The Development of Teacher Guide Book on Preschool-Aged Children's Aggressive Behavior and IT-Based Solutions

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Abstrak

Penelitian ini bertujuan untuk menghasilkan buku panduan bagi guru tentang perilaku agresif anak usia dini dan cara mengatasinya di TK Wilayah Kecamatan Turi Sleman Yogyakarta yang diintegrasikan melalui E-Learning dengan aplikasi moodle. Subyek penelitian adalah para guru, siswa dan orangtua. Metode pengumpulan data terdiri dari wawancara, observasi, dan angket. Penelitian ini merupakan penelitian *Research&Development* yang dilakukan dalam enam tahap. Tahap I survey dan pendahuluan, tahap II awal pengembangan prototipe buku panduan guru, tahap III evaluasi produk awal uji ahli, tahap IV uji coba produk, tahap V Revisi produk dan perbaikan buku panduan, Tahap VI Produk final buku panduan guru. Analisis data menggunakan analisis kuantitatif, kemudian dikonversikan ke data kualitatif dengan rumus persentase untuk mengetahui kualitas produk. Selanjutnya data dianalisis dengan diskriptif kualitatif dan kuantitatif. Hasil menunjukan bahwa penggunaan buku panduan guru berdampak signifikan terhadap perbaikan perilaku agresif anak usia dini, dengan hasil uji paired sampel t-test pada nilai angket sebelum dan sesudah menggunakan buku paduan diperoleh nilai sig. (2-tailed) 0.000 < 0.05.

Kata Kunci : *buku panduan, guru, perilaku agresif anak usia dini, e-learning*

Abstract

The current study aimed at developing a teacher guide book on preschool-aged children's aggressive behavior and its solution. The study was conducted in Kindergarten in Turi Subdistrict, Sleman, Yogyakarta. The subjects of the study were Kindergarten teachers, students, and parents. The data collection method consisted of interview, observation, and questionnaire. The present study was categorized as Research and Development (R&D). The study was conducted in six phases. Phase I involved survey and preliminary study, phase II involved prototyping of teacher guide book, phase III was initial evaluation, phase IV was product tryout, phase V was product revision, phase VI was the final product. The data were analyzed using quantitative analysis. Then it was converted into qualitative data by percentage formula in order to point out the product quality. The data were then analyzed using qualitative and quantitative descriptive method. The result of the study showed that the use of teacher guide book significantly affects the decrease in preschool-aged children's aggressive behavior. The result of paired sample t-test on the questionnaire score before and after the use of the teacher guide book was sig. (2-tailed) 0.000 < 0.05

Keywords : *guide book, teacher, preschool-aged children's aggressive behavior, e-learning*

INTRODUCTION

Early childhood is viewed as critical and sensitive period that determines one's attitude, value, and behavior in the future, where one's critical propensity and awareness will be actualized when properly stimulated. Preschool-aged children is those whose age is between 3-6 years old. Whereas sub-directorate of Early Childhood Education (PAUD) specifies preschool-aged children as children whose age is 0-6 years old, where children have studied at Kindergarten level (Yulianti, 2010).
One of the developments a child should attain is emotional development. Hampered emotional development and social behavior may result in aggressive behavior, among others. Aggressive behavior refers to a form of anti-social behavior. Aggression is an individual's behavior indicated by tendency to hurt other individuals (Baron & Byrne, 2009). It contradicts social and legal norms that live in its surrounding, which is unexpected by both individual and the community.

