



Independence of Deaf Students Through Mesatue Method Using Cartoon Media In Hindu Religious Learning

Desak Putu Saridewi^{1*}, Yupin Aunguroch², I Gede Juanamasta³ 

¹ Teacher education for early childhood education, Institute of Agama Hindu Negeri Gde Pudja Mataram, Mataram, Indonesia

²Faculty of Nursing, Chulalongkorn University, Bangkok, Thailand

²Nursing program, STIKes Wira Medika Bali, Denpasar, Indonesia

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ABSTRAK

Anak tuna rungu menghadapi masalah dengan kemandirian. Sikap kemandirian sangat berdampak positif pada kehidupan keseharian mereka. Penelitian ini bertujuan untuk menganalisis metode mesatue media kartun dalam kepercayaan diri beragama Hindu siswa disabilitas. Jenis penelitian ini yaitu pengembangan. Metode penelitian dengan pengembangan media menggunakan model 4D, meliputi tahap define, design, develop, dan diseminasi sesuai dengan karakteristik siswa penyandang tunarungu. Pengumpulan data yang digunakan adalah metode observasi, dengan instrumen aspek kemandirian siswa, wawancara, dan dokumentasi mendalam. Analisis dalam penelitian ini menggunakan metode deskriptif kualitatif yang berfokus pada bagaimana meningkatkan kemandirian siswa tunarungu dalam pembelajaran agama Hindu. Penelitian ini dilakukan dengan evaluasi awal sebelum menggunakan media kartun dan evaluasi akhir setelah menonton pendidikan agama Hindu. Hasil penelitian dari kategori tunarungu menunjukkan bahwa pengenalan nilai-nilai agama Hindu dengan metode mesatue dengan media kartun mencapai 72% untuk tingkat SD, SMP meningkat 58%, dan SMA sebesar 97% dengan total 16 siswa. Tampilan gambar interaktif dapat mengakