Research Paper

Child-Friendly School Environment in the Perspective of Constructivism Theory: An Exploration of Human Resources in Education

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Abstract

Child-friendly school education is education with a pleasant learning atmosphere and supports teachers' ability to implement active, collaborative, and democratic learning in the context of edutainment. Child-friendly school education programs are considered capable of strengthening the character of children to become individuals with noble character. In 2020, Indonesia had 36,766 child-friendly schools spread across the country. However, the current implementation of child-friendly schools is still not optimal considering the many phenomena of bullying problems that are increasingly rampant. This is in line with the data that in Indonesia there were 12,285 children experiencing violence, and the data continued to increase in 2020 to 12,425 and 2022 as many as 15,972 children. This quantitative study included 138 teacher respondents. The obtained data were analyzed using a structural equation model with SmartPLS software. This research builds a model that involves the Variables of Technology Knowledge and Teaching Aids as endogenous variables with Educational Competence as a mediating variable to improve Child-Friendly School Performance. The results revealed that the model built fit is proven that Educational Competence can leverage Teaching Aids and Technology Knowledge on Child-Friendly School Performance with the best path being Teaching Aids → Educational Competence → Child-Friendly School Performance, with a total effect of 0.239198. This research contributes to the body of knowledge of Constructivism Theory.

Keywords: *Child-Friendly School; Educational Competence; Teaching Aids; Technology Knowledge*

INTRODUCTION

Child-friendly school education is closely related to aspects of the physical and the non-physical environment. These two aspects are interrelated and interact to create an adequate school environment for children's physical, social, emotional, and academic development. A child-friendly school not only provides physical infrastructure such as good teaching aids and other facilities but also pays attention to non-physical aspects such as psychological safety, fairness, and attention to the individual needs of each student. As such, this environment plays an important role in creating a positive and supportive learning experience for children in their growing and learning years (Kirch, 2014; Szabó & Csépes, 2022). The focus of child-friendly school education in some countries, such as India, is related to the safety of educational environments (Jadhav, 2019), studies in Myanmar discuss child protection (Barai, 2022), and studies in Korea are related to social justice (Shaeffer, 2019). All three respondents agreed that the most important aspects of child-friendly schools are related to the environment, which includes social, safety, and fun learning. Schools with a child-friendly education base are considered crucial because children are the biggest investment of a country because they are the next generation of the nation (Hermawan et al., 2022), so it is necessary to form a quality generation. The quality generation starts in the early years of Early Childhood Education (ECE) (Jadhav, 2019). Child education by implementing child-friendly education utilizes play motives and curiosity to improve children's abilities (Watson et al., 2019). Children's abilities are supported by a comfortable environment, patient educators, and a surrounding environment that supports child-friendly school education programs.

The child-friendly school education program also prioritizes education and entertainment, which is education with a pleasant atmosphere, including individualized and gender-appropriate

teaching, and supports teachers' ability to implement active, collaborative, and democratic learning in the context of edutainment (Kitheka, 2015). The implementation of the edutainment learning method will pay attention to various aspects, such as teaching aids, that are in line with current technologies, such as AR, machine learning, and the Internet of Things (IoT) (Palamar et al., 2021). Another aspect that is no less important is the teacher's ability to deliver the material as the subject of the edutainment learning method to transfer knowledge to children. The teacher's storytelling ability will create an atmosphere that encourages children to enjoy story plots that carry knowledge and cognitive material about character education. The teacher's storytelling ability is equivalent to the presence of fun-filled knowledge transfer for child-friendly education.

Child-friendly education has become a global concern, including in Indonesia. This is evidenced by the existence of Government Regulation and PA No. 08 of 2014, which includes an understanding of the concept of child-friendly schools and their establishment and development. The Indonesian government has been developing the Child-Friendly School (CFS) program since. CFS are formal, nonformal, and informal education units that can provide fulfillment of rights and special protection for children. CFS bridges the complaint mechanism for case handling in education units. The purpose of CFS is to create a safe, clean, healthy, caring, environmentally cultured school, guaranteeing children's rights from violence, discrimination, and other mistreatment. The expected conditions in CFS consist of "BARIISAN", namely Clean, Beautiful, Inclusive, Healthy, Safe, and Comfortable (Kemenpppa, 2020). Based on data from the Indonesian Ministry of Women's Empowerment and Child Protection (KemenPPPA) as of February 2020, 36,766 Child-Friendly Schools exist across various provinces and cities in Indonesia. The school levels are also very diverse, ranging from ECE, kindergarten, elementary school, junior high school, to senior high school. Although Indonesia has been increasingly intensively developing child-friendly schools, a problem gap.

The phenomenon of the problem gap refers to data released by the United Nations Children's Fund (UNICEF), which stated that violence against children is still widespread in homes, schools, and communities, including in Indonesia (UNICEF, 2020). In Indonesia, 12,285 children experienced violence, and the data continued to increase from 2020 to 12,425 and from 2022 to 15,972 children (SIMFONI PPA, 2023). An example of this is that children who play mobile legends can hurt their psychology because the game has elements of violence (Marican et al., 2023), as well as teachers who hit their students (Billett et al., 2020) Physical attacks in schools tend to be experienced by boys, and teachers often use physical and emotional forms of punishment to discipline children (UNICEF, 2020). Such violence can cause physical and mental suffering that can affect a child's future character. The pain children experience due to violence adversely affects their mental health and psychosocial functioning and leads to counterproductive character traits for child development (Kızıltepe et al., 2020). Therefore, developing a child-friendly approach is a learning challenge in ECD today.

Another problem stems from the limitation of the previous study (Haron et al., 2019) on the constructs of Teaching Aids and Educational Competence where teachers have limitations in developing educational aids for learning quality. This is in line with the study of (Haron et al., 2019) recommendation to re-examine teachers' skills in developing educational aids because teaching effectiveness depends on teachers' skills and attitudes; therefore, it is a recommendation for future research. This study is crucial to be built so that the question in this study is whether the three constructs of Teaching Aids, Technology Knowledge, and Educational Competence have a significant influence on Child-Friendly School Performance. Although this study explores the theme of education, the perspective used is the field of human resource management. The purpose of this study is to offer Teaching Aids, Technology Knowledge, and Educational Competence variables that are used to fill the body of knowledge in the child-friendly school education domain that has not

been studied quantitatively through the Constructivism Theory perspective.

LITERATURE REVIEW

In the literature review section, the constructs involved in achieving Child-Friendly School Performance such as Educational Competence, Teaching Aids, and Technology Knowledge are described.
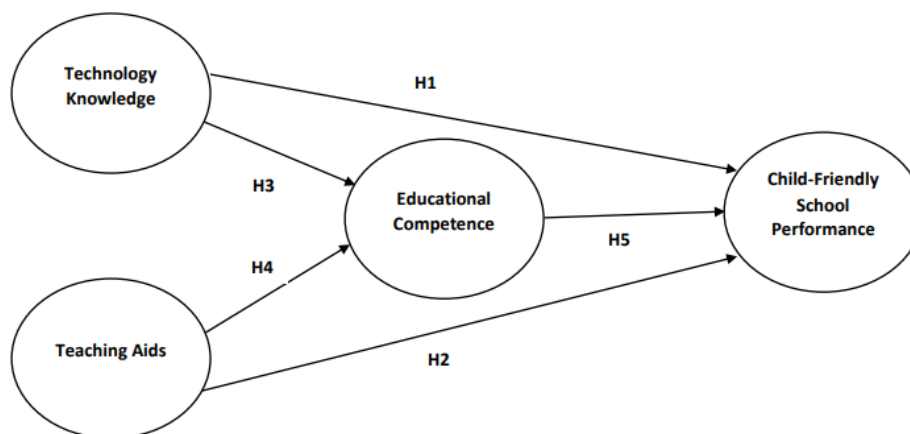

