

Bilingual Education in Improving Early Childhood Communication Skills: A Systematic Literature Review

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Abstract: Bilingual Education in Improving Early Childhood Communication Skills: Systematic Literature Review. Objectives: This study aims to comprehensively analyze bilingual education on early childhood communication skills. **Methods:** This research uses qualitative methods with a systematic literature review. Data was collected through electronic database literature searches namely, dimensions, eric, taylor and francis, sciencedirect and google scholar. **Findings:** Thirty seven articles were found that were relevant to the research topic. The results of this research show that bilingual education has great benefits for children's communication skills, especially in developing vocabulary and practicing pronunciation. **Conclusion:** Bilingual education is a method for improving children's communication skills, coupled with fun media and learning methods that can optimize learning and minimize the occurrence of obstacles.

Keywords: children's bilingual, communication ability, and systematic literature review.

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■ INTRODUCTION

Early childhood experiences a fairly rapid and significant development. The development of children aged 6-8 years is a period of holistic development in various aspects such as physical, cognitive, language, social and emotional development. (Kouser & Papat, 2022). One of the essential developments in early childhood growth is language development. The role of language skills is very important in children's literacy development (Reed & Lee, 2020). The language skills of 5-year-olds are characterized by responsive long talks and conversations that develop vocabulary (Hansen & Broekhuizen, 2021). Children learn vocabulary unintentionally by overhearing conversations around their environment, such as school (Christ & Chiu, 2018). Education is the main place in developing

children's development, as well as their communication skills (Novita et al., 2023). A good quality school environment for young children is one where there is good interaction and communication and where learning activities are designed collaboratively with children (Naesby, 2021). Bilingual education is one of the methods in developing early childhood communication skills, pronunciation and communication skills will be more extensive (Hamman, 2018). Therefore, an understanding of bilingual education should be disseminated to educational institutions to improve the quality of education (Bashir Albadawi, 2020). It aims to stimulate early childhood communication skills optimally, so that it will make it easier for them to interact with parents, teachers, and peers, especially people around their environment.

However, in reality, early childhood communication skills are still not optimally stimulated. When learning in class, early childhood is often unable to retell the story that the teacher tells during class (Asrowi & Fahriyani, 2022). Communication skills have a broad meaning and consist of various skill components so that vocabulary alone is not enough to build effective communication (Van der Wilt, Van der Veen, Van Kruistum, & Van Oers, 2020). Preschool-age children are prone to impaired vocabulary and impaired communication. Speech Sound Disorders (SSD) are difficulties that children experience in speech perception, processing, planning and production (McLeod et al., 2017). Often early childhood in educational institutions do not receive stimulation of communication skills due to lack of knowledge and training of educators in stimulating children's communication skills (Kuschmann, Nayar, Lowit, & Dunlop, 2021). Bilingual education programs are still not well known in early childhood education institutions, even early childhood education educators still lack understanding about bilingual education for early childhood (Tridinanti, 2016). Therefore, the real conditions in the field illustrate that the lack of stimulation given to early childhood in the development of communication skills.

This certainly creates a mismatch between the achievements of child development that must be achieved and the facts in the field. The achievement of mastery of early childhood Indonesian word classes, namely the word classes of nouns, verbs, adjectives, adverbs, pronomina, numeralia, prepositions, conjunctions, and interjections (Markus, Kusmiyati, & Sucipto, 2018). However, the facts in the field state that there are early childhood children who are still unable to respond to communication in the form of oral or written communication that has been given by the teacher (Yeblo, Ardini, & Juniarti, 2023). Bilingual children show a greater interest in the use of other languages than other children (Graf Estes, Antovich, & Verde, 2021). It is

suggested that there should be a special board of education for bilingual schools that is concerned with designing curriculum development frameworks, teacher training programs and the establishment of standardized tests for bilingual schools (Surdyanto, 2018). This empirical gap shows that further research is needed in understanding bilingual education for early childhood and the relationship with early childhood communication skills.

This research is expected to provide understanding in stimulating early childhood communication skills. Covering theoretical literature and empirical findings that are systematically identified, these findings will provide a deeper understanding of early childhood bilingual education, especially in early childhood education institutions. This systematic literature review aims to identify bilingual education on early childhood communication skills. Therefore, this research aims to go through. Therefore, the researcher formulated the following research questions (RQ):

1. How does the influence and benefits of bilingual education on early childhood communication skills?
2. What learning media and methods are used in the implementation of bilingual education in early childhood education institutions?
3. Which constraints occur in the implementation of bilingual education in early childhood education institutions?

Based on these questions, it is hoped that this research can provide a comprehensive understanding and can provide valuable information for early childhood education educators and parents in providing stimulation of communication skills to children.

■ **METHOD**

Research Design

This study uses a qualitative research method with a systematic literature review, to

accurately review and synthesize more in-depth information about bilingual education to improve early childhood communication skills. The systematic literature review method is used to thoroughly analyze previous studies through a systematic process. This method involves empirical evidence that corresponds to a predetermined topic to answer the research question precisely, based on the PRISMA 2020 guidelines (Asar, Jalalpour, Ayoubi, Rahmani, & Rezaeian, 2016). This method has several objectives, including assessing the quality of the current application of a method based on relevant evidence, and gaining an in-depth understanding of previous research. And finally, evaluating the quality of the current research. The results of this

research can be in the form of an analysis of the distribution of literature based on the theory, location, time, methods used, concepts and types of research obtained.

Data Collection and Analysis

It is very important for researchers to follow the guidelines correctly in using the systematic literature review method. This is because it anticipates potential problems that may occur in terms of selectively comparing reports, duplicating methods and evaluating the effectiveness of planned reports, reducing potential duplication and increasing collaboration. The stages of the systematic literature review can be seen in Figure 1.

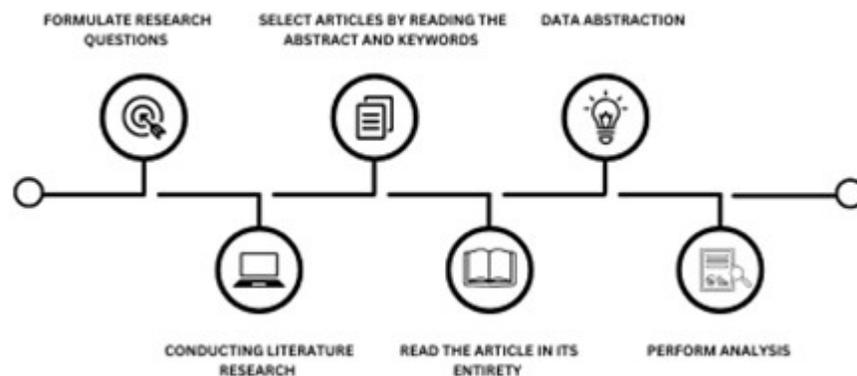


Figure 1. Stages of systematic literature review method

The initial stage in the systematic literature review in this study, namely formulating research questions (RQ) to make it easier to determine research objectives and the search stage in retrieving relevant literature data. After that, conduct literature research or data search. The process of collecting data for this study is based on PRISMA which consists of four stages, namely, identification, screening, eligibility, and inclusion of articles (Cooper, Booth, & Varley-Campbell, 2018). In the identification stage, data were searched using the keywords “*Bilingual Learning*” and “*Bilingual Education*” in electronic database literature searches such as, dimensions, eric, taylor and francis, sciencedirect and google scholar with a research time range of

2014-2024. The keywords written in the electronic database literature search engine were “*Bilingual Learning*” OR “*Bilingual Education*”. Automation tools were set up to set the time range of the year of publication of the article, select the type of article, language, and open access. The initial search results using these keywords yielded 409 journal articles. The details of the number of journal articles found in each electronic database are dimensions as many as 41 articles, eric as many as 22 articles, taylor and francis as many as 46 articles, sciencedirect as many as 251 and google scholar as many as 49 articles. The data set includes research on bilingual education around the world at various school levels. In the next stage of data filtering,

more specific data was taken by identifying the articles based on the title, abstract and relevant keywords to answer the research questions. The screening process obtained 135 articles that fit the research criteria. Furthermore, an in-depth analysis of the content of the articles was carried out based on the eligibility of the articles to meet the research criteria, so that a final inclusion of 37 relevant journal articles was found to be used. The articles included in this study were Indonesian-language articles and English-language articles. To prevent bias, data collection was conducted on one day, December 19, 2024. Of the initial 409 articles, 272 of them were not

used because they did not meet the eligibility criteria in the study, two other articles were excluded because they could not be opened. Of the remaining 135 articles, 98 articles were further removed because they did not match the criteria for the specified variables and there was metadata for the articles that did not appear.

These articles were used as the basis for analyzing and formulating the findings in this study. The data obtained from the set of research articles were classified based on certain themes. After that, each theme was interpreted descriptively. The prism diagram can be seen in Figure 2.

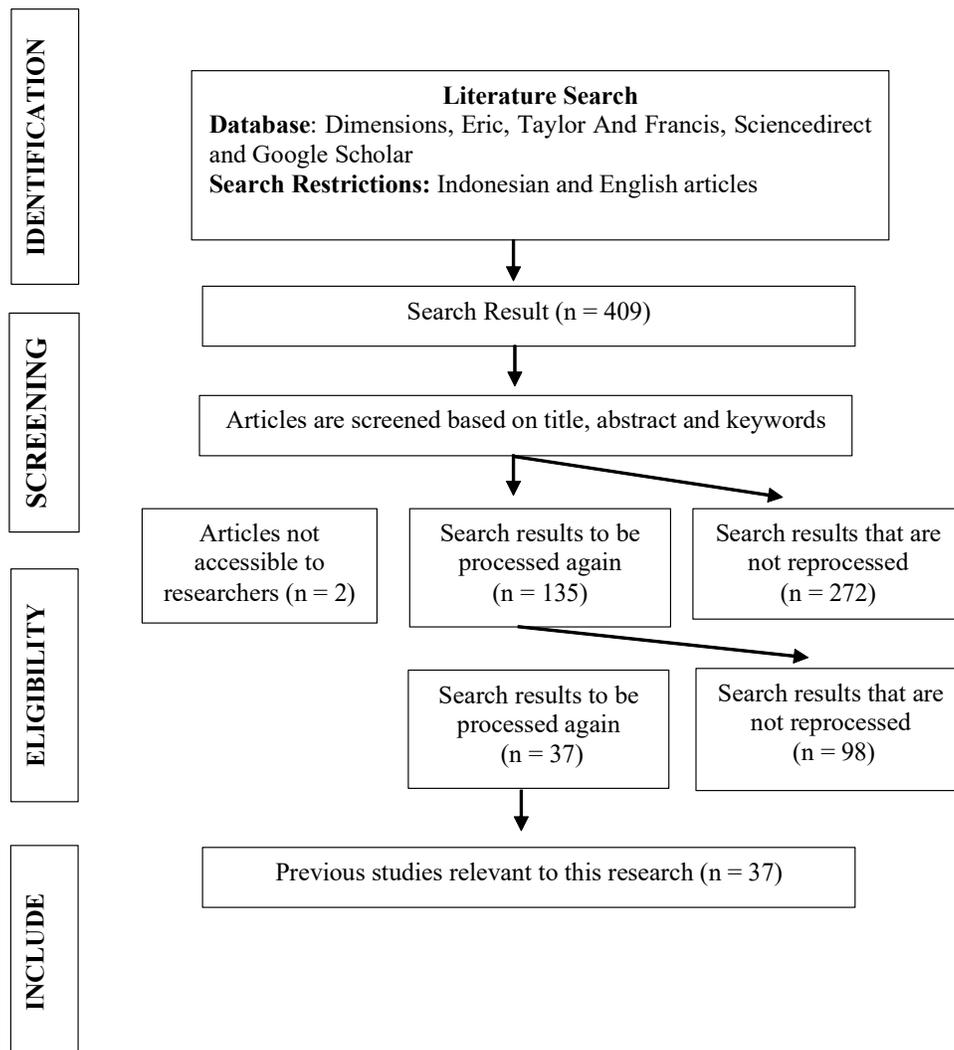


Figure 2. Diagram PRISMA (preferred reporting items for systematic review and meta-analysis)

■ RESULT AND DISCUSSION

Benefits of Bilingual Education for Children's Communication Skills

Bilingual education is a learning method as an effort to stimulate children's communication skills. It includes learning materials and media that help children develop the ability and skills to communicate, express opinions and the ability to interact with people around them, such as parents,

teachers and peers. The research data revealed in this article is a summary of various articles related to bilingual education in improving early childhood communication skills. Table 1 discusses the benefits of bilingual education on children's communication skills.

The implementation of bilingual programs in early childhood education institutions is still causing pros and cons in the community. Parents

Table 1. Article findings on the benefits of bilingual education for children's communication skills

| No | Author | Year | Research Results |
|----|--|------|--|
| 1 | Juanita M Silva | 2021 | Bilingual children learn better because they are used to using multiple languages flexibly during the learning process. So they can participate more actively in discussions. |
| 2 | Adriel John Orena, Krista Byers-Heinlein, Linda Polka | 2020 | A 10-month-old child can already begin to absorb and learn a language that is different from the one he or she speaks on a daily basis. This is where a bilingual profile can be developed alongside language development. |
| 3 | Youran, Fangfang, Andrea, & Karen | 2023 | Bilingual education is suggested to enhance linguistic and cultural competence to facilitate intercultural communication. |
| 4 | Ekaterina, Natalia, & Ksenia | 2023 | Bilingual programs are necessary for the development of fluent bilingual communication, influencing literacy acquisition as well as enhancing the development of children's phonological and phonemic awareness and metacognitive abilities. |
| 5 | Laura, Jiwon, & Mariana | 2023 | Bilinguals perform better than monolinguals in developments involving auditory processing, phonetic abilities as well as phonological and sensory memory recall. |
| 6 | Andrea, Melanie & Krista | 2023 | Bilingual children have the advantage of gaining a strong insight into vocabulary development. |
| 7 | Josje Verhagen, Jan Boom, Anne-Mieke Thieme, Folkert Kuiken, Darlene Keydeniers, Suzanne Aalberse & Sible Andringa | 2024 | Bilingual ECEC has a positive impact on foreign language development and does not affect the child's native language. |
| 8 | Eleni Griva, Dora Chostelidou, Antonia Ypsilanti & Sofia Iliadou | 2014 | Bilinguals develop foreign language competencies necessary for the future. |

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| 9 | Sandra Preusler, Steffen Zitzmann, Jürgen Baumert & Jens Möller | 2025 | Bilingual education provides significant progress in foreign language reading skills. |
| 11 | Gloria Chamorro & Vikki Janke | 2023 | Children who participate in bilingual education score higher in cognitive skills which can affect other skills. |

and educators still have concerns about the implementation of bilingual education programs in schools. This is due to the lack of understanding about bilingual education in early childhood education institutions and its effect on children's development. Bilingual education has many benefits for early childhood development, especially in children's communication skills. Therefore, the following study findings explain the benefits of bilingual education on children's communication skills. Bilingual children are more active in class discussions because they can use multiple languages flexibly (Silva, 2021). The bilingual profile can be instilled from the age of 10 months to train the child's language development (Orena, Byers-Heinlein, & Polka, 2020). Bilingual education is recommended to improve linguistic competence with the aim of facilitating intercultural communication (Lin, Li, MacLeod, & Pollock, 2023). Bilingual programs are necessary in educational institutions to develop the ability to communicate in two languages, influence literacy acquisition, and improve children's phonological awareness, phonemic and metacognitive abilities (Oshchepkova, Kartushina, & Razmakhnina, 2023). Bilinguals are rated better than monolinguals in enhancing development involving children's auditory processing, phonetic, phonological, and sensory memory recall abilities (Spinu, Hwang, & Vasilita, 2023). Children who learn two languages have the advantage of developing a wider vocabulary (Planckaert, Duyck, & Woumans, 2023). Foreign language development can be stimulated by bilingual ECEC without affecting the child's native language (Verhagen et al., 2024). Bilingual is beneficial for developing foreign language skills

necessary for future needs (Griva, Chostelidou, Ypsilanti, & Iliadou, 2014). Bilingual education improves foreign language reading skills (Preusler, Zitzmann, Baumert, & Möller, 2025). Finally, bilingual children have superior cognitive scores, so that other abilities can be optimally stimulated (Chamorro & Janke, 2023). The findings of this study highlight the benefits and positive impact of bilingual education on the development of children's communication skills.

