



The Effectiveness of the Digital Comic "Si Jali Anak Kota" to Improve the Independence of Children Aged 5 - 6 in Cahaya Kindergarten, Sumberjosari Village, Karangrayung District

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Abstract

Objective study This is For know effectiveness comic digital" si jali child city " as a learning medium For increase independence child 5-6 years old in Cahaya Kindergarten Village Sumberjosari, District Karangrayung, Regency Grobogan. The method used in the research This that is quantitative experiment with design one group pretest posttest. Population study consists of 32 children 5-6 years old in Light Kindergarten Village Sumberjosari, District Karangrayung, Regency Grobogan. Study This use where the total sampling technique whole population made as sample. Research data collection techniques use observation, questionnaire and documentation. Data analysis techniques using statistics inferential with testing hypothesis use Paired Sample T- Test. Research results from t test calculation obtained value $|t_{count}| > t_{table}$, that is $5.409 > 2.03452$, with mark significance (2- tailed) 0.000, then H_0 is stated rejected and H_a accepted. Based on results calculation the independence child experience enhancement as big 16.84% of before exists treatment using digital comic media "Si Jali Anak Kota". The calculation of the N- gain test is obtained results of 0.23 which strengthens that effectiveness of digital comic media "Si Jali Anak Kota" can increase independence child. Those results show exists change form enhancement independence child 5-6 years old after exists treatment using digital comic media "Si Jali Anak Kota".

How to cite

INTRODUCTION

School as responsible formal institution answer for educate child morally, so can create smart, smart, and character generation, so capable fulfil expectations of parents and society (Misnan *et al.*, 2021). Child education age Early Childhood Education (PAUD) is means for build and educate child from ages 0-6 who have control big to suitability age with stages development and growth child. At a rate education this personality and character child formed with exists various stimulation form interactions that occur good from parents, teachers and friend peer with goal for children can more ready face level education next. Developed character there is a number of mark such as, discipline, independence, cleanliness, morals, religion, nationalism, responsibility answer, believe yourself, work hard, tough, creative, leadership, democratic, low heart, tolerance, solidarity and care (Mentari *et al.*, 2019).

Independence must owned every son, because can help develop every potency in self child and raise performance learn it. it be one proof that child ready for follow level education furthermore (Chairilisyah, 2019; Mala & Sa'adah, 2021; Schrodt *et al.*, 2022; Thamrin, 2015). independence of course very relate tightly with attitude not quite enough answer, believe self, no easy surrender, tough, and brave (Mala & Sa'adah, 2021; Mustakim, 2022). Independent child only will keep going depend to others, no can look after himself yourself and fulfill his needs alone. Independence can interpreted as individual ego attitudes that can trained since early own a number of indicator like responsible answer, can finish problem alone, discipline, abstinence surrender and control good emotions. So child own desire release self from parents and teachers, so they can look after himself alone and fighting for stand alone so that child can develop himself become more personal good again.

Standard development children aged 5-6 years should Already develop in accordance with aspect independence like, aspect believe self, aspect interaction social aspect finish problem itself (*problem solving*), aspect management emotion, aspect responsible answer, and aspect disciplinein look after his needs alone (Amin *et al.*, 2020). However, facts found in the field there is something related problems with independence child age early after do observation during one months in group B Cahaya Kindergarten Village Sumberjosari, District Karangrayung, Regency Grobogan. Observation results show that independence child age early at school the not optimal. This seen mo-

ment still lots asking child accompanied his mother and reluctantly left for studied at school, even until cry. There is a number of still child difficulty do alone assignments given by the teacher, such as draw form, write letters, numbers nor coloring picture often no finished in accordance time already set. So as a result child will confused alone and ended request teacher or friend for finish his job. Children not yet can tidy up goods or toys already they use it in its place (Wahyuni *et al.*, 2021). This show that child still not yet can finish problem which simple is one part from independence child.

The role of teachers and parents in give various type stimulation very important to use increase independence son, fine with give example real nor with an interesting medium attention child (Sari & Rasyidah, 2019; Thamrin, 2015). medium or device used in learning expected capable increase independence child age early. Learning media moment this available with diverse type for interesting interest study child, for one is digital comics or *e-comics* (Chairilisyah, 2019). Soedarso (2015) comic divided into 3 types ie, comic strips, books comics, and digital. Digital comics are a form of media book based computer, consists from row picture interesting in a manner sequentially in box (panel) with a little text for explain activity or incident in picture (Rahmawati, 2017). Text the served in simple words to make it easy understood. Age child early more like when presented pictorial media, because child will more understand something learning being taught through pictures, audio-visual, or practice direct (Rohani, 2019). Where child easy fed up with something thing that (Wahyuni *et al.*, 2021) not enough interesting. According to Chairilisyah (2019) digital comic is suite arranged image become a story with objective convey message to readers. There is another opinion submitted by Riwanto and Wulandari (2019) that digital comic is arrangement arranged image form something suite interesting story own element entertain but inside it tucked away message for the readers. From opinion a number of expert the digital comics is series arranged image form something interesting story and has element entertain but there is message contained in story the for the readers.

There is a number of study previously those who used digital comic media would but no for measure independence child in preschool level. Comic with the title "Si Jali Anak Kota" was created based on problem related independence simple to do child for look after his needs

alone. Whereas Wibowo and Koeswanti (2021) do study with objective produce something learning media products form comics used for increase independent study for student 3rd grade. Showing that comic electronic can used as a learning medium for increase independent study child. Chen *et al.* (2018) do study against 89 students school base on class early, in Taoyuan City, Taiwan. Where consists from 2 classes that is class taught control with method traditional whereas class experiment use digital comics. Obtained results that group experiment get more results high (significant) of class controls using traditional media. There is other studies are also related digital comic by Rahmita Rahmita *et al.* (2021) discuss about learning counting early on in children aged 5-6 years in Al Azhar Islamic Kindergarten 54 Pekanbaru. Research results the that is according to the e-comic validator worthy for used as a supporting medium learning or help stimulate child age early, because after tested with 6 aspects development validity of the media reached 84.50%. Based on results study prior and research early in the field there is related problems with independence child age early as well as the more development of learning media in accordance interests and characteristics child age early, then need he did study about effectiveness digital comic "Si Jali Anak Kota" for increase attitude independence children in Cahaya Kindergarten Village Sumberjosari Sub-district Karangrayung. Digital comics are the latest media that can designed as a unique and interesting learning media. The choice of digital comic media "Si Jali Anak Kota" in study This is rated in accordance with the development of the all-digital and reliant *millennial* era technology as well as the internet (Narestuti *et al.*, 2021). Besides matter the that is aspects studied contained within content story from the digital comic. The use of digital comic media has not so lots used as a learning medium specifically for child age early. According to results observation matter the because there is a number of educator or a teacher who hasn't know and know that digital comic can used as learning media. So need done study about effectiveness comic digital "Si Jali Anak Kota" for increase independence child 5-6 years old in Chaya

Kindergarten Village Sumberjosari ,

District Godong , District Karangrayung .

METHOD

The method used in research This is study quantitative with use method experiment included in design *Pre-Experimental* (Sugiyono, 2019). Type the design used is *the One-Group Pretest-Posttest Design* (Sugiyono, 2016). Study This compare condition before given treatment and after being given treatment with *pretest* and *posttest*. It done For know difference independence child before and after given treatment use digital comics. Population in study This is whole participant educate Cahaya Kindergarten B class Village Sumberjosari, District Karangrayung , Regency Grobogan . Participant educate class B1 16 children and B2 16 children in Kindergarten Cahaya Village Sumberjosari So as many as 32 children. Sample in study this taken through one type existing techniques in group *probability sampling* that is technique total (Sugiyono, 2016). This technique use whole population as sample. Data analysis on research this is statistics inferential with type statistics parametric. Parametric statistical techniques used for analyze an interval and ratio data (Sugiyono , 2019). Hypothesis test counted using the Paired Sample T-Test and different tests done for ensure There is or nope difference (mean) of sample research. Normality test done as condition before he did hypothesis test analysis. For the n-gain test used by researchers for evaluate how much good a medium used.

Study This designing comic media with utilise progress digital technology with consider usefulness, convenience access, and use. This digital comic media safe used child age early, add Power imagination child, and as support stimulation development child especially in matter independence, so can create nice atmosphere during the learning process. Digital comic media "Si Jali Anak Kota" is divided into 4 topics story that is part early, bathe yourself, eat and clean equipment Eat alone, study friends and finish assignments at school. Themes the customized with need development independence child field and standard independence child 5-6 years old.