Figure 1. Conceptual Model

Constructivism Theory

Constructivism theory emphasizes that in the context of technology and teaching aids, constructivism suggests that the use of technologies that support knowledge construction and active learning experiences (such as simulations, interactive games, or multimedia) can improve students' understanding and retention of information (Kirch, 2014; Szabó & Csépes, 2022). This theory also suggests that teachers who are competent in using technology and teaching aids can assist students in constructing their knowledge in a more effective way (Vygotsky & Cole, 1978). From the perspective of human resource management, the competence of building child-friendly schools is relevant to the needs of human capital effectiveness, while, on the other hand, technology and complete methods become a form of knowledge infrastructure whose work elaborates with the role of teachers and principals as human capital.

Educational Competence (EC)

Teacher competence is defined as specific cognitive performance responsive to situations and demands in a particular domain (Kaiser & König, 2019). A well-known researcher, M.C. Leod, stated that a teacher's competence is determined by his or her ability to perform his duties ethically and practically (Wordu & Eme, 2020). Teachers must utilize a variety of knowledge and assemble it into coherent understandings and skills to master the core challenges of teaching (König et al., 2020). According to Wardoyo et al. (2021), several indicators build educational competence, namely, active participation in learning activities (EC1) and teacher's active role in the learning process in the classroom. The second and third indicators, namely, developing student potential (EC2) and motivating students' willingness to learn (EC3), explain that schools provide a forum for students to develop their talents, and when students are actively learning, schools give appreciation. The indicators of ensuring the level of understanding and adapting learning activities (EC4), continuing to improve teaching methods (EC5), paying attention to learning objectives (EC6) and teaching in accordance with the learning objectives and life context (EC7) explain the methods and learning outcomes. Furthermore, increasing student motivation (EC8) and providing

opportunities for students to ask questions (EC9) explain teaching that motivates students to express their opinions increases.

Teaching Aids (TA)

Teaching Aids are learning tools that can be used for the learning process (Kelana et al., 2019). Learning tools can activate the educational process based on an innovative approach to the education system (Musakhonovna, 2022). The application of technology can increase creativity (Adah et al., 2024). The use of teaching aids is an important component of the learning process and is indispensable for improving students' understanding of learning. In a study conducted by Haron et al. (2019), several indicators have been found to build teaching aids; namely, the use of technology-assisted teaching aids enhanced student interest (TC1), namely teaching aids can provide support in student learning, for example, by providing technological facilities. The next indicator is the use of multimedia materials (TC2), which means that in learning, the school uses multimedia such as educational videos connected to the internet. Furthermore, they are skilled at using technology tools (audio, video, software, computers) (TC3), which means that each teacher can run Educational Aids at school. The indicator of using technology-assisted teaching aids (TC4) is that in the learning process, the school applies technology.

Technology Knowledge (TK)

Technology Knowledge refers to the understanding and ability to utilize various technological tools, systems, and applications (Wardoyo et al., 2021). This includes awareness of how technology works, ability to navigate digital platforms, and competence to use technology effectively to enhance learning or achieve specific goals. Technological knowledge is a significant factor influencing play-based learning and early childhood education outcomes (Rahman et al., 2020). According to Wardoyo et al., (2021), Technology Knowledge has four indicators, namely technical skills to use technology (TK1), learning technology easily (TK2), ability to integrate e-crowd war for study (TK3), and use multiple technologies to study my learning subject (TK4). Technical skills to use technology refers to the ability to effectively use various technological tools, software, and devices. This includes the ability to install applications, understand shortcut keys on the keyboard, take screenshots, and utilize software formulas. Furthermore, learning technology can be easily achieved through a structured approach, the use of appropriate learning resources, and consistency in practice and experimentation with the learning technology. Being able to integrate e-crowdwar for study means the ability to incorporate e-crowdwar applications into the learning process for educational purposes. E-crowdwar is a game-based learning application that guides students in self-learning and exploring information in an environment determined by the teacher (Incantalupo et al., 2014). Then, using multiple technologies to study my learning subject refers to the integration of various technological tools and devices in the teaching-learning process, which includes the use of different applications, software, and hardware to support the understanding and learning of specific subject matter.