Bilingual education makes the profile of the individual multilingual and multicultural so that the level of proficiency in English as a foreign language is at a good level (Abduh, Jayadi, & Dunakhir, 2021). Policies in some European countries require bilingual education in early childhood education (Kirsch, 2021). It shows that Early Childhood Education needs a bilingual program to be used as one of the learning methods in developing the ability to communicate in two languages. Children learn thousands of new words each year directly from what they hear, which makes them love the new words they learn (Zucker, Cabell, & Pico, 2021). Bilingual education is one of the solutions to provide a new experience in learning a foreign language.

Teaching Media and Methods in the Implementation of Bilingual Education in Early Childhood Institutions

The implementation of bilingual programs in early childhood education institutions, of course, requires media and learning methods that are interesting and in accordance with the principles of early childhood education learning. It is intended that the implementation of bilingual education can run well and the development of children's

communication skills can develop optimally. This section discusses the learning media and methods used to support bilingual education in early childhood education institutions. This is important for parents and teachers to know as a reference

in the implementation of early childhood learning in encouraging their communication skills. The results of the study on media and methods in the implementation of bilingual education can be seen in Table 2.

Table 2. Article findings on media and methods in implementing bilingual education

| No | Author | Year | Research Results |
|----|--|------|--|
| 1 | Carla Meskill, Gulnara Sadykova, & Albina Kayumova | 2020 | Digital media has potential in the application of bilingual learning. The materials include digital storytelling, multimedia language, and cultural materials designed for teaching. |
| 2 | Ida Ayu Nyoman Lilis Trisnanti, Luh Ayu Tirtayani, & Ketut Adnyana Putra | 2018 | Bilingual flashcard media has an influence on the ability of beginning English vocabulary in group B children in kindergarten of Gugus Mawa, South Denpasar District in 2017/2018 academic year. |
| 3 | Lucia Casal de la Fuente & Carol Gillanders | 2021 | The medium of song is seen as a greater means of gaining language and cultural understanding and can help strengthen interpersonal relationships. |
| 4 | Cheryl M. McElvain & Heidi A. Smith | 2016 | Inquiry learning provided significant improvements in mathematical reasoning, bilingual verbal ability, higher learning motivation, and increased self-efficacy. |
| 5 | Beth A O'Brien, Nicole Cybill Lim, Malikka Begum Habib Mohamed, & Nur Artika Arshad | 2019 | Pre-reading spelling development as a dynamic process in English literacy development and a new perspective on literacy development models. |
| 6 | Melodie, Helene, & Margaret | 2023 | Reading storybooks together can be used as a method when learning bilingualism. |
| 7 | Silke, Esli, Kyrana, Philippe, Dorien, & Stefanie | 2023 | Transcranial Direct Current Stimulation (tDCS) is a neuromodulation tool that can improve the effectiveness of speech and language therapy.. |
| 8 | Luis Pires, María-Jesús Mancebón, Mauro Mediavilla & José-María Gómez-Sancho | 2024 | Content and Language Integrated Learning (CLIL) can improve children's English language skills and does not affect the subjects taught. |
| 9 | Kenan Dikilitas & Ali Öztüfekçi | 2024 | Bilingual education can be implemented through group learning using two languages. |
| 10 | Kevin W.H. Tai | 2024 | The use of iPads is an alternative to achieving pedagogical goals in improving English and math skills. |
| 11 | Samantha Curle, Dogan Yuksel, Ikuya Aizawa, Gene Thompson & Mahboubeh Rakhshandehroo | 2024 | Instrumental and integrative motivation are important in the early stages of implementing bilingual education. |

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| 12 | Marianne Turner & Angel M.Y. Lin | 2024 | Language translation activities can help children explore language, leading them to further understanding. |
| 13 | Zhipeng Zhang, Xuesong (Andy) Gao & Ting Liu | 2024 | Focusing activities can have a significant impact on English learning. |
| 14 | Dandan Yang, Christina Xia, Penelope Collins & Mark Warschauer | 2022 | Interactive e-books can more easily provide language comprehension for children. |
| 15 | Errol Ertugruloglu, Tessa Mearns & Wilfried Admiraal | 2023 | Scaffolding allows children to be actively involved in English learning. |
| 16 | Huub Oattes, Arie Wilschut, Ron Oostdam, Ruben Fukkink & Rick de Graaff | 2022 | The implementation of PCK provides a more proficient average quality in language skills. |
| 17 | Kevin Donley | 2023 | Course design and learning projects aim to define the framework of language teaching. |
| 18 | Olga Anatoli & Asta Cekaite | 2023 | Children can practice bilingual skills with two-way communication that aims to overcome institutional constraints and train children as speakers with broad insights. |
| 19 | Kenan Dikilitaş, Vahid Bahrami & Nil Tugce Erbakan | 2023 | Collaborative learning is an opportunity to improve English dialog together. |