Picture. 1 Draft Digital Comic “Si Jali Anak Kota”

RESULTS AND DISCUSSION

Learning in Cahaya Kindergarten Village Sumberjosari, District Karangrayung, Regency Grobogan Already use curriculum independent and apply principle profile student Pancasila. Usesystem learning centered on the child in class capacity maximum 16 children. However, implementation activity For practice independence child only through habituation Morning before enter class sing together on the page school, where child requested for alternate lead activity. According to results observation pre-research there are 11 surviving children not enough believe self, 13 children Still not enough in aspect interaction social, 8 children Still not enough in aspect not quite enough answer, 10 still Not yet can finish the problem own (*problem solving*), 15 children Still low level discipline, almost all child Still low in aspect management emotions, the caused Because age still child early and lack of stimulation good from teachers and parents. One child nope only own one aspect independence yet fulfilled but can more from one. Master still use simple and less media varied for child. Neither has the teacher use digital media for focus increase independence child.

Independence according to dictionary big Indonesian origin from the independent word meaning can do all something Alone without depend on others in condition whatever. Independent is one of 6 features profile student Pancasila. Six characteristic profile student pancasila as following (a) faith, piety to True God, and have character noble, (b) global diversity, (c) work together, (d) independent, (e) reason critical, and (f) creative (Aditomo, 2022). independence according to Aditomo (2022) that is, the consciousness possessed somebody for responsible answer, got control himself, and can adapt self with circumstances around him. Thamrin (2015) state that independence is attitude or owned character everyone for can fulfil his needs alone so that no depending on others. Character independent No

as well as immediately There is in self someone. Needed proper stimulation for stimulate independence somebody from age early (age 0-6 years) so can develop optimally. Cooperation between teachers and parents very needed in the process of stimulation child for can reach independence in accordance with expected.

During the learning process the teacher can Possible insert values in independence. Teacher yet capable developing learning media for child age early digital based. There is a number of indicator independence stated by Chairilisyah Chairilisyah (2019) that is ability physical, believe me self, responsible responsibility, discipline, smart get along with each other share, control emotion. As for aspect independence according to Indriasih *et al.* (2020) that is, can use napkins and cleaning remainder food, got pour water and drink yourself, got Eat yourself, got put on and take off clothes yourself, got use shoe without rope, got wash hand yourself, got to room small andclean himself moment poop, open and close water tap, brushing tooth with guided, and save toy or the equipment itself in place . Indicator independence child 5-6 years old according to Wahyuniet *al.* (2021) is put on your own clothes, shoes worn alone, eat yourself and prepare all his needs myself, will but also related with psychological child, where child capable take decision own responsible answer as well as have trust self. From several aspects and indicators independence used in research earlier such, then researcher adopt a number of indicator for made aspect as well as customized indicator with the media too need researcher aspects the that is capable finish the problem self, discipline, believe self interaction social, capable responsible responsibility, management emotion. Aspect the developed become indicators Then made customized statementwith digital comic media “Si Jali Anak Kota”.

Digital comic media is is a viable and effective graphic medium For increase various aspect in self child with content existing story in comic the like, aspect cognitive child capable analyze message contained in story, aspect physique mo-

tor child can imitate a number of behavior from figure (wash plate, wiping plate, bring plate to place laundry plate), aspect language child can tell return content comic with language they itself, aspect art child can draw one goods or a number of according item they interesting there is in stories, and aspects social emotional can study work the same like together tidy up toy, capable convey opinion, too cultivate empathy.

Table 1. Descriptive Results Study In the form of Total Pretest and Posttest Scores

Descriptive Statistics					
N	Minimum	Maximum	Means	std. Deviation	
Pretest	32	55	128	91.88	17,346
Posttest	32	100	116	108.72	4,214
Valid N (listwise)	32				

Table on is information results analysis descriptive showing that there are 32 children as respondent (N). The *minimum pretest* value is 55 and value *the maximum pretest* is 128. Meanwhile mark *minimum posttest* 100 and value *maximum posttest* 116. Pretest mean value namely 91.88 and the average value (*mean*) *posttest* is 108.72. data in table the showing that respondent each other related with digital comic media "Si Jali Anak Kota".

Based on table 2 results of the Paired Sample T-Test shows that $|t_{count}|$ is 5,409. T table value with df 31 ie 2.03951. Calculation results the value $|t_{count}| > t_{table}$, is 5.409 > 2.03452, with mark significance of 0.000, then H_0 is declared rejected and H_a accepted. those results showing exists change form enhancement independence child 5-6 years old after exists treatment using digital comic media "Si Jali Anak Kota". Difference can more clear seen through mark less (2-tailed) significance of 0.05, ie of

0.000.

Following is N-gain value, yield calculation sourced from data on research this:

$$\begin{aligned}
 skor_{pretest} &= 2940 \\
 skor_{posttest} &= 3479 \\
 skor_{ideal} &= \text{amount score max x} \\
 &\quad \text{amount questionnaire x} \\
 &\quad \text{number respondent} \\
 skor_{ideal} &= 4 \times 42 \times 32 \\
 skor_{ideal} &= 5376
 \end{aligned}$$

$$\begin{aligned}
 N\text{-gain} &= \frac{Skor_{Posttest} - Skor_{Pretest}}{Skor_{Ideal} - Skor_{Pretest}} \\
 &= \frac{3479 - 2940}{5376 - 2940} \\
 &= \frac{539}{2436} \\
 N\text{-gains} &= 0.23
 \end{aligned}$$

Table 3. Criteria Evaluation N-Gain Score

Average	Criteria
$G > 0.7$	Tall
$0.3 \leq g \leq 0.7$	Currently
$0 \leq g \leq 0.3$	Low

Calculation on show that research N-gain value This that is 0.23. concluded that digital comic media "Si Jali Anak Kota" for increase independence child stated effective. Independence parameters child age early experience enhancement is at in category low. Independence parameters child age early experience enhancement is at in category low.

Table 2. Paired Samples T-Test Results

Paired Samples Test									
Paired Differences									
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
Pair	Pretest				Lower	Upper			
1	– Posttest	-16.844	17.614	3.114	-23.194	-10.493	-5.409	31	.000

Pretest and *posttest* values independence child age early can categorized as following :

Table 4.2.1 Categorization *Pretest* t Early Childhood Independence

No.	Interval Value	Category	Frequency	Percentage
1.	54,00 – 75,00	Very Low	7	21.88%
2.	76,00 – 95,00	Low	10	31.25%
3.	96,00 – 115,00	Height	13	40.62%
4.	116,00 – 135,00	Very High	2	6.25%

Table on showing many child who has level divided independence _ into 4 categories or level . On category very low there are 7 children or 21.88% of amount whole sample. Whereas child in category low there are 10 children or 31.25%. On category tall there are 13 children or 40.62%. On category very tall totaling 2 children or 6.25%. independence child age early (5-6) years before given treatment with using digital comic media “Si Jali Anak Kota”, in a way general For category very low as much as 21.88%, category low 31.25%, category high 6.25%, and category very height 6.25% of 32 children.

Table 4.2. 2 Categorization *Posttest* Early Childhood Independence

No.	Interval Value	Category	Frequency	Percentage
1.	54.00 – 75.00	Very Low	0	0%
2.	76.00 – 95.00	Low	0	0%
3.	96.00 – 115.00	Tall	31	96.88%
4.	116.00 – 135.00	Very High	1	3.12%

Table on showing information many child who has independence shared into 4 categories or level. A total of 31 children or 96.88% have independence in category high. While 1 child or 3.12% own category independence very high. independence child 5-6 years old after given treatment with digital comic media “Si Jali Anak Kota” for free general For category tall as much as 96.88% and children are in category very tall as much as 3.21% of 32 children.

CONCLUSION

Research results showing that independen-

ce child 5-6 years old experience enhancement as big 16.84%, after given treatment with digital comic media “Si Jali Anak Kota”. Reinforced with results score on | tcount | > ttable , is 5.409 > 2.03452, which gains mark (2-tailed) significance of 0.000 and an N-gain score of 0.23. Independence own a number of aspect that is aspect beliefself, aspect interaction social aspect finish problem itself (*problem solving*), aspect management emotion, aspect responsible answer, and aspect discipline. According to observation researcher effectiveness of digital comic media “Si Jali Anak Kota” for increase independence child experience significant improvement with category low. Learning media digital comic can become a medium of innovation for teachers, PAUD institutions and researchers furthermore for increaseindependence child can done variation or develop theme in a manner more wide with add sub- stories that can interesting interests and characteristics child age early.

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