development through play and cooperative learning (Mustakimah, 2023). Moreover, for many kindergarten children, exploring the natural environment serves as a novel learning experience. This natural setting encourages children to interact, communicate, and collaborate with one another as they gather leaves or flowers.



Figure 5. Children Are Happy When Engaging in Activities Outdoors

Another factor that triggers children to share leaves and flowers is a direct request from a peer who does not receive a portion. In six-year-old children, one strategy for requesting is done directly to the target through verbalization, gesture, and facial expression (M. Usman et al., 2022).



Figure 6. Children Helping Each Other and Sharing Flowers

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Several issues were found in cycle II of the first meeting. First, the long interval between the picking process and the distribution caused some leaves or flowers to wilt and bruise. In addition, students had difficulty selecting materials because those materials were kept in bags and not visible as a whole. The effort to remove the stitching on one side of the drawstring backpack also did not make it easier for students to put in plastic and plants. Second, the group cooperation rules with a rotation system require students to readjust to a new partner. The adjustment of this interaction process briefly triggered conflicts, such as a wooden mallet being grabbed, although eventually students could take turns independently without teacher reprimand. In the second cycle's second meeting, the teacher divided the group using a bag-hanger picking activity inside the mystery box to increase enthusiasm. The activity continued as in the previous meeting by applying some improvements. The corrective steps in the second meeting cycle II include conditioning students to immediately share after plucking leaves or flowers, removing leaves or flowers from the pockets into the group's plastic basket, and opening the seams on both sides of the backpack. Here are the results of observed prosocial behavior of students in the second meeting cycle II.

Table 10. Results of Prosocial Behavior Observation of Children in the Second Meeting of Cycle II

No.	Child's Initials	Score	Category
1.	AI	40	BSB
2.	AF	38	BSB
3.	AL	36	BSB
4.	AZ	34	BSB
5.	DZ	30	BSH
6.	KH	40	BSB
7.	KY	40	BSB
8.	RH	30	BSH
9.	SF	40	BSB
10.	SQ	40	BSB

Observations of the implementation results for Cycle II of the second meeting on ecoprint pounding activities to develop prosocial behavior in children of group B3 TK Negeri Lerang show an improvement. The results include 2 children (20%) in the BSH category and 8 children (80%) in the BSB category. The highest development was in prosocial behavior, namely sharing and cooperation. In particular, indicators of taking turns using the wooden mallet and indicators of helping a friend who is having trouble performing the pounding technique. Both indicators show the greatest increase due to their correlation. This means that when a child helps a friend who is having difficulty pounding, the child will automatically

take turns using the wooden mallet. The behavior indicators of prosocial development that show the highest progress are sharing and cooperative behavior. This highest increase is specifically evident in the indicators of taking turns using the wooden mallet and helping a friend in difficulty. These two indicators experience a significant rise because they are interrelated; when a child helps a friend who is in trouble during the pounding technique, they will automatically take turns using the wooden mallet.



Figure 7. The Children Take Turns Using the Wooden Mallet and Help One Another

Nonverbal language or body movement cues are closely related to emotions and interpersonal relationships, thus having a strong influence (Ture et al., 2026). Children do not seek help through words, but through facial expressions and body movements. This behavior indicates a request for assistance, for example, when the child offers a wooden mallet to a friend. Repetitive ecoprint pounding activities habituate the child and enable them to understand their friend's nonverbal language. This is shown by the child's attitude in promptly accepting the wooden mallet to assist the pounding process. Another factor causing children to take turns using the wooden mallet is their tendency to immediately hand it over when they feel frustrated or unable to strike anymore. Previous research reveals that one characteristic of young children is easy giving up, frustration, and lack of patience in facing difficult tasks (Diniarza, 2025).