Phenomena of aggressive children at school also widely discussed. The study conducted by the International Center for Research on Women (ICRW) publish at the beginning of March 2015 showed a surprising fact on children's violence at school. It was found that 84% of Indonesian children experienced violence at school. It was higher than the trend in the Asia region (70%). Besides, data from UNICEF stated that 1 of 3 girls and 1 of 4 boys in Indonesia experienced violence. These cases showed that there are many problems faced in education. Children's aggressive behavior at school is often viewed as normal. Teachers and parents tend to view this aggressive behavior is something normal for preschool-aged children. We often hear words like "They're just children, after all" with regard to this issue. Actually, if we study it further, such children's aggressive behavior is harmful when it is not addressed correctly. When children at Kindergarten level have already had aggressive behavior, there may be more cases when they are at elementary school, junior school, and high school level, given that children memorized both good and bad behavior. Aggressive behavior may affect children's behavior as they grow adult, children with aggressive behavior can be shunned and alienated by their friends, which turn them into a closed-off individual. A research supported the finding of the previous study, stated that based on their 19-years of study, they found that individuals who solve their problems aggressively during their childhood exhibit the same behavior and attitude when they were 23 years old (Asendorpf et al., 2008). Based on this result, it is stated that an individual's reaction during their childhood tends to remain to exist even when they have grown.

The study conducted on five students of early childhood education with aggressive behavior shows various behavior. The forms of their aggressiveness were physical aggressiveness, explosive aggressiveness, verbal aggressiveness, and indirect aggressiveness. These behaviors were exhibited either when studying or playing. These children caused problems at school every day. In order to reduce such aggressive behaviors, we conducted observations, interviews with children, teachers, and parents (Arriani, 2014).

The design of the guide book we developed to overcome children's aggressiveness at school applied two theories, namely, Bandura's social learning theory and token economy theory (Bandura, 1977). Interviews with the kindergarten teachers revealed that they were not capable of solving problems at school so that the learning activities were hampered. In terms of educational background, the teacher's educational background was not relevant to their competency. They had not been able to handle the problems that arise at the school. We attempt to make a contribution in the form of teacher guide book on preschool-aged children's aggressive behavior and its IT-based solution.

Following the phenomenon and experts' statement above, it is clear that a solution for children's aggressive behavior is needed. Educational guide book refers to a book containing principle, procedure, description of core material, or learning model used by teachers to carrying out their primary duty and function as education (Depdiknas, 2008). In broader view, teacher guide book is a book which its contents can be used for improving teacher's performance. Guide book, as a medium, may contribute to the teacher's quality improvement in addressing aggressive behavior and

give additional values on the teacher's activity of guiding, educating, and solving preschool-aged children's problems.

Besides the hard copy version, it can also be accessed online through Moodle. The e-learning module allows teachers to access the book anytime. The module contains a step-by-step solution to be used as a reference. This is related to the industrial revolution 4.0 that obliges the presence of technology in education. We would conduct training on how to operate E-learning website to the teachers of sixteen Kindergartens in Turi Subdistrict. To overcome such issues, it is necessary to develop teacher guide book on preschool-aged children's aggressive behavior and its IT-based solution.

The teacher guide book can be used as a reference in overcoming preschool-aged children's daily problems at school. E-learning can be an aid tool for facilitating teachers in accessing the guide book. E-learning refers to one of the learning methods where the learning materials or even the assessment process is carried out using electronic devices with Internet access (Fitri & Asyikin, 2017). E-learning that is developed and used to integrate the web-based teacher guide book so that it can be accessed by the users through browsing application. To integrate the guide book into e-learning, two interfaces were used, web service and web client. Teachers can watch and review or download the guide book anytime. All the data process done in web client will be transmitted to web service and stored in the database (Eko, 2016).

A meta-analytic study conducted on "*effects of violent video games on aggressive behavior, aggressive cognition, aggressive affect, physiological arousal, and prosocial behavior* that involved 4262 participants where 46% of them were under 18 years old found that violent content in video game imposed health risk and harmful effects for the community, particularly children (Craig, 2001). The majority of this study was experimental, revealing a causal relationship between violent content in video games and aggressive cognition. Accordingly, video containing violence can increase children's aggressive behavior because they had not understood whether the video they watch is something normal or deviance. Sometimes, violent videos spread in community without parents and family monitoring. Likewise violent scenes on television.

METHOD

R&D is a method that produces a certain product, and test the product to see whether or not the effectiveness of the product can give benefits to a certain scientific development (Sugiyono, 2008). Data of the study were collected through observation, interviews, and questionnaires. The observation was done using observation guide and sheet designed following the criteria of aggressive behavior, both verbal or nonverbal. The observation was held before and after conducting training with the guide book. The interviews were held with teachers and parents of students with aggressive behavior. The questionnaire was distributed to the validators, they were expert on early childhood, expert on book development, representatives of Kindergarten teachers. They were asked to assess the effectiveness of the guide book in addressing preschool-aged children's aggressiveness at school. The data were obtained through interview with the teachers and parents. It aimed to obtain a general depiction of the indications that emerge from children's aggressive behavior. The result of this interview became the basis for determining the subject of the study. We then designed an observation sheet of preschool-aged children's aggressive behavior. This aims to list the children's aggressive behavior when studying at school, during break time and playing at the schoolyard. We also composed questionnaires in order to assess the effectiveness of the guide book. The questionnaires were distributed to the expert and the teachers. The expert team and kindergarten teachers were asked to see the appropriateness of the book. The questionnaire scrutinizes guide book relating matters. The instrument was consulted with the expert team before distributed to the respondents. The consultation aims to make the instrument possesses good validity.

The present study was categorized as Research and Development. Research and Development (R&D) is a research method applied to create a certain product and to test the effectiveness of the product (Sugiyono, 2008). The study was conducted in six phases of the study, namely: Phase I, survey, preparatory phase, phase II--developing prototype of teacher guide book/ product draft, phase III, expert judgment, phase IV, limited prototype assessment, phase V, product revision, and phase VI- the final product. This study employed quantitative approach and was described using qualitative approach.

The study was conducted in Kindergartens in Turi subdistrict, Sleman, Yogyakarta. The subjects of the study were teachers, students, and parents from sixteen Kindergartens in Turi Subdistrict. Each school was represented by one teacher, the sample was selected purposively. 3 of 16 kindergartens were selected as the sample of the study. They were TK Pertiwi II, TK Insan Cendekian, and TK ABA Keringan. The subjects of trial 1 were seven teachers from TK Pertiwi 1, TK Pertiwi 2, and TK ABA, while the large-scale trial involved sixteen kindergartens in Turi subdistrict, where each kindergarten was represented by one teacher. Students from three kindergartens were involved as subjects of the study since they exhibited aggressive behavior in classroom. Another participant in the study was the classroom teacher. In this case, the teacher provided information regarding their observation on student's aggressive behavior in classroom.

RESULT AND DISCUSSION

The present study was aimed at developing a teacher guide book on preschool-aged children's aggressive behavior and its IT-based solution. Step 1. Potentials and problems. Based on the preliminary study, it was found that the student's aggressive behaviors were exhibited in the form of insulting friends, brawling for toys, punching friends, among other behaviors. These findings are supported by the results of interview with the teachers, they stated that the students' aggressive behavior is not normal, yet it often occurs. Due to such behaviors, some students cried, some students go back and forth to the teacher's room complaining about their friend's behaviors. This finding was utilized as the basis for developing instruments and criteria for the questionnaire to be distributed to the validator to assess the effectiveness of the book.

Based on the previous data, it was found that Kindergarten teachers had not been able to assist the children with aggressive behavior at school. All teachers stated that they need examples of learning activity on overcoming preschool-aged children's aggressive behavior.

Step 2: The initial data collection phase for the development of the book prototype. Some activities conducted in this step were: The information was gathered through studying books and journals. Through observation, interviews, and questionnaires, the data were collected to develop a teacher guide book. Interviews were conducted with teachers and parents to obtain preliminary data on children indicated as having aggressive behavior. The observation was conducted to obtain data on children showing aggressive behavior by listing their aggressive behavior with both verbal or physical behavior scale. The questionnaire that was distributed to the expert team and Kindergarten teachers aimed to collect suggestions regarding the guide book. Based on the criteria that had been determined, the questionnaire items were created. The questionnaire was consulted with the expert before distributed. Based on the collected data, the book was developed. Based on the collected data, the next step was to determine the characteristic of this guide book user, namely, a kindergarten teacher who wants to overcome problems related to children's aggressiveness at school. The development of the guide book that consists of Introduction, Problems of preschool-aged children, for whom this book is suitable, and how to use this book. The second section, theoretical background: teacher's concept in handling preschool-aged children's aggressiveness with the theory for handling preschool-aged children's problems. The third section explains theories and examples of addressing aggressive behavior.

Step 3: Product Design/ Developing prototype of the guide book. Developing the prototype of the guide book (step 1) reviewing the format of the guide book, consisting of: (a) Chapter I- introduction: the essence of preschool-aged children, preschool-aged children' problems, preschool-

aged children' developmental problematics, preschool-aged children' aggressive behavior, aggressive behavior and its treatment following Albert Bandura's social learning theory, aggressive behavior and its treatment following economic token theory, preschool-aged children' aggressive behavior management strategy, glossary, references, and author's profile. This systematics has been orderly arranged, allowing the reader to understand the content of the book easier.

Step 4: Design Validation / Limited assessment on the prototype of the guide book. In this phase, the review of the initial product was conducted by asking suggestions from two experts in learning media. Three teachers, and an IT expert. This validation is important for assessing the feasibility of the product. The validation was done by competent experts, this process allowed us to experience the transfer of knowledge. The reviewers of this book are Dr. Esti, a lecturer at Graduate School of UPY and Syahira Anggita Sakti, M.Pd, a lecturer of Early Childhood Education Teacher Training, Siti Romlah, S.Pd, Sumartini, S.Pd, Yanuar Bagas Arwansyah as the IT expert, and three teachers from TK Pertiwi 2 and TK Pertiwi 1 and one teacher from TK ABA Keringan were asked to give necessary feedback about the book. Reviewers suggestion is helpful for the writing process of the guide book. The result of the assessment is as follow:

Table 1. The result of the assessment on Teacher Guide book on Early Aged Children's Aggressive behavior and Its solution

No	Assessment	Result of Component Assessment			Total
		Content Feasibility	Language	Presentation	
1.	Validator I The Expert on Guide book development	118	72	76	266
2.	Validator II The Expert of Early-Childhood Development	122	106	73	301
3.	Validator III IT Expert	53	7	6	66
4.	Validator IV Teacher at TK Pertiwi I	104	82	75	261
5.	Validator V Teachers at TK Pertiwi II and TK ABA	178	391	354	923
Total of Indicator		575	658	584	1427
Average		115	131.6	116.8	121.1
Idealness percentage		82.14%	94.00%	83.42%	86.50%
Category		Excellent	Excellent	Excellent	Excellent

As shown in the table, it can be seen that the ideal percentage of content feasibility, language, and presentation are categorized as excellent, with percentage of 82,14%, 94,00%, 83,42%, respectively. Based on the result of the judgment, in general,the book is excellent, the score was 86.50%.

Hypothesis testing was conducted in order to prove whether or not the use of this guide book significantly affects preschool-aged children's aggressive behavior.

H0 β: = 0 The use of the teacher's guide book does not significantly affect preschool-aged children's aggressive behavior.

H1 : $\beta \neq$ 0 The use of teacher's guide book significantly affect preschool-aged children aggressive behavior. Significance level (α) : 0.05 (5%)

Table 2. Paired Samples Statistics

	Mean	N	Std Deviation	Std Error Mean
Pair 1				
Pretest Score	14.2857	14	.99449	.26579
Posttest Score	5.2143	14	1.05090	.28087

Table 3. Paired Samples Correlations

	N	Correlation	sig.
Pair 1 Pretest score and Posttest Score	14	-.022	.940

Table 4. Paired Samples Test

		Paired Differences					t	df	sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	sig. (2-tailed)
					Lower	Upper			
Pair 1	pre test - post test	9.21429	1.42389	.38055	8.39215	10.03642	24,213	13	.000

The result of the study showed that the use of teacher guide book significantly affects the decrease in preschool-aged children's aggressive behavior. The result of paired sample t-test on the questionnaire score before and after the use of the teacher guide book was sig. (2-tailed) 0.000 < 0.05. This indicated that there is a difference between pretest and posttest scores.