Child-Friendly School Performance (CFSP)

The Child-Friendly School is a formal, non-formal, and informal education unit that is safe, clean, healthy, caring, and environmentally cultured (Sunandar et al., 2022). On the other hand, by implementing Child-Friendly Schools, schools can guarantee, fulfill, and respect children's rights protect them from violence, discrimination, and other ill-treatment, and support children's participation. According to (Milfayetty & Hajar, 2021), Child-Friendly School Performance has three indicators, namely Child-Friendly School Policy (CFSP1), related to the success of the implemented curriculum. Teaching and Learning Process (CFSP2), i.e. the learning process that is in line with a

child-friendly school program. The next indicator is Facilities and Infrastructure (CFSP3), which is related to the facilities provided by schools that support child-friendly school programs. These indicators that build Child-Friendly School Performance.

The Effect of Technology Knowledge on Child-Friendly School Performance

Technology is playing an increasingly important role in shaping learning environments that are suitable for children (Haleem et al., 2022). The understanding and application of technology by child-friendly schools can have a significant positive impact on their performance. First, technology can increase access to relevant and quality educational resources (Ferri et al., 2020). With easier access to information and learning materials, students can better expand their knowledge (Haleem et al., 2022). Technology can also help facilitate interactive and project-based learning, which can increase student engagement and promote creativity and collaboration. The proposed hypotheses are as follows:

H1: Technology Knowledge has a significant effect on Child-Friendly School Performance

Effects of Teaching Aids on Child-Friendly School Performance

The use of Teaching Aids supports creating a fun learning process (Adnyani et al., 2021). Playing and learning with teaching aids inside and outside the classroom packaged in the concept of edutainment learning can create a pleasant atmosphere and is suitable for early childhood. Previous research has revealed that learning using teaching aids can encourage positive student attitudes compared to learning using conventional techniques (Yeoh & Cheong, 2023). The use of Teaching Aids is also able to maintain emotional connection and attract and maintain students' interest and attention (Kuzmina et al., 2023); thus, the proposed hypothesis is as follows:

H2: Teaching Aids Has a significant effect on Child-Friendly School Performance

The Effect of Technology Knowledge on Educational Competence

Technology plays an important role in improving teacher competence (Haleem et al., 2022). Child-friendly schools that apply the importance of understanding and applying technology will encourage teachers' competencies to become more advanced and improve their performance. It is supported by the availability of technology which facilitates access to relevant and quality educational resources (Ferri et al., 2020). With easier access to information and learning materials, students can better expand their knowledge (Haleem et al., 2022).

H3: Technology Knowledge has a significant effect on Educational Competence

The Effect of Teaching Aids on Educational Competence

Good early childhood education can be realized through a fun learning process. A fun learning process can be created with Teaching Aids or educational tools that support it (Yeoh & Cheong, 2023). The availability of learning tools supports teachers' teaching processes. Teachers who use Teaching Aids become more creative and easy to express material presented (Tavdgiridze et al., 2020). The proposed hypothesis is as follows:

H4: Teaching Aids have a significant effect on Educational Competence

The Effect of Educational Competence on Child-Friendly School Performance

Fun learning for Child-Friendly Schools is also supported by the competence of teachers who

can present the concept of a fun learning space in the context of independent play (Tavdgiridze et al., 2020). Research conducted by Rusilowati and Wahyudi (2020) showed that teacher competence affects the creation of a learning atmosphere, especially teachers who have certification have more ability to establish social relationships and know the characteristics of each student so that a pleasant learning atmosphere can be formed. The proposed hypothesis is as follows:

H5: Educational Competence has a significant effect on Child-Friendly School Performance

RESEARCH METHOD

This research uses quantitative methods from a positivist perspective. Primary data were obtained directly from the field by distribution of questionnaires using a non-self-assessment method. Sampling using a purposive sampling technique, namely, teachers. This study distributed 180 questionnaires with data acquisition from as many as 150 respondents. However, after analyzing the outlier data, the data processed in this study were 138 respondents, representing 92% of the total data collected. The analytical tool used is Structural Equation Modeling (SEM), which was analyzed using SmartPLS software. The use of Smart-PLS is based on processed samples included in the small category (Hair et al., 2014). The sample adequacy in this study is calculated based on the number of indicators of 20 multiplied by the index 1-6, so the sample adequacy is 120 (20*6) so that the availability of data is sufficient from the minimum sample required in Smart-PLS analysis (Hair et al., 2014).

FINDINGS AND DISCUSSION

Data that have passed testing and are suitable for processing 138 respondents (details in Table 1). Based on Table 1, the majority of respondents were women (97.83%. In the context of the work environment and organizational culture in Early Childhood Education (ECE), it tends to be more welcoming to women (Martin, 2001).

Table 1. Characteristics of the Respondents

Characteristics	Amount	Precentage
Gender		
Male	3	2,17%
Female	135	97,83%
School status		
Public School	7	5,1%
Private School	131	94,9%
Years of Teaching		
<1 Year	9	6,5%
1-5 Years	31	22,5%
>5 Years	98	71%

Human resources practices create an inclusive and supportive environment for women, particularly in ECE, possibly due to unconscious stereotypes that they are more attentive and patient with young children (Sumsion, 2005). Furthermore, private schools dominate with a percentage of 94.9% for school status. This figure indicates that child-friendly schools are more easily implemented in private schools because management systems tend to have simpler bureaucracy and easily delegated autonomy (Duke, 1976). Human resources departments in private schools often have more resources to attract high-quality teachers and staff with competitive benefits and professional development opportunities, thereby enhancing their competencies in inclusive learning environments (Podgursky & Springer, 2007). Lastly, the

majority of respondents in this study have more than five years of experience, amounting to 71%, indicating that they are experienced. Teachers are integral to organizations, and as agents of human capital effectiveness (Hermawan & Suharnomo, 2020) , they must understand the characteristics of young children and integrate entertainment elements into education (Deming, 2022).

In the data testing process, the first step is to assess validity, including convergent and discriminant validity tests. The convergent validity assessment involves examining the loading factors presented in Table 2. In addition, construct reliability was evaluated using Cronbach's Alpha and Average Variance Extract (AVE), as shown in Table 3. Furthermore, discriminant validity was assessed based on the Fornell-Lacker Criterion values presented in Table 4.

Table 2. Convergent Validity Test

	TA	TK	EC	CFSP
TA1	0.892			
TA2	0.908			
TA3	0.823			
TA4	0.831			
TK1		0.904		
TK2		0.939		
TK3		0.909		
TK4		0.837		
EC1			0.748	
EC2			0.761	
EC3			0.826	
EC4			0.739	
EC5			0.833	
EC6			0.859	
EC7			0.757	
EC8			0.814	
EC9			0.709	
CFSP1				0.925
CFSP2				0.934
CFSP3				0.852

Source: SmartPLS 3.2.9 Processing Results (2024)

The test results in the form of loading factor values were obtained to assess the validity of the indicators within the variables. According to Hair et al. (2014); Jun et al. (2021), an indicator is considered valid if its value exceeds 0.70 (Hair et al., 2014; Jun et al., 2021). The findings from the table indicate that all indicators within each variable meet this criterion: TA indicators range from 0.823 to 0.908, TK indicators range from 0.837 to 0.939, EC indicators range from 0.709 to 0.859, and CFSP indicators range from 0.852 to 0.934. Thus, it can be concluded that all indicators have surpassed the required validity threshold.

Table 3. Cronbach's Alpha, Composite Reliability, and Average Variance Extract (AVE)

Variable Laten	Indicator	Cronbach's Alpha	CR	AVE
Child-Friendly School Performance	CFSP	0.889	0.931	0.818
Technology Knowledge	TK	0.886	0.943	0.807
Educational Competence	EC	0.909	0.926	0.685
Teaching Aids	TA	0.919	0.922	0.747

Source: SmartPLS 3.2.9 Processing Results (2024)

Ghozali (2021) stated that Cronbach's Alpha values should exceed 0.70 to indicate adequate reliability, and all variables in this study met this threshold. Composite reliability (CR) is considered acceptable if it exceeds 0.70, which was also achieved in this data analysis. Furthermore, for Average Variance Extracted (AVE), values above 0.50 indicate acceptable validity, and all variables met this criterion as well.

Table 4. The values of the Fornell-Lacker Criterion test

Construct	CFSP	TA	EC	TK
CFSP	0.905			
TA	0.743	0.765		
EC	0.736	0.777	0.898	
TK	0.654	0.659	0.662	0.864

Source: SmartPLS 3.2.9 Processing Results (2024)

Discriminant validity was assessed using the Fornell-Lacker Criterion values. The table indicates that each construct correlates more strongly with its variables than other constructs. This suggests that variables predict indicators within their group more effectively than indicators in other groups, indicating unidimensionality for each variable (Ghozali, 2021).

In evaluating model fit, several matrices are considered, such as Standardized Root Mean Square Residual (SRMR), Chi-Square, and NFI. SRMR is used to measure absolute model fit, where a value of 0 indicates perfect fit and good fit is typically indicated by SRMR values below 0.80 (Hu & Bentler, 1999). The table indicates that the SRMR value is 0.070, which is below 0.80, indicating a good fit. Additionally, the Chi-squared value was used to assess the overall model fit (Hu & Bentler, 1999). The Chi-Square/df obtained meets the cutoff criteria with a value of 426.520, which falls within an acceptable range for Chi-Square values.

Table 5. Model Fit

	Saturated Model	Estimated Model
SRMR	0.070	0.070
d ULS	1.042	1.042
d G	0.574	3.363
Chi-Square	426.520	426.520
NFI	0.818	0.818

Source: SmartPLS 3.2.9 Processing Results (2024)

Furthermore, the Normed Fit Index (NFI) according to Hooper et al. (2007) suggests that NFI values above 0.95 indicate a good fit. However, according to (Khalil et al., 2023; Khan et al., 2019), NFI values ranging from 0 to 1 and approaching 1 are considered acceptable. In this study, the NFI value was 0.818, which indicates that the model meets acceptable criteria when processing data.

Hypothesis testing involves analysis of the Original Sample (O) to determine the direction of the relationship between independent and dependent variables; positive values indicate a positive relationship. As shown in Table 6, all results from the Original Sample are positive. Furthermore, the T-statistic is considered significant if it exceeds 1.96 (Sitepu & Indrawan, 2023). During data analysis, the T-statistic indicates the influence of the independent variable on the dependent variable and is considered significant if P-values are less than 0.05 (Ghozali, 2021).
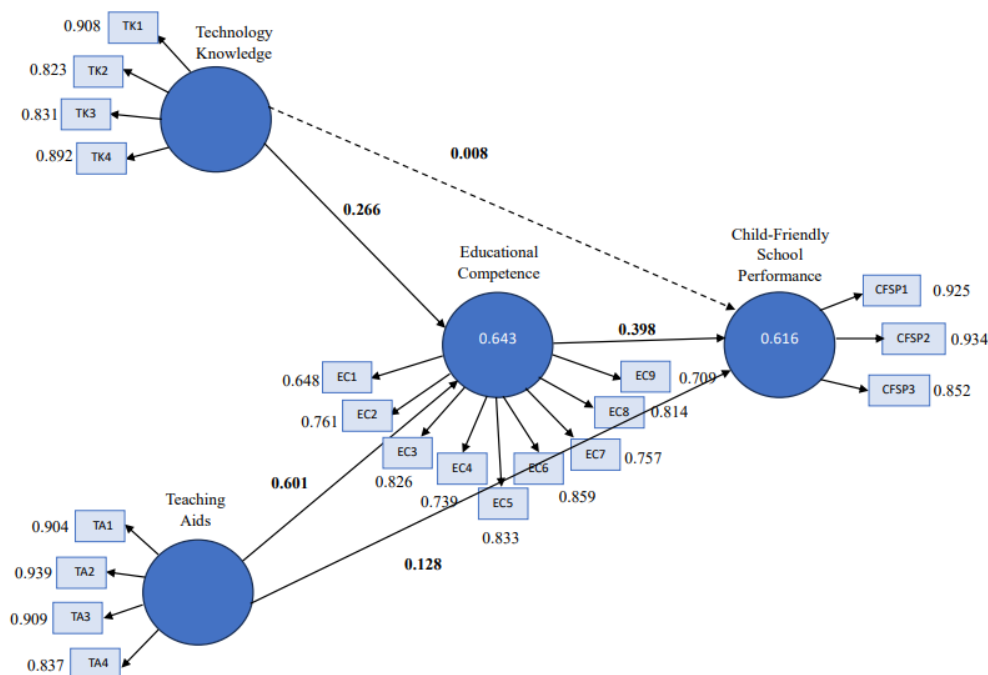
Figure 2. Results of the Analysis Model

