



# Enhancement of Early Childhood 4C Skills with TAMAITO-Peaceful Love and Tolerance Smart Card

Dian Kencana Ayudhia<sup>1,2</sup>, Junita Dwi Wardhani<sup>1(✉)</sup>, Nining Sholikah<sup>2,3</sup>,  
and Edi Pramono<sup>4</sup>

<sup>1</sup> Faculty of Teacher Training and Education, Universitas Muhammadiyah Surakarta, Surakarta, Indonesia

[jdw126@ums.ac.id](mailto:jdw126@ums.ac.id)

<sup>2</sup> Bocah Pintar Preschool, Karanganyar, Indonesia

<sup>3</sup> Politeknik Pratama Mulia Surakarta, Surakarta, Indonesia

<sup>4</sup> Faculty of Mathematics and Natural Science, Sebelesa Maret University, Surakarta, Indonesia

**Abstract.** This ability of early childhood teachers to adapt and have competence and skills in carrying out learning is needed to produce children as quality human resources towards the transformation of the era of society 5.0. Learning problems in producing students who have 4C skills (creativity, communication, collaboration, critical thinking) are still very limited, especially in Early Childhood Education. The problem can be seen from the achievements of children's development were limited creativity when teaching learning process occurs, children have low communication skills and express opinions from the results of groups or collaborations. This study aims to increase 4C skills (Communication, Collaboration, Critical Thinking, and Creativity) through playing TAMAITO Smart Card for children ages 5–6 years. The subject study is a child at an early age, specifically a Kindergarten B group of 16 children consisting of 7 children male and 9 children female. This research type is descriptive qualitative, and the data was collected through interviews, observations, and documentation. The data analysis is carried out by stages of data reduction, data presentation, and withdrawal conclusion. The results showed that the use of the TAMAITO Smart Card could improve the 4C skills of early childhood. Including solving daily problems by being creative (Creative), convey about what and how things familiar surroundings (Creative), applying simple technology to complete tasks and activities (Critical Thinking), understand and show ability speak expressive (Communication) and possess behavior that reflects attitude care and mutual help (Collaboration).

**Keywords:** 4C Skills · 21<sup>st</sup>-Century Education · Learning Media · TAMAITO Smart Card

## 1 Introduction

Early childhood is a golden period of child growth where all aspects of development can be easily stimulated. This golden period only lasts once throughout the human life span. Experiences lived during this time can be recorded in a strong memory and carried for

© The Author(s) 2023

M. H. Hikmat et al. (Eds.): ICOLAE 2022, ASSEHR 757, pp. 527–541, 2023.

[https://doi.org/10.2991/978-2-38476-086-2\\_44](https://doi.org/10.2991/978-2-38476-086-2_44)

life. It is in accordance with Maria Montessori's opinion that children in this age range experience an absorbent mind period. Children in this age range absorb any information they receive through their senses. Montessori likens a child's brain at this age to a sponge that can absorb whatever is around it. This period is the key to the development of children's potential and intelligence in the future [1].

In the 21st century, it is insufficient for today's students only to acquire the traditional skills of the "3Rs" (reading, writing, and arithmetic) to be able to compete in the global society. They must also be capable in communication, creation, critical thinking and collaboration (the "4Cs" [2]. 4C skills should be emphasized in teaching and learning process of pre-school children [3].

The 2013 curriculum (K-13) is based on the times that have entered the 21st century. The implementation of the 2013 curriculum is shown to answer the challenges of the times towards education, namely to produce graduates who are competitive, creative, collaborative and character [4]. In 21st-century learning, skills become an essential item that must be developed in education. The Partnership for 21st Century Skills identifies 4C skills, namely Critical thinking, Communication skills, Collaboration/team building, Creativity and Innovation, as skills needed for learning [5, 6]. 4C skills are the key to unlocking lifelong learning and creative work [7]. In the 2013 *PAUD (Pendidikan Anak Usia Dini)* curriculum, the core competencies that students must achieve are described in several basic competencies, including: solving daily problems creatively (3.5 – 4.5), convey about what and how the objects around them are known (3.6 – 4.6 and 3.7 – 4.7), use simple technology to complete tasks and activities (3.9 – 4.9), understand and show expressive language skills (3.11 – 4.11) and have behavior that reflects caring and mutual help (2.9). These competencies embody the 4C skills referred to in the 2013 curriculum as critical, creative, communicative and collaborative thinking skills [8].

Previous research developed early childhood education media to shape character and 4C skills [9, 10]. Learning with the play method encouraged children's activity, knowledge and social interaction [11]. The other previous research studied the application of "Magic Star" 4C skills and improved the cognitive abilities of group B children in Ratna Siwi Tambirejo Kindergarten, Gajah District, Demak Regency. This innovation product is in the form of Magic Star learning media to achieve learning activities in mentioning and using the concept of numbers 1–10 with the playing process stimulating 21st century skills or termed 4C [12]. The developmental aspects of only cognitive and 4C competencies studied were not synchronized with the used curriculum, as a result the assessment was carried out only based on the observations of researchers or teachers. A qualitative descriptive study has been conducted to see the prospects of teachers in understanding and implementing the STEAM method to instill 21st century skills [13]. As a result, the use of 4C skills has begun to be applied in PAUD Mutiara Bunda Gandusari, with various media, including loose parts media, projects, role playing, host, and other media. But in the application of STEAM, sometimes teachers who do not understand its application often feel insecure about their abilities, so teachers often do not connect what children are doing with meaningful learning in their lives. The teacher does not realize and does

not understand that an event has a learning meaning so that the moment is passed and is not picked up by the teacher.

### TAMAITO Smart Card

Therefore, in this study, authors created an educational game media Peaceful Love And Tolerance or *Cinta Damai dan Toleran* (TAMAITO) Smart Card to reach developments in the 21st-century era, namely 4C Skills (Communication, Collaboration, Critical Thinking and Problem Solving, and Creativity and Innovation). One strategy that can help in preparing 21st century skills for children aged 4–6 years is the development of 4C skills. 4C skills at the early childhood level can be integrated into the play learning process [14]. The 4C skill is the natural ability to be addressed with the 2013 Curriculum [15]. Learning in Kindergarten differs from learning at a higher level of education, especially in learning media or teaching aids. Kindertgartens still need things or objects that are concrete, easy to observe, and directly confronted (Table 1).

**Table 1.** The Process Of Playing The Tamaito Smart Card Learning Media Is,

No	Process
1	Communication is the activity of transferring information both orally and in writing. In playing with the TAMAITO Card media, before the game is started, the children will communicate about who will play first; the TAMAITO Smart Card in the form of a snake and ladder game is a medium for telling stories, answering questions and carrying out orders on the cards. This will stimulate good language skills for students by seeing, listening, and carrying out orders in sequence and understanding the symbols of objects around them.
2	Ability to collaborate or work together, synergize, adapt in various roles and responsibilities; work productively with others, put empathy in its place; respect different perspectives. In playing with the TAMAITO Card media, after communicating, children will work together to play it, not scramble over what is being played because the rules of the game are required to play with at least two children and two companions.
3	Critical Thinking and Problem Solving (critical thinking and problem solving) is the ability to understand a complex problem, connect information, so that eventually various perspectives emerge, and find solutions to a problem [16]. Critical thinking is also defined as the ability to reason, understand and make complex choices; understand the interconnections between systems, structure, express, analyze, and solve problems. The TAMAITO Smart Card is an interesting educational game tool that makes young children happy to play and learn. In this TAMAITO Smart Card, it is intended that children can listen and do invitations in sequence, understand the symbols of objects around them and understand the rules of the game that have been agreed upon with friends.
4	Ability to develop, implement, and convey new ideas to others; be open and responsive to new and different perspectives. The TAMAITO Smart Card concept is an approach of being free to play, listening and practicing. This concept reminds us of the statement of Lao Tsu, a Chinese philosopher who stated "I hear and I forget. I see and I remember. I do and I understand." [17]

The TAMAITO Smart Card is also constructed based on Core Competence (Kompetensi Inti) and Basic Competence (Kompetensi Dasar) at Curriculum 2013 and existing early childhood development achievement indicators, so teachers can use it to improve children's 4C skills, include:

- 1.2. Appreciate yourself, others, and the environment as gratitude to God.
- 2.7. Have a behavior that reflects a patient attitude (willing to wait their turn, willing to listen when other people are talking) to practice discipline
- 2.8. Have behavior that reflects independence
- 2.9. Have behavior that reflects a caring attitude and is willing to help when asked for help
- 2.10. Have behavior that reflects an attitude of respect and tolerance for others
- 3.5–4.5: Knowing and solving everyday problems and behaving creatively; Indicator age 5–6 years: Able to solve simple problems on their own
- 3.6–4.6: Recognize the surrounding objects (name, color, shape, size, pattern, nature, sound, texture, function, and other characteristics); Indicator age 5–6 years: Carry out activities that show children are able to recognize objects by grouping various objects in their environment based on size, pattern, function, nature, sound, texture, and other characteristics
- 3.7–4.7: Getting to know the social environment (family, friends, place of residence, places of worship, culture, transportation); Indicator age 5–6 years: Make and follow the rules
- 3.9–4.9: Recognize and use simple technology to complete tasks and activities.
- Age indicator 5–6 years: Carry out activities using simple technological tools according to their functions safely and responsibly.
- 3.12–4.12 Recognize and demonstrate early literacy through play; Indicator age 5–6 years: State the number of objects by counting.

## 2 Method

The method used in this research is qualitative research method according to research before [18, 19]. The type of approach used in qualitative research is a descriptive approach. The research sample was in KB Bocah Pintar with children in groups B. The data collection technique used observation, interviews, and documentation. The data collection instruments used were interviews, human instruments or the researchers themselves, observation instruments based on each card in the TAMAITO Smart Card game according to Core Competence (Kompetensi Inti) and Basic Competence (Kompetensi Dasar) and indicators of developmental achievement of children aged 5–6 years [8]. Data validity was based on the validity and reliability of the observation instrument. The data analysis process was carried out using an interactive analysis model by Miles & Huberman (1994:12), which includes: (1) Data Collection, (2) Data Display, (3) Data Reduction, and (4) Conclusion Drawing (20).

### 3 Result and Discussion

The difference between this research and previous research is the application TAMAITO Smart Card, the original educational game tool from the school object, and the child observation assessment based on a curriculum. It is not only the cognitive aspect in early childhood but also 4C skills and all aspects of early childhood development. After conducting initial observations, data was obtained that children aged 5-6 years can count numbers 1–20, children can follow the invitation to line up neatly, children have a good relationship with the teacher (familiar), children respond in the form of answers when the teacher asked. However, the author sees that there are many other aspects that need to be improved, such as solving daily problems creatively, conveying what and how the objects around him are known, using simple technology to complete tasks and activities, and having behaviors that reflect a caring and mutual attitude and mutual help. The results of observations before using the TAMAITO Smart Card were presented in Table 2 and Fig. 1.

Score description: [21].

1 = if the child does it must be with guidance or an example from the teacher.

2 = if the child does it still has to be reminded or assisted by the teacher.

3 = if the child can do it independently and consistently, without having to be reminded or assisted by the teacher.

4 = if the child can do it independently and has been able to help his friend who has not achieved the ability according to the expected indicators [22].

After seeing the results that have not shown success in learning, the researcher uses the TAMAITO Smart Card, which can be simultaneously used in 4 C's, namely communication, collaboration, critical thinking, and creativity. Showing excellent results and learning can be said to be successful using the TAMAITO Smart Card, while the results can be seen in Table 3 and Fig. 2.

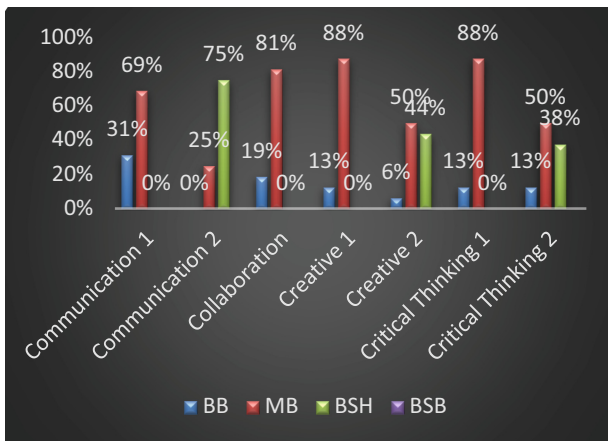
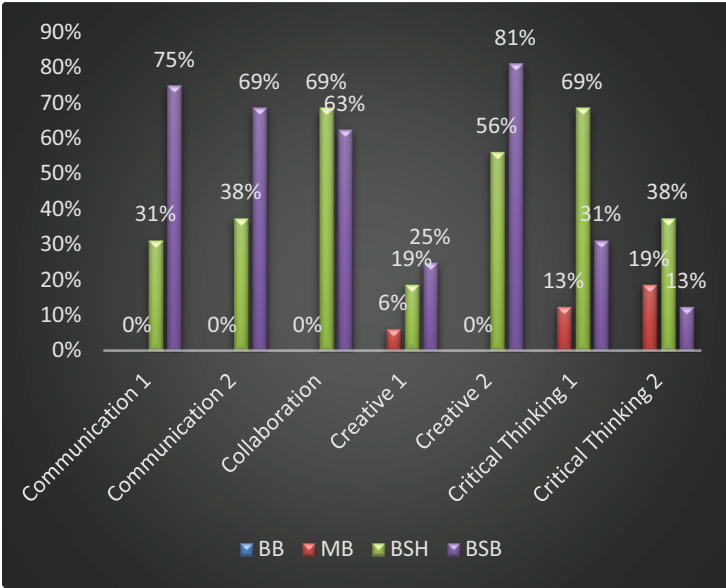


Fig. 1. Observation Result Before the TAMAITO Smart Card Application







**Fig. 2.** Observation Results After the TAMAITO Smart Card Application

Based on Fig. 2, the communication 1 skills of child who received a BSB assessment [4] increased from 0% to 75%. This happened because through playing TAMAITO Smart Card, children learned to follow the applicable rules and do what the teacher read through the cards with fun, which is mentioned in the card “Together with your friends, choose a yellow card or lego and count”. The result is that the child is thrilled to choose the yellow card or lego, communicates smoothly and cooperates with his friends, meaning that the child understands the teacher’s receptive language by understanding the commands given. The communication 2 children who received a BSB rating [4] increased from 0% to 69%, as mentioned in the card “What do you do if your friend fights?”. Some children immediately answer (in expressive language): “Separate first Mrs. Teacher and keep telling Mrs. Teacher” there are still children who need to be given understanding and understanding of attitudes when they see friends fighting.

The collaboration value of BSB increased to 63%, the TAMAITO Smart Card game was carried out in a team consisting of two children, so that children were taught to collaborate between teams and between friends. In the card there are also many suggestions about collaboration, working together in playing or in doing something for example sorting organic and inorganic waste. Creative Skills also increased their BSB value from 0% to 81%, in the TAMAITO Smart Card game children are invited to do activities that show children are able to recognize objects by grouping various objects in their environment based on size, pattern, a function such as grouping cutlery and cooking utensils, grouping geometric shapes and others. The last 4C skill is Critical Thinking, the result of the BSB assessment rise to 69%. By playing TAMAITO Smart Card, children learn to make and follow the rules that apply in the game, such as going up if there is a ladder



picture, going down if there is a slide picture, sharing and taking turns playing with other teams.

From the interviews with teachers and parents, some impacts were achieved from the application of this method are:

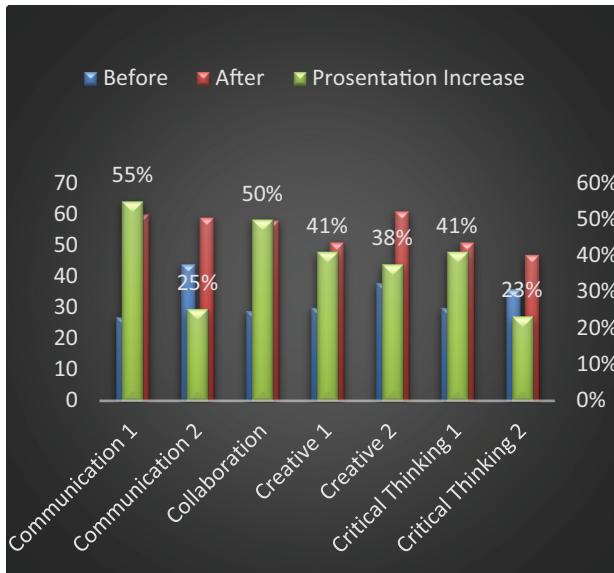
**Table 4.** Interview Result

No	Impact
1	<p><b>Stimulate the creativity and innovation of students</b></p> <p>Cards and board games are concrete objects that attract children. The game is carried out with activities that are fun and not boring because with the use of the modified snake and ladder game, besides children learning to read, children can also play</p>
2	<p><b>Improve children's socialization skills</b></p> <p>Using the TAMAITO Smart Card, children will be stimulated in their social skills because the rules of the game are required to play with at least two children and two companions</p>
3	<p><b>Improve attitudes and good character in students</b></p> <p>From an interview with parents, since they often played with TAMAITO Smart Card, children cared more. Example when parents was sick, children cares about getting a drink. It's also more eloquent to apologize if they feel guilty about their brother/sister</p>
4	<p><b>Increase knowledge about preventing acts of violence, preventing bullying and preventing radicalism (invitation to tolerance) in early childhood</b></p> <p>The TAMAITO Smart Card can be used as a tool or media to introduce good teachings about preventing acts of violence, bullying and radicalism, namely through game habituation. Also developing social emotional aspects of children such as understanding the rules of the game that have been agreed upon with friends, sharing, being patient, and taking turns</p>
5	<p><b>Preventing sexual violence against children</b></p> <p>Many parents think that sex is a taboo issue to talk about, let alone to teach it to their children. Parents assume that when their children grow up they will know by themselves, so this sex education does not need to be taught. Sex education actually teaches children to know their body parts, how to care for and take care of them [23]. Through questions and orders in TAMAITO Smart Card is about body parts that may and may not be touched and how to introduce students to how to take care of them (wearing their own clothes and having separate bathrooms for men and women) will support students in avoiding the violence that will occur, including sexual violence</p>
6	<p><b>Increase the creativity and confidence of the teachers in conveying information to students</b></p> <p>With the TAMAITO Smart Card tool in the form of snakes and ladders games and online educational games, the teachers are more creative in creating fun academic learning media. The teachers will more easily convey information to students. And they become more confident in their efforts to introduce peace-loving and tolerant character education.</p>

Meanwhile, according to the researchers' observations, the supporting factors in the implementation of this method include:

No	Supporting Factor
1	Availability of basic materials for tool making. The tools and materials used in manufacturing this tool are easy and can be printed. In addition, online educational web games are also available for free on the internet
2	TAMAITO Smart Card with snakes and ladders board games and online educational games are interesting for children. The children are enthusiastic about participating in the game. Early childhood likes something concrete or real. Piaget, 1963 in [24] stages of development helped popularize the use of concrete experiences and manipulatives in early childhood education. If young children were capable of only concrete thinking, then it made sense to focus on "real math" (everyday experiences or objects), not symbolic mathematics that required abstract thinking. TAMAITO Smart Card will make it easier for them to receive the message conveyed, be interested in paying attention, and even do it (actively participating)
3	Before practicing the TAMAITO Smart Card, students have been taught good habits at school through "The Bocah Pintar child protection policy". In addition, parents have also been provided with some parenting about these issues. At home, they can practice good habits with their children. Parenting was conducted with online and offline "Great Parenting Forum" meetings. Moral education with good habits will not be lived and practiced if it is only taught, but more than that, moral education must be educated through the educational process. Family education as one of the first forms of education for children is the right medium for every parent to educate, guide, and nurture their children [25]

Based on the results of the assessment instrument observations in Fig. 3 obtained that the use of the TAMAITO Smart Card can improve the 4C skills of early childhood including solving daily problems creatively (Creative), conveying about what and how the objects around them are known (Creative 2), using simple technology to complete tasks and activities (Critical thinking), understand and demonstrate expressive language skills (Communication) and have behaviors that reflect an attitude of caring and mutual help (Collaboration).



**Fig. 3.** Comparison Chart Before and After Using TAMAITO Smart Card

While the total score is in the Table 4. Based on the diagram in Fig. 3, it can be seen that the largest percentage increase for Communication skills is 55%. The child's language ability will increase optimally according to the stage of development TAMAITO Smart Card in the form of snakes and ladders games and online educational games are media for telling stories, answering questions and carrying out orders on cards. This will stimulate good language skills for students, namely by seeing, listening, and carrying out orders in sequence, as well as understanding the symbols of objects around them. Students who learn based on independence will always be energetic, optimistic, prospective, creative and always dare to try new things (26). At the same time, the lowest percentage increase is Critical Thinking Skills. This shows that stimulation to improve critical thinking skills is still considered lacking, so teachers are advised to strengthen STEAM further learning through a scientific approach in every lesson, not just using the TAMAITO Smart Card. Based on research conducted, it is suggested that the presentation of STEM content design in interactive media should be more varied and detailed in each display [27] (Table 5).

**Table 5.** Total Score Result Comparison Before and After Using The TAMAITO Smart Card

No.	4C Skills	Core Competence (Kompetensi Inti) and Basic Competence (Kompetensi Dasar)	Early childhood development achievement indicators	Before (%)	After (%)
1	Communication	3.10 - 4.10. Understand and demonstrate receptive language skills (listening and reading)	Carry out more complex orders according to the given rules	27	60
2	Communication	3.11 – 4.11: Understand and demonstrate expressive language skills (express language verbally and non-verbally)	Expressing desires, feelings, and opinions in simple sentences in communicating with children or adults	44	59
3	Collaboration	2.9 Have behavior that reflects a caring attitude and is willing to help when asked for help	Cooperate with friends	29	58
4	Creative	3.5 – 4.5: Knowing and solving everyday problems and behaving creatively	Able to solve simple problems by themselves	30	51
5	Creative	3.6 – 4.6: Getting to know surrounding objects ( name, color, shape, size, pattern, properties, sound, texture, function, and characteristics) other)	Carry out activities that show children are able to recognize objects by grouping various objects in their environment based on size, pattern, function, nature, sound, texture, function, and other characteristics.	38	61
6	Critical thinking	3.7 – 4.7: Getting to know the social environment (family, friends, place of residence, places of worship, culture, transportation)	Create and follow rules	30	51

*(continued)*

**Table 5.** (continued)

No.	4C Skills	Core Competence (Kompetensi Inti) and Basic Competence (Kompetensi Dasar)	Early childhood development achievement indicators	Before (%)	After (%)
7	Critical thinking	3.2 - 4.2: Recognize and demonstrate polite behavior as a reflection of noble character	Be polite and caring through spontaneous words and actions (eg: say sorry, excuse me, thank you)	36	47

## 4 Conclusion

Research on the use of TAMAITO Smart Card learning media in early childhood has been carried out. This media is applied to instill 4C skills in early childhood. The data shows that TAMAITO Smart Card effectively improves all 4C points, including communication, creativity, collaboration and critical thinking. The TAMAITO Smart Card has the potential to be widely applied in early childhood education to make the 21st century learning model a success.

**Acknowledgments.** The Authors Would Like To Acknowledge Universitas Muhammadiyah Surakarta For Providing Financial Support.

**Authors' Contribution.** DKA Prepared TAMAITO Smart Card, Conducted Data Analysis And Wrote The Manuscript. JDW Supervised And Article Review. NS Prepared TAMAITO Smart Card And Article Review. EP Conducted Data Analysis And Article Review.

## References

1. Yunansah H. Fenomena Fisika Dalam Mengembangkan Keterampilan Sains Anak Usia Dini. *Cakrawala Dini J Pendidik Anak Usia Dini*. 2018;5(2):111–8.
2. Association NE. Preparing 21st Century Students for a Global Society: An Educator's Guide to the "Four Cs." 2014.
3. Ompok CC, Teng LM, Pang V, Mun HC, Abdullah AC, Sapirai J. Early mathematics learning in reading and writing numerals: Learning through "What are the numbers?" A picture book made up of Flora and Fauna in Borneo. *Southeast Asia Early Child J*. 2018;7:52–9.
4. Fajri I, Ar K, Prajana A, Yusran, Sanusi. Peningkatan Keterampilan 4C melalui Model Pembelajaran Berbasis Portofolio. *J Dedik Pendidik*. 2020;4(2):371–80.
5. Agustini K, Santyasa IW, Tegeh IM, Santyadiputra GS, Mertayasa INE. Quantum Flipped Learning and Students' Cognitive Engagement in Achieving Their Critical and Creative Thinking in Learning. *Int J Emerg Technol Learn*. 2022;17(18):4–25.

6. Rentzou K. Twenty-first-century skills and learning capacities and the physical environment of Cypriot preschool settings. *Early Child Dev Care*. 2021;191(2):242–54.
7. Maulidah E. Keterampilan 4C Dalam Pembelajaran Untuk Anak Usia Dini. *Child Educ J Pendidik Anak Usia Dini*. 2021;2(1):52–68.
8. RI K. Permendikbud RI Nomor 146 Tahun 2014 Tentang Kurikulum 2013 Pendidikan Anak Usia Dini. 2014.
9. Choiriyah, Mayuni I, Dhieni N. *European Journal of Educational Research*. *Eur J Educ Res*. 2022;10(3):1075–88.
10. Grieshaber S, Nuttall J, Edwards S. Multimodal play: A threshold concept for early childhood curriculum? *Br J Educ Technol*. 2021;52(6):2118–29.
11. Amiran S. Efektifitas Penggunaan Metode Bermain Di Paud Nazareth Oesapa. *J Pendidik Anak*. 2016;5(1):710–6
12. Asmawati. Meningkatkan Keterampilan 4C Melalui Bermain “ Magic Star ” Di Tk Ratna Siwi Tambirejo Kecamatan Gajah Kabupaten Demak. *Din J Prakt Penelitian Tindakan Kelas Pendidik Dasar Menengah*. 2019;9(2):1–10.
13. Setyowati RI, Rachmah LL, Lutfia ZM. Menanamkan Keterampilan Abad 21 Kepada Anak Usia Dini Melalui Pembelajaran Steam Di Paud Mutiara Bunda Gandusari. *SINDA Compr J Islam Soc Stud*. 2022;2(1):13–23.
14. Scott LA. 21st Century Learning For Early Childhood: Framework. In: *Battelle for Kids*. 2017. p. 20.
15. Alosaimi, K.H., Reid, Norman., & Rodrigues S. Critical thinking . Can it be measured ? Critical thinking . Can it be measured ? Pensamiento crítico . Se puede medir ? *J Sci Educ*. 2019;15(1):30–6.
16. Sholikhah N. Modul Permainan Kartu Pintar TAMAITO. 2021.
17. Wardhani JD, Katoningsih S. Persepsi Mahasiswa Program Studi PGPAUD terhadap Implementasi Life Skills dalam Program MBKM. *J Obs J Pendidik Anak Usia Dini*. 2022;6(5):5318–30.
18. Nugrahani F. METODE PENELITIAN KUALITATIF dalam Penelitian Pendidikan Bahasa. Vol. 1. 2014. 305 p.
19. Huberman M, Miles MB, Saldana J. *Qualitative Data Analysis A Methods Sourcebook*. 2014.
20. Dirjen PAUD. *Pedoman Penilaian*. 2014. 2015. 1–75 p.
21. Rasmini NW, Karta IW. Analysis of the Impact of Storytelling Methods on Early Childhood Religion and Moral Development. *J Obs J Pendidik Anak Usia Dini*. 2021;6(3):1147–57.
22. Wardhani JD, Sholikhah R. Persepsi orang tua terhadap pendidikan seks pada anak usia dini di Desa Tawang Kecamatan Weru Kabupaten Sukoharjo. In: *Seminar Nasional Pendidikan*. 2019. p. 554–8.
23. Baroody AJ. The Use of Concrete Experiences in Early Childhood Mathematics Instruction. *Adv Child Dev Behav*. 2017;53:43–94.
24. Anisah. Pola Asuh Orang Tua Dan Implikasinya Terhadap Pembentukan Karakter Anak. *J Pendidik Univ Garut*. 2011;5(1):70–84.
25. Ab Kadir MA. What Teacher Knowledge Matters in Effectively Developing Critical Thinkers in the 21 st Century Curriculum? *Think Ski Creat*. 2017;23:79–90.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