Following the criteria of hypothesis testing, the use of a teacher's guide book significantly affects the preschool-aged children's aggressive behavior.

Step 5. Revising the prototype of the teacher guide book based on the assessment (teachers and experts). In this step, there were some suggestions from teachers to improve the guide book, namely: (1) the picture on the front cover would be better if it is more interesting and is adjusted to the theme; (2) the example of cases that are easier to understand; (3) smaller book sizes (A5), for instance) would make it easier to put it in the bag; and (4) The content could be more detailed and is compared to other causes of problems so that there is a causal relationship that helps the reader understands easier. Below is the guide book before and after revised by the experts.

Before Revision   After Revision

Picture 1. Design of teacher guide book cover

Step 6. Product tryout Tryout phase involve seven teachers from sixteen kindergartens in Turi Subdistrict, one teacher was from TK Pertiwi 1, two teachers were from TK Pertiwi 2, two teachers were from TK Cendekia, and two teachers were from TK ABA The experiment was done using e-

learning program (Moodle), allowing the participants to access the guide book. The teachers were asked to comprehend the book and attempted to implement it when handling children with aggressive behavior in their school for two weeks and accompaniment afterward, on 16 August, pretest was conducted. On 31 August 2019, posttest was conducted, then evaluation was conducted alternately. After comprehending the book and implementing the materials, they were asked to observe the children's behavior.

Table 4. **The number of instruments distributed to the Respondents for each variable of the study**

Variable	Number of Items
Teacher Guide book	31
Children's aggressive behavior	14
Teacher questionnaire	28

Source: Appendix of research instrument

As shown in the table above, there were 31 items related to the teacher guide book, 14 items related to children's aggressive behavior, and 28 items for teacher questionnaire. The source of data of the present study was teachers in Kindergartens in Turi subdistrict, Sleman Regency. Purposive sampling technique was applied, thus 71 teachers were selected as the sample of study.

Product evaluation was done by asking teacher for feedbacks related to the result of the experiment. Based on the questionnaire result, the quality of the learning aspects in the guide book was 86.50% on average. This score shows that in general, the book is categorized as having excellent presentation. Some teachers' feedback for the guide book were: (1) the color of the image should be brighter to grab the user's attention; (2) example of theory should be constructed in easy-to-understand sentence structures and be relevant to early childhood aggressive behavior; (3) the book explains that the teacher always reminds children not to be aggressive by giving examples directly in children's school life; (4) the material should be made brief so that teachers can understand and apply it easier; (5) the image in cover should be brightened to grab the user's attention; (6) in general, teachers provide more detailed feedbacks in some sections of the book related to the language improvement by adjusting to PUEBI (General Guideline of Indonesian Spelling); (7) interesting picture with relevant color gradation will draw reader's attention; and (8) an accurate, clear, systematic, structured, simple discussion.

Table 5. Feedback and Revision for teacher's guide book

Aspect	Suggestion	Revision
Cover	The image should represent all contents of the book, and there should be some additional images.	Image revision
Font	Sanserif	Roman
Layout		Adjusted to the page set up
Image	Unclear Image	Image Clarity

Children aggressive behavioral changes after guidance

Guidance on social skills of non-violent behavior when socializing with friends. In the present study, the teachers taught the children social skills of non-violent behavior and were asked to observe the children's behavior that reflects prosocial behavior in classroom setting. About 629 children participated in the study. The result shows that the average score of children's prosocial behavior was improved after receiving guidance. With regard to verbal behavior, the children were able to control their emotions, resulting in lower aggressive behavior. This showed the success of the use of the teacher guide book. Regarding the verbal aspect, children were able to control their behavior so that they did not speak harshly to their friends.

The result of the study showed that the use of teacher guide book significantly affects the decrease in preschool-aged children's aggressive behavior. The result of paired sample t-test on the questionnaire score before and after the use of the teacher guide book was sig. (2-tailed) 0.000 < 0.05. t-count (10,03642) was greater than t-table(8.39215). Children's social behavior was improved after receiving guidance using our teacher guide book. The result of t-test before and after the observation of three aspects. The result shows difference in verbal behavior, non-verbal behavior, and the development of positive behavior before and after the guidance. It could be concluded that the teacher's guide book can significantly improve Kindergarten student's behavior, in other words, there is a positive behavior improvement after conducting guidance using the book. The book can also be used by other teachers as long as they have the same characteristics as this study.

CONCLUSION

The result of the study showed that the use of teacher guide book significantly affects the decrease in preschool-aged children's aggressive behavior. The result of paired sample t-test on the questionnaire score before and after the use of the teacher guide book was sig. (2-tailed) 0.000< 0.05. t-count (10,03642) was greater than t-table (8.39215). Based on the validators' judgment, the content, language, and presentation o the book were categorized as excellent, with percentage of 82.14%, 94.00%, and 83.42%, respectively. Based on the result of the judgment, in general, the book is excellent, the score was 86.50%. The book contained many learning materials for teacher's purpose in addressing preschool-aged Children's aggressive Behavior at school, comprising: Introduction, the essence of preschool-aged children, Preschool-aged children' problems, Preschool-aged children' developmental problematics, Preschool-aged children' aggressive behavior, Aggressive behavior and its treatment following Albert Bandura's Social Theory, Aggressive behavior and its treatment following token economy theory, Preschool-aged children' aggressive behavior management strategy, Glossary, References, and Author's profile. Based on the observation result, There was a change in children's aggressive behavior as expected. The final condition shows that the student's aggressive behavior can be handled, and they did not show aggressive behaviors anymore. It creates a comfortable learning activity, students' solidarity, and a safe environment for the students.

REFERENCES

Arriani, F. (2014). Perilaku agresif anak usia dini. *Jurnal Pendidikan Usia Dini*, *8*(2), 263–274.

Asendorpf, J. B., Denissen, J. J. A., & van Aken, M. A. (2008). Inhibited and aggressive preschool children at 23 years of age: Personality and social transitionsintoadulthood. *Developmental Psychology*, *44*(4), 997–1011. http://dx.doi.org/10.1037/0012-1649.44.4.997

Bandura, A. (1977). *Social Learning Theory*.

Baron, R. A., & Byrne, D. (2009). *Psikologi Sosial (terjemahan) edisi kesepuluh*. Erlangga.

Craig, et. A. (2001). *Effects of violent video game on aggressive cognition, aggressive affect, psychological arousal, and prosocial behavior: A meta-analytic review of the scientific*. https://doi.org/10.1111/1467-9280.00366

Depdiknas. (2008). *Kurikulum Tingkat Satuan Pendidikan*. Dikmenum Depdiknas.

Eko, S. P. (2016). Sistem penilaian otomatis jawban esai pada e-learning belajar disini.com. *Jurnal Teknologi Informasi Dan Ilmu Komputer*, *3*(4), 248–252.

Fitri, R., & Asyikin, A. N. (2017). Aplikasi penilaian ujian essay otomatis menggunakan metode cosine similarity. *Jurnal Poros Teknik*, *7*(2), 88–94. https://doi.org/10.31961/porosteknik.v7i2.218

Sugiyono. (2008). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.

Yulianti, D. (2010). *Bermain Sambil Belajar Sains di Taman Kanak-Kanak*. PT Indeks.