

Exploring Informal Children's Play Space through Phenomenography Study

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Abstract— Research on children play space commonly took place in a formal environment. However, play is an innate activity to children and they can construct play space anywhere with any means. This paper tests the phenomenography approach and memory sketch method on a different context to see the way children from informal environment (indigenous settlement/kampung) construct their play space. Memory sketch is a tool adopted from Sun Young Rieh's research of children and adult's lived memory. This method is particularly convenient to gain participating children's personal memory of place to play in a short time span and movement restrictions during the global pandemic. A rail-side settlement in Surabaya is selected as the study case area of informal environment for its thriving neighborhood despite the observable multilayered problem. The result from 2 cases of selected participant aged 12 and 13, shows that memory sketch method can draw diverse, personal comprehension to the same given prompt. However, it signifies a subjectivity that has to be complemented with other methods to enrich children's narration of their play. Therefore, memory sketch needs supplementary methods such as in-depth interview or qualitative conversation and site visit in order to gain a comprehensive result.

Keywords—Children, Memory sketch, Play, Rail-side kampung, Surabaya.

I. INTRODUCTION

Phenomenology and phenomenography are closely related for having the same qualitative nature [1] but with different focus. While phenomenology focuses solely on the phenomena, phenomenography in the other hand is centered to the relation of phenomena and the actor [2]. This study sought the relation of children, play activity, and the environment. There has been many child-environment research that utilize visual tools such as: Derr's research on children's examination of the city that uses photographs and colored frames, demonstrates children's capability of environmental awareness and knowledge [3], Moore and Young's unpublished project of Childhood Use of the Urban(izing) Landscape (CUULS) that maps children's total phenomenal landscape [4], and Rieh's memory sketch tool that compares adult's lived memory of school playground and children's current state of school playground shows the relation of imprinted memories and sense of place [5]. All three research are based on children's perspective in which derived from their ability of perception and experience. With many other research that share similar focus, it can be concluded that children's experience-based research is particularly important in studying a child-friendly environment. However, these research are

based on formal environment. Thus, a different setting from informal environment is chosen for this study.

This paper is part of thesis and highlights the method part of the work: "Place Experience of Children in Rail-side Kampung to Support Child-friendly Settlement". This study tests the memory sketch tool on an informal setting of a rail-side kampung in Surabaya. Kampung is the key features to Indonesian urban settlement in metropolitan area [6] that used to be generalized as slum or squatter during the colonial era [7]. Focusing on marginalized context, a rail-side settlement is initially formed as a temporary squatter kampung [8] which means, the area itself is never meant to be a settlement area [9]. This transformation emerges as a multilayered problem: the irresponsible parties take advantages from the lack of supervision to create cheap rental housing for residents that are not legal conscious and have lack of access to adequate housing [10]. This study recognizes the legal issue of the study case area. However, this study does not interfere by arguing or approving the legal issue itself. The legal issue practically serves as a contextual fact of the study case area.

In the general scope, Surabaya has attained Child-Friendly City predicate [11] through *Inisiasi Kampung Arek Suroboyo* (Initiation of Surabayan Children Kampung) or IKAS, also known as *Kampung Ramah Anak/KRA* [12]. Despite its success, there is a case that shows the program does not fully aligned with children's preferences and the main drive to the case is disparity between their perception to the program applied in the kampung [13].

Children's development revolves around play activity [14]. Play is an innate behavior related to their physical and social development [15]. Interaction in play activity creates the best environment for children to learn [16]. Play itself is facilitated to children by the smallest microcosm of family [4] and grows into the mesosystem of community [17]. Yet, the existence of non-social play is recognized and claimed to be benign or rather, beneficial to some extent [18]. This is how memory sketch facilitates to communicate children's different views on their play activity.

II. CHILDREN FRAMEWORK

The following framework is used in order to study children behavior in kampung: setting up age constraint from children cognition development, identifying play as the observed activity, and social ecology of kampung as the study case area.

A. Outlining Children

Children is a concept commonly limited to age range between 0-18 years old [19]. Age is a general identifier to sensory-motor [20] and cognitive development that shapes their overall behavior [21]. Piaget inferred that children went through four stages of cognitive development in their lives [16] as follows:

- *Sensorimotor stage* (from birth to 2 years old): children build their understanding of reality about themselves and the way things work through assimilation and accommodation with the environment Bottom = 1.18"
- *Preoperational stage* (2 to 4 years old): children begin to have the ability to classify objects, mainly through its features. They are also able to conceptualize things abstractly in the presence concrete object.
- *Concrete operations* (7 to 11 years old): children can now begin to conceptualize and able to logically explain their accumulated physical experiences.
- *Formal operations* (begins at 11 to 15 years old): the final formation of cognition. Children can create a rational judgement without the presence of concrete object.

This study focuses on the *formal operations* stage where 2 selected children, aged 12 and 13, described their place to play. This stage is selected for it is where children have their experiences accumulated. They have the ability of hypothetical thinking where their thinking process can go forward or backward. This ability is necessary for memory sketching.

B. Play as Childhood's Essence

Play is an inherent activity that is beneficial to children's physical and cognitive development [14], [15], [22]. Play has no definitive meaning for its subjectivity [23] but there are basically two play hierarchies: *social* and *cognitive play* [24], [25]. In The Play Observation Scale (POS), the *social play* highlights the proximity and attention of play while *cognitive play* is based on children's intention of play. In between the two categories, there are also behaviors implied as *non-play behavior*. The complete categorization is as follows:

Social play

- *Solitary play*: in solitary play, the child plays separately and may not pay attention to each other. They usually play with separate, individual toys that differ to each child.
- *Parallel play*: independent play in the company of other children. Children may be in a closer proximity to engage 'parallel speech' or be more attentive to one another but they do not play together.
- *Group play*: children play in a group with shared group-centered goal. They may be following each other, creating something, competing, dramatizing, or playing a formal games in an organized manner.

Cognitive play

- *Functional play*: child seeks physical sensation through motoric activity, with or without objects.
- *Constructive play*: children's manipulation and creation of objects.

- *Exploration*: the child meticulously examines information from an object.
- *Dramatic play*: the child pretends to take somebody's role as a play. It includes the activity to animate an inanimate object.
- *Games-with-rules*: children play by the complied rule, usually in a competitive manner.

Non-play behavior

- *Unoccupied behavior*: the child is not in any purposive activity.
- *Onlooker behavior*: the child is spectating an activity and is not actively involved to it.
- *Transition*: the child is in transitioning phase from one activity to another.
- *Active conversation*: a verbal information transfer among children. It excludes parallel-speech, private-speech and also differs from conversation among children-teacher or adult.
- *Aggression*: aggressive interaction between children.
- *Rough-and-tumble*: a non-organized, playful physical contact.
- *Hovering*: an onlooker behavior in a very close proximity between the child and observed activity.
- *Anxious behavior*: behaviors that signify anxiety, such as: crying, whining, nail biting, hair twisting, etc.

This study does not apply a specific definition to the word 'play' and let children to categorize it themselves. The activity they categorize as 'play' then discussed to the play hierarchies described above.

C. Children in Rail-side Kampung: The Mesosystem of Play

Human develops through different systems in life. There are *microsystem* built from family relations, *mesosystem* of community associations, the social structures of *exosystem*, and the world structures of *macrosystem* [17]. Children started their social ecology from family relation to community associations. The development of system plays a role to facilitate children's development and the play activity [4]. Therefore, it is important to see the two systems that are particularly crucial in children's development: the *microsystem*: sibling and parent-child subsystem, and *mesosystem*: friendship, neighbor, and peers [17].

III. PHENOMENOGRAPHY STUDY IN INFORMAL SETTLEMENT

This section covers the study case area, participants, and approach to the study.

A. Memory Sketch

Phenomenography is a research method that qualitatively maps different ways of people construct their understanding. Phenomenography shared four features with phenomenology: relational, experiential, contextual, and qualitative [1]. However, rather than solely looking at a specific phenomenon, the object to phenomenography is the relationship between the actors and the phenomenon [2]. Therefore, while both phenomenography and phenomenology shares similar features, they are different in the way that phenomenology is

related to the core of phenomenon and in the other hand, phenomenography is related to the experiences and perceptions of the phenomenon [27].

Memory sketch is a phenomenography tool from Rieh’s research on children’s lived experience [5]. Originally, the study compares two different age groups to see ‘place generators’ from participants’ memory that manifests into sketches. This research adapted the similar method but focuses only on *formal operations* age group. Participants were asked to *draw their usual place to play in the kampung* in two sessions: each session was held a month apart for safety measure in this pandemic. This tool is helpful to gain a glimpse of lived experience, particularly during the pandemic timeframe where direct meetings and continuous field observation are highly risky and even restricted. This tool is also supported by follow-up interview and walking-along [28] to the site in children’s sketch to gain the natural context of children’s memory.

B. Kampung Ambengan Selatan Karya V, Surabaya

Kampung Ambengan Selatan Karya V (shorten: Kampung Ambengan) is registered within Pacarkeling sub-district of Tambaksari district, located along the east side of the railroad track, in line to Surabaya Gubeng Railway Station (Fig. 1). This location gives access to large open spaces between railway tracks compared to other rail-side kampung that promotes more movements and activities (Fig. 3-Fig. 4). Kampung Ambengan is one of 72 rail-side kampungs identified in Surabaya, with 245 houses and 330 families living in the kampung. The large occupancy is divided into 4 community groups [26] (Fig. 2).



Fig. 1. Major circulation (in red line) of Kampung Ambengan Selatan Karya V (Source: Google Maps, Openstreet Map).

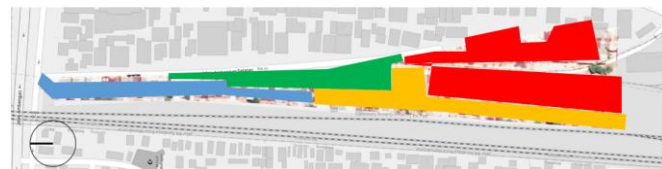


Fig. 2. Groups in Kampung Ambengan: Group 1 in blue, Group 2 in yellow, Group 3 in green, and Group 4 in red (Source: Arkom Jatim, 2019).



Fig. 3. Aerial view of open fields between railway tracks (Source: Google Maps).

There are two accesses to the kampung: northern paved access from Group 1 and earthen road with train track on the

south to the Group 4 (Fig. 5). The southern track is used for the locomotive that stops in the middle of kampung. This track is also divided the kampung into two major lanes (Fig. 1).



Fig. 4. Residents crossing through the field between the tracks, 2019 (Source: Author documentation).



Fig. 5. Red gate of northern access and southern trail (Source: Google Maps).

C. Selected Participants: Anna and Yani

Originally, there are 16 participants selected: 12 from *concrete operations* and 4 from *formal operations*, with two of them intersect both stages for being 11 years old at the time of sketching sessions. Therefore, this study highlights 2 participating children classified solely on *formal operations* stage: Anna and Yani. Besides, they are the only participants who went through sketching sessions twice before the activity is halted due to the rising case of COVID-19 pandemic.

Anna (12 years old, pseudonym) and Yani (13 years old, pseudonym) are the eldest of all participants and classified in *formal operation* age stage. Anna and Yani are selected personally by their shared acquaintance: Ina (18 years old, pseudonym), a youth association member in Kampung Ambengan whom also becomes an informant in this study.

Anna is a 6th grader who lives in Group 3. She is the third child in the family. She lives with her father who works outside the kampung, 2 older siblings, and a younger brother. Her mother has passed away due to illness. Anna’s grandma lives nearby in a separate house and usually asked Anna to do errands for her. Anna does not go out much and usually spends time with Ina, the attending youth association member who also lives in Group 3.

Ina has just graduated from high school and is part of the youngest batch in the kampung’s youth association. She lived with her mother in Kampung Ambengan since 2005. She is an acquaintance of both Anna and Yani. Ina is particularly close to Anna because of the proximity of their houses. Moreover, Ina also a part-time teacher that gives out lessons for nearby children who need help with their homework. This is also the underlying reason to her selection of participants: a personal affiliation.

Yani lives in Group 1 near to the north entrance. She has

just recently graduated from elementary school and was on preparation for middle school by the time of second-call sketching session with her. There are total 6 persons, including herself, in the family. Her parents sell meatballs and she usually helps around, cleaning after the cooking process. During the sketching session, she is always accompanied by a youth association member other than Ina. In the initial sketch session, she was accompanied by Alya (pseudonym) who is also her relative. In the second-call, she was accompanied by Sita (pseudonym), Alya's neighbor.

IV. RESULTS AND DISCUSSION

This section displays 2 results of selected cases: Anna and Yani, who went through two sketching sessions in this study. The sketch prompt limits the outcome to *place* and *play* activity. The sketch result combined with follow-up interview indicates children's depth of place experience that is related to behavior-setting mechanism.

A. Anna's Case

Anna's initial sketch depicts the field between the tracks where she played badminton with Ina and her sibling (Fig. 6). On the second-call, her sketch depicts her living room where she usually watches TV with Ina (Fig. 8). The second sketch is completely different to the first one in terms of both appearance and the source of idea. Despite both being real play experiences to her, the first sketch comes from Ina's suggestion while the second one is completely her own idea.



Fig. 6. Anna's sketch of field and badminton play (Source: Author documentation).



Fig. 7. The actual field on May 2021 (Source: Author documentation).

The interview reveals that she does not play outside as much as her younger brother, who is cycling around the kampung at the time of observation. She is usually watching movies at home with Ina, who lives nearby in the same group. There is a sensitive case to her memory that alters the

approach to her narration. According to conversation with Ina, Anna has just lost her mother last year. Therefore, there is no site visit with Anna herself. Instead, Ina took her place and the exploration is represented by Ina's description.

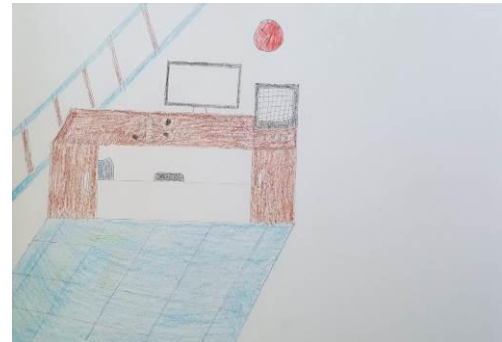


Fig. 8. Anna's sketch of her living room (Source: Author documentation).

B. Yani's Case

Yani's initial sketch shows her usual hangout spot: a wooden bench by the train tracks (Fig. 9-Fig. 10). Her rendition of the place highlights several visible elements: the wooden bench, shrubbery behind it, plants on the ground, catfish pond, and tree as the entrance. Yani usually sits on the bench, being on the phone, or playing and chatting with her friends. These activities are not depicted but described in the follow-up interview.



Fig. 9. Anna's hangout place (Source: Author documentation).



Fig. 10. Real life condition of the place (Source: Author documentation).

In her second sketch, Yani draws another hangout place that is located across the place in her initial sketch (Fig. 11). The second sketch depicts her friend's front porch (Fig. 12). Similar to the first sketch, the second sketch does not show any specific activity at all. The activity described in the follow-up interview is similar to the first sketch. The only

difference of both places are adult's presence. Yani prefers any place that is not occupied by adults.

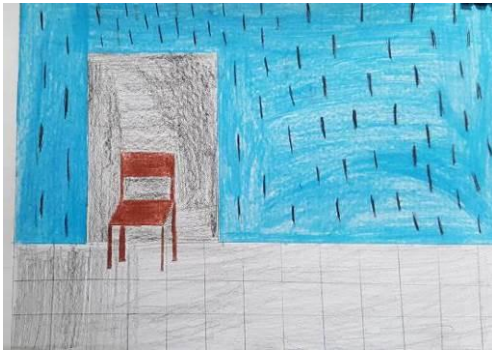


Fig. 11. Yani's sketch of a friend's porch (Source: Author documentation).



Fig. 12. The actual porch on June 2021 (Source: Author documentation).

C. Discussion of Two Cases

The prompt has a clear contextual requirement to show *play places in the kampung*. Being in informal environment, there are some play objects scattered but there is no designated playground exists in the kampung. Rather, children define their play spaces activity and their social scope.

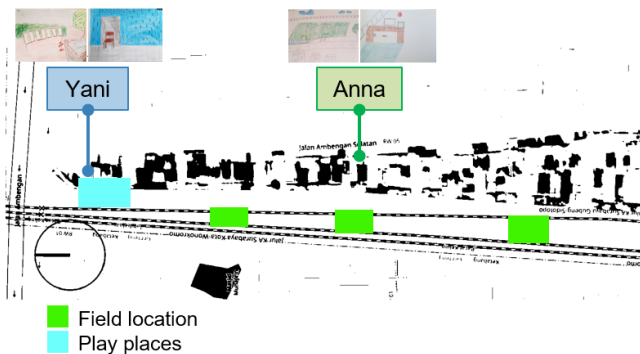


Fig. 13. Location of the participants in the kampung (Source: Author documentation).

The two cases demonstrate the elusive meaning of play [23]. In Anna's case, her silent, homebound tendency correlates to her less engagement to the outdoor environment. her play activity exists in microcosm network [17], consists of her siblings and neighbor. In her age, she has the ability to depict the place in her imagination and in the same time, she questioned her own decision to draw the living room (Fig. 8) and categorize 'watching TV' as 'play activity'. Watching TV translates into onlooker behavior [24], [25] and counts as a non-play behavior.

Yani's overall case shows the importance of social relation in play activity. She has high engagement in the community association level, between her relative, friends, and neighbors. To her, active conversation and being around her affiliates is considered as play. It contradicts the POS perspective [24], [25], where active conversation is not considered play behavior. It is important to remember that the dynamic state of play where hanging out can be both an unoccupied behavior and a transitional phase before another play engaged. It is shown in Yani's description where she also play some games on the place while hanging out with her friends.

There are differences in comparison to Rieh's method. The result displayed in her paper shows, mostly a black-white outline sketch of favorite memories about school. These sketches are created by fifteen upper professional-level students. Sketches can depict either place or activity, but the level of detail signifies the richness of memories. In this research, the level of detail is shown in the description of the sketch, instead of the rendition itself. There is deeper memory beyond the representation of a certain object. The recognition and reduction or exaggeration of small details supports the narration and factual condition of the places drawn.

V. CONCLUSION

This study proves both the merit and demerit of memory sketch method in an informal setting. Its particular strength is located in the depth of personal story sourced from sketch and supported with description while being on the actual setting. However, it is highly dependent to children's enthusiasm and the overall condition that is primarily challenged by the ongoing pandemic.

It can be seen from the difference of two cases, where the interest to sketch activity plays a subjective role to the sketch outcome. The process of comprehending the prompt itself depends on the children's upbringing. Memory sketch alone cannot be employed without being supported by in-depth interview or qualitative conversation about the sketch itself. Therefore, creating a conducive situation that suits children's trait to draw is essential. Lastly, memory sketch method has the opportunity to be quantified especially under multidisciplinary study. This method is highly suggested under normal circumstances where intensive contact can be held.

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REFERENCES

- [1] F. Marton, "Phenomenography—A Research Approach to Investigating Different Understandings of Reality," *Journal of Thought*, vol. 21, no. 3, pp. 28–49, 1986.
- [2] J. A. Bowden and P. Green, *Doing Developmental Phenomenography*. RMIT University Press, 2005.
- [3] V. Derr, L. Chawla, M. Mintzer, D. Cushing, and W. Van Vliet, "A City for All Citizens: Integrating Children and Youth from Marginalized Populations into City Planning," *Buildings*, vol. 3, no. 3, pp. 482–505, Jul. 2013, doi: 10.3390/buildings3030482.

- [4] I. Altman and J. F. Wohlwill, Eds., *Children and the Environment.*, vol. 3. Springer US, 2013. [Online]. Available: <https://books.google.co.id/books?id=bm7SBwAAQBAJ>
- [5] M. Sarvimäki, *Case Study Strategies for Architects and Designers: Integrative Data Research Methods*. New York: Routledge, 2017.
- [6] R. Emawati, "Facing Urban Vulnerability through Kampung Development, Case Study of Kampung in Surabaya," *Humanities and Social Sciences*, vol. 1, p. 1, Jan. 2013, doi: 10.11648/j.hss.20130101.11.
- [7] A. N. Ramadhani, M. Faqih, and D. Septanti, "Development Concept Of Urban Housing Renewal Based On Sustainable Tourism: A Case Study Of Kampung Tambak Bayan, Surabaya," vol. 6, no. 06, p. 9, 2017.
- [8] L. R. Ford, "A Model of Indonesian City Structure," *Geographical Review*, vol. 83, no. 4, pp. 374–396, 1993, doi: 10.2307/215821.
- [9] T. Akbar, "Kampung Tematik Sebagai Bentuk Partisipasi Masyarakat Dalam Permasalahan Permukiman Kumuh Di Kota Malang," *Wahana : Tridarma Perguruan Tinggi*, vol. 70, no. 2, Art. no. 2, Dec. 2018, doi: 10.36456/wahana.v70i2.1741.
- [10] R. Winarti, "Pengendalian Permukiman Liar Bantaran Rel Kereta Api Di Daerah Operasional (DAOP) I JAKARTA PT KERETA API INDONESIA (Persero)," Bachelor Thesis, Universitas Sultan Ageng Tirtayasa, 2014. Accessed: Jun. 03, 2021. [Online]. Available: <http://ane.fisip-untirta.ac.id/>
- [11] KPPPA, "Kota Surakarta. Surabaya, dan Denpasar Meraih Penghargaan Kota Layak Anak Kategori Utama," Jul. 24, 2019. <https://www.kemenpppa.go.id/index.php/page/read/29/2206/kota-surakarta-surabaya-dan-denpasar-meraih-penghargaan-kota-layak-anak-kategori-utama> (accessed Oct. 31, 2020).
- [12] D. Y. Handayani, "Lomba Kampung Pendidikan Kampunge Arek Suroboyo, Apresiasi Kampung Peduli Anak," Sep. 20, 2018. <https://www.suarasurabaya.net/kelanakota/2018/Lomba-Kampung-Pendidikan-Kampunge-Arek-Suroboyo-Apresiasi-Kampung-Peduli-Anak/> (accessed Oct. 31, 2020).
- [13] A. E. Wulandari, P. Setijanti, and E. B. Santoso, "Factors that Formed Kampung Ramah Anak (KRA)/ Child-Friendly Kampong based on Children Perception in Surabaya," *International Journal of Engineering Research*, vol. 5, no. 01, p. 10, 2012.
- [14] J. Almon, Ed., *Playing It Up—With Loose Parts, Playpods, and Adventure Playgrounds*. Annapolis: Alliance for Childhood, 2017.
- [15] M. M. Musyoka, "Understanding Indoor Play in Deaf Children: An Analysis of Play Behaviors," *Psychology*, vol. 6, no. 1, pp. 10–19, Jan. 2015, doi: 10.4236/psych.2015.61002.
- [16] C. G. Mooney, *Theories of Childhood, Second Edition: An Introduction to Dewey, Montessori, Erikson, Piaget & Vygotsky*. Redleaf Press, 2013.
- [17] U. Bronfenbrenner, *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge: Harvard University Press, 1979.
- [18] K. H. Rubin, "Nonsocial Play in Preschoolers: Necessarily Evil?," *Child Development*, vol. 53, no. 3, pp. 651–657, 1982, doi: 10.2307/1129376.
- [19] M. Li and J. Li, "Analysis of Methods of Allocating Grass Space for the Design of Child-friendly Cities: A Case Study of Changsha," *Procedia Engineering*, vol. 198, pp. 790–801, Jan. 2017, doi: 10.1016/j.proeng.2017.07.130.
- [20] J. H. Flavell and J. Piaget, *The Developmental Psychology of Jean Piaget*. Literary Licensing, LLC, 2011. [Online]. Available: <https://books.google.co.id/books?id=IhxBzQEACAAJ>
- [21] S. Ghanbari-Azarneir, S. Anbari, S.-B. Hosseini, and S.-A. Yazdanfar, "Identification of Child-friendly Environments in Poor Neighborhoods," *Procedia - Social and Behavioral Sciences*, vol. 201, pp. 19–29, Aug. 2015, doi: 10.1016/j.sbspro.2015.08.114.
- [22] S. Chatterjee, "Children's Friendship with Place: A Conceptual Inquiry," *Children, Youth and Environments*, vol. 15, no. 1, pp. 1–26, 2005.
- [23] J. White, *Outdoor Provision in the Early Years*. SAGE, 2011.
- [24] K. H. Rubin, "The Play Observation Scale." 1989. [Online]. Available: <http://www.utsc.utoronto.ca/~marksch/psyc26/The%20Play%20Observation%20Scale.pdf>
- [25] K. H. Rubin, "The Play Observation Scale (POS)." 2001.
- [26] Arkom Jatim, "Profil Kampung Ambengan Karya Selatan V." 2019.
- [27] L. Hitchcock, "Methodology in computing education research: a focus on experiences," in *Proceedings of the 19th Annual NACCQ Conference*, Wellington, New Zealand, 2006, p. 6.
- [28] M. Lim and A. C. Barton, "Exploring insideness in urban children's sense of place," *Journal of Environmental Psychology*, vol. 30, no. 3, pp. 328–337, Sep. 2010, doi: 10.1016/j.jenvp.2010.03.002.