Many early childhood education educators are still confused about implementing bilingual education in early childhood education institutions, especially since this program is still rarely used in Indonesian early childhood education institutions. The implementation of bilingual education is similar to other curricula, so there are no restrictions or specific learning methods. Media and methods can be adapted to the learning materials provided. The following study findings explain the various media and methods in the implementation of bilingual education. Digital media has potential in bilingual education with the concept of digital fairy tale learning media, multimedia language, and cultural materials (Meskill, Sadykova, & Kayumova, 2020). Flashcards can help improve children's English vocabulary skills (Trisnanti, Tirtayani, & ..., 2018). The use of songs is an

effective way to gain language and cultural understanding (Casal de la Fuente & Gillanders, 2021). Inquiry-based learning can be used for bilingual learning methods because it provides significant improvement (McElvain & Smith, 2016). Bilinguals can be honed through the pre-reading spelling method, which is a new way to improve literacy skills (O'Brien, Lim, Habib Mohamed, & Arshad, 2019). The method of reading storybooks together can be used as one of the methods in the bilingual program (Matrat, Delage, & Kehoe, 2023). Transcranial Direct Current Stimulation (tDCS) method is used in bilingual education because it can improve the effectiveness of speech and language therapy (Coemans et al., 2023). CLIL can be used to improve English language skills (Pires, Mancebón, Mediavilla, & Gómez-Sancho,

2024). Group-based learning can be implemented to implement bilingual education (Dikilita^o & Öztüfekçi, 2024). The iPad product is an alternative media to improve English and math skills (Tai, 2024). Penanaman motivasi instrumental dan menjadi tahap awal dalam pendidikan bilingual (Curle, Yuksel, Aizawa, Thompson, & Rakhshandehroo, 2024). Translating language can help children explore and broaden their knowledge of the language (Turner & Lin, 2024). Focusing activities can help improve learning skills in English (Z. Zhang, Gao, & Liu, 2024). Interactive e-book media is easier to have a significant impact on children's language comprehension (Yang, Xia, Collins, & Warschauer, 2022) (Yang, Xia, Collins, & Warschauer, 2022). Scaffolding is used so that children can be actively involved in learning English (Ertugruloglu, Mearns, & Admiraal, 2023). PCK makes children more proficient in language skills (Oattes, Wilschut, Oostdam, Fukkink, & De Graaff, 2022). Children are trained to define language teaching with course design methods and learning projects (Donley, 2023). Two-way communication aims to overcome institutional constraints and train children in speaking (Anatoli & Cekaite, 2023). Finally, collaborative learning encourages active English dialog in the classroom together (Dikilita^o, Bahrami, & Erbakan, 2023). There are no specific limitations or provisions in the use of learning media and methods in the implementation of bilingual education in early childhood education institutions, these media and methods can be adapted to the material and learning objectives and refer to the principles of early childhood education learning.

Kindergarten educators in Indonesia still experience obstacles in implementing bilingual education in kindergarten institutions, namely obstacles in the application of media and methods used to make learning interesting. (Wirsa & Saridewi, 2020). The teaching methods used can be modified to suit the learning needs (Gupta, 2019). One of them is the method of translating

language can support skills in writing and expolarizing about English (Zheng & Drybrough, 2023). Various media and learning methods can be used and developed by PAUD educators to support the implementation of bilingual education. However, what teachers need to pay attention to is determining the learning style that is in accordance with the characteristics of the child and the targeted needs (Incik, 2020). Learning media used in bilingual education must pay attention to the needs of children.

Constraints in the Implementation of Bilingual Education in Early Childhood Education Institutions

Bilingual education has many benefits for early childhood development, especially in honing children's communication skills. However, on the other hand, there are also obstacles or barriers in the implementation of education in early childhood education institutions. These obstacles can be caused by internal and external factors, so the implementation of bilingual education in early childhood education institutions must continue to be evaluated and improved as an effort to improve the quality of the implementation of bilingual education. The results of the study on constraints in the implementation of bilingual education in early childhood education institutions can be seen in Table 3.