Based on the full model diagram, EC can leverage the influence of TK and TA on CFSP, with respective effects of 0.105868 and 0.239198, which are greater than the direct effects of TK on CFSP (0.008) and TA on CFSP (0.128). The best path obtained in this study is TA -> EC -> CFSP.

Table 6. Hypothesis Testing

Hypothesis	R/Ship	Original Sample (O)	Sample Mean (M)	T-Statistics	P-Values	Decision
H1	TK->CFSP	0.008	0.008	0.106	0.916	Rejected
H2	TA->CFSP	0.128	0.128	2.064	0.000	Accepted
H3	TK->EC	0.266	0.260	3.932	0.000	Accepted
H4	TA->EC	0.601	0.609	8.542	0.000	Accepted
H5	EC->CFSP	0.398	0.391	3.771	0.000	Accepted

Source: SmartPLS 3.2.9 Processing Results (2024)

Hypothesis 1 is rejected. Based on the results of the empirical test, it was found that TK did not have a significant effect on CFSP. This result is in line with the study of Arifin et al. (2019). However, this is different from the results of a previous study Ferri et al. (2020), which found the opposite result. This study then found the reason why TK did not have a significant effect on the CFSP, where TK in encouraging the CFSP cannot only be equipped with an understanding of the technology that has been mastered, but teachers also need to actively upgrade to improve their competence. Reliable teacher competence will optimize existing technology facilities to realize CFSP. If TK is not accompanied by reliable teacher competence, it will not have a significant effect on CFSP, which is a finding in this study. The primary contribution of this study is that it succeeded in identifying a model that can bridge TK to CFSP.

Hypothesis 2 is accepted. TA has a significant impact on CFSP. The use of Teaching Aids in the learning process creates an engaging learning environment for children (Adnyani et al., 2021). Learning and playing with educational aids create a fun and interactive learning atmosphere, which

makes it easier for children to understand the learning materials provided by teachers. This finding is consistent with studies that found that learning with teaching aids encourages students to enjoy learning compared with conventional teaching methods (Yeoh & Cheong, 2023). The implementation of TA impacts CFSP (Kuzmina et al., 2023).

Hypothesis 3 is accepted, TK significantly influences EC (Haleem et al., 2022). Teachers with good technological knowledge are more capable of utilizing technology in the teaching process. Educational software, learning applications, and other technological tools can be employed to create a more engaging and effective learning environment (Ferri et al., 2020). Technological knowledge helps teachers develop innovative and relevant learning materials for early childhood education. They can create multimedia content, educational games, and other interactive resources that enhance children's appeal and engagement. Technological literacy enables teachers to access relevant online training and professional development. Students can participate in courses, webinars, or virtual conferences to enhance their skills in using technology in early childhood education. Technology also allows teachers to more effectively monitor and evaluate student progress.

Hypothesis 4 is accepted; Teaching Aids significantly influence Educational Competence. Early childhood children often face challenges in understanding abstract concepts. Teaching aids such as pictures, posters, or models help teachers illustrate these concepts visually and make them easier for children to understand. This approach assists teachers in creating concrete, experience-based learning experiences for children. Additionally, TA enables children to learn through direct action and exploration, which aligns with their learning styles during early childhood (Yeoh & Cheong, 2023). Teachers who use Teaching Aids become more creative and effective in expressing the materials they deliver (Tavdgiridze et al., 2020).

Hypothesis 5 is accepted; Educational Competence significantly influences Child-Friendly School Performance. Teachers with strong educational competence can contribute to the development of curricula that support child-friendly school principles. They can select or develop learning materials that are relevant, inclusive, and age-appropriate (Tavdgiridze et al., 2020). Research conducted by Rusilowati and Wahyudi (2020)s showed that teacher competence impacts the learning environment; certified teachers are better equipped to foster social relationships and understand each student's characteristics, thus creating an enjoyable learning atmosphere. Educational competence includes the ability to create safe, open, and supportive learning environments that foster holistic student development. This encompasses not only academic but also social, emotional, and physical aspects of the school environment. Competent teachers can help students develop the social and emotional skills they need to navigate challenges in school and daily life. They can integrate learning about empathy, cooperation, and conflict resolution into everyday teaching. Competent teachers can communicate effectively with parents and involve them in their children's education. Strong collaboration between teachers, parents, and the community can reinforce support for child-friendly school principles.

CONCLUSIONS

This study found that Technology Knowledge and Teaching Aids significantly influence educational competence. Improved teacher educational competence plays a crucial role in enhancing Child-Friendly School Performance. The empirical testing results revealed that the optimal path in the model is Teaching Aids → Educational Competence → Child-Friendly School Performance with a total effect of 0.239198. The model developed in this research indicates that investment in technology knowledge development and effective use of teaching aids can directly contribute to creating a school environment that supports holistic student development. The theoretical implications of this research underscore the importance of integrating technology and

innovation in education to enhance teaching and learning quality. By building teacher educational competence through technology knowledge and the use of relevant teaching aids, education for children can be better tailored to their individual needs. From a human resource management perspective, teachers and school principals are effective human capital drivers that promote the successful implementation of child-friendly schools. Infrastructure of knowledge that supports edutainment. This research also confirms that modern learning theories emphasizing the use of technology as an effective learning tool can be directly applied to improve educational quality. Managerially, these findings provide a strong foundation for school policies in developing professional development programs for teachers. Investment in training and resources is needed to strengthen teachers' knowledge of technology and to support the use of innovative teaching aids. Furthermore, school management can use the findings of this research as a basis for designing more effective strategies for creating a child-friendly learning environment that addresses the technological aspects and diverse learning needs of students. Overall, better integration of technology, teaching aids, and educational competence can significantly contribute to achieving child-friendly school goals and creating a learning environment that supports positive and holistic development for all students.

LIMITATION & FURTHER RESEARCH

This study is a cross-sectional study because it only gathers data at one time, making it difficult to assess the long-term effects of implemented interventions or policies. In furthering knowledge about child-friendly school education, several future research recommendations can be considered: (1) Conduct comparative studies across countries by comparing the implementation of technology, use of teaching aids, and educational competence of teachers in the context of early childhood education. (2) Further investigate how contextual variables such as local educational policies, school culture, or environmental factors influence the implementation of child-friendly educational practices. (3) Develop Intervention Models by designing and testing specific intervention models to enhance technology knowledge, the application of teaching aids, and the educational competence of teachers in supporting the establishment of child-friendly schools. Lastly, longitudinal studies should be conducted to assess the long-term impacts of child-friendly school educational practices on academic achievement, student well-being, and their integration into society.

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