Figure 8. Children's Interaction During Ecoprint Pounding

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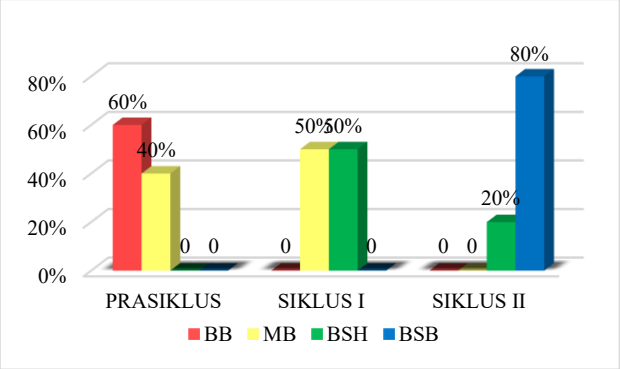
Factors supporting success in the second cycle of the second meeting include: teacher approaches that give children ample opportunities to interact directly outdoors; group division based on the color of bag hangers taken from the mystery box to boost children's enthusiasm; implementation of the cooperative learning model in five groups to prevent passive attitudes; rules of cooperation with a rotation system to encourage children to collaborate with different work partners in producing ecoprint pounding works; as well as the careful supervision of teachers over the progress of activities and the consistency of teachers in scolding and guiding children who act wrongly or forget to behave prosocially. The development of children's prosocial behavior at Lerang State Kindergarten, based on the final meeting at the end of each cycle, is illustrated in the following graph.



Graphic 1. Development of Prosocial Behavior in Children during Precycle, Cycle I, and Cycle II

Here is the summary of the teacher's success assessment in applying ecoprint at the first meeting (P1) and the second meeting (P2) in Cycle I as well as Cycle II.

Table 11. Comparison of Teacher Success Assessments in Implementing Ecoprint in Cycle I and Cycle II

Aspects of Observation	Cycle I			Cycle II		
	Score		Average Score ($\bar{X}$)	Score		Average Score ($\bar{X}$)
	P1	P2		P1	P2	
The teacher explains the ecoprint pounding activities that will be carried out, along with the tools and materials to be used	3	3	3	3	3	3
The teacher demonstrates the steps for the ecoprint technique (pounding)	3	3	3	3	3	3
The teacher provides an example of prosocial behavior through an ecoprint activity using the pounding technique	2	3	2,5	4	4	4
The teacher guides the	2	3	2,5	3	4	3,5

children to engage in prosocial behavior during the ecoprint pounding activity						
Final Score			11			13,5

The application of ecoprint at the end of cycle I is in the good category with a score of 11, then increases to very good at the end of cycle II with a score of 13.5. The development of children's prosocial behavior at the end of cycle II has reached 80% with the BSB criteria. This indicates that the minimum success indicator of 76% for the BSB category has been met; it can be concluded that the implementation of ecoprint can improve prosocial behavior in 5–6 year old children at Lerang State Kindergarten.

CONCLUSION

Observation results indicate an increase in prosocial behavior among 5–6-year-old children at Lerang State Kindergarten through the ecoprint pounding technique. In Cycle I, the success rate in increasing prosocial behavior reached 50% BSH, and the technique was rated good. In Cycle II, the success percentage increased to 80% BSB, and the technique was in the very good category. This achievement has met the predefined success indicators, namely a minimum of 76% in the BSB category. Thus, the ecoprint technique application can improve the prosocial behavior of 5–6-year-old children at Lerang State Kindergarten. However, this classroom action research (PTK) yields findings that cannot be generalized. Therefore, researchers suggest that future research be conducted with a broader sample and using a comparison group so that the results can be generalized. Further researchers are also advised to conduct additional studies on other prosocial behaviors that can be developed through ecoprint pounding techniques, applying variations of other ecoprint techniques, or combining them with different learning methods. This suggestion is based on the consideration that children's prosocial behavior can be developed through various creative media.

AUTHOR CONTRIBUTION STATEMENT

Harpina contributed to the conceptualization of the research, the design of the methodology, data collection, processing, data analysis, and the drafting of the initial version of the article. Meanwhile, Sri Mulianah, Syarifah Halifah, and Tien Asmara Palintan

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contributed to the conceptualization of the research, instrument validation, and supervision of the research from the early writing to the approval of the final manuscript version.

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