All things have drawbacks, because nothing is perfect, and the same goes for bilingual education programs. Behind its benefits for children's development, the implementation of bilingual education has obstacles or barriers. Of course, if left unchecked, this will affect the quality of the bilingual program itself. The following study findings explain the obstacles in implementing bilingual education in early childhood education institutions. Bilingual education causes children to have difficulties in reading and writing (J. Zhang & Wang, 2023). Bilingual education has no significant effect on reading skills (Hojen & Bleses, 2023). Bilingual education is influenced by

Table 3. Article findings on constraints in implementing bilingual education in early childhood education institutions

| No | Author | Year | Research Results |
|----|---|------|--|
| 1 | Jie & Qiuying | 2023 | Bilingual education only prioritizes language development, sometimes bilingual children struggle with reading and writing. |
| 2 | Anders & Dorthe | 2023 | Bilingual education has no significant effect on reading skills. |
| 3 | Francesca, Michela, Ferida, & Margherita | 2023 | The implementation of bilingual education is influenced by one's socioeconomic status. This is because most schools that implement bilingual education tend to have expensive costs. |
| 4 | Xin et al. | 2023 | Bilingual education inculcates and habituates children to forget their native language and eventually abandon their heritage language. |
| 5 | Xuesong (Andy) Gao & Weijia Yang | 2023 | Teachers are not prepared for the new challenges that require teachers to develop new knowledge and skills to implement bilingual education. |
| 6 | Raúl Rojas, Farzan Irani, Svenja Gusewski & Natalia Camacho | 2023 | The frequency of non-fluency in bilingual proficiency was found. |
| 7 | Luisa Scherzinger & Taiga Brahm | 2023 | Professional competencies must be possessed by bilingual teachers, which requires training such as language proficiency development, cooperation skills and knowledge of bilingual education research. |

socioeconomic status (Paradis, 2023). Bilingual education makes children abandon and replace their native language with a foreign language (Federico, Mellone, Volpi, & Orsolini, 2023). New challenges are created that leave teachers unprepared to develop new knowledge and skills in implementing bilingual education (Gao & Yang, 2023). Barriers to bilingual fluency (Rojas, Irani, Gusewski, & Camacho, 2023). Finally, teachers must have professional competence and must participate in training to develop language proficiency, cooperation skills and knowledge of bilingual education research (Scherzinger & Brahm, 2023).

Before deciding on an education model for their children, parents must examine in detail the education model that their children will be taught. As with bilingual education, it is recommended that parents not only look at the positive side,

but also look at the obstacles and barriers. It is feared that this bilingual education makes aspects of child development disturbed and learning objectives are not achieved. Not all bilingual education has a good impact if it is developed early, in the process each child has different potential (Xue et al., 2021). Children who learn two languages or bilinguals are generally only proficient in one of the languages, namely the main language they use, the second language they learn is less proficient, especially if it is rarely used (Kraut & Pixner, 2022). If children do not receive support from those closest to them, it is feared that children will be less enthusiastic in participating in learning, so that the implementation of bilingual education will experience obstacles in its implementation. Lack of support from the people around them can be caused by a lack of understanding about bilingual education. Some

people consider bilingual education to be a threat to the local culture. Bilingual education requires a person to have an understanding of another language that is generally used as a second language and used situationally in everyday life (Nikula & Moore, 2019). Some of these obstacles can be used as a reference for educators, and minimize the occurrence of these obstacles.

■ CONCLUSION

Bilingual education in early childhood institutions requires students to learn English vocabulary, pronunciation and meaning. It is intended to train children's auditory, phonetic, phonological, and sensory memory recall skills that refer to the ability to communicate. Media and learning methods are important to consider in the implementation of bilingual education in PAUD institutions to avoid obstacles in learning. The researcher realizes that there are still shortcomings in this article, due to limitations in data collection. We only collected data from electronic databases such as Taylor & France, Science Direct, Dimensions and Google Scholar and did not explore the long-term effects of bilingual education on children's communication skills in the future. Therefore, the researcher suggests that future research can be broader in its coverage of the long-term effects of bilingual education on children's communication skills in the future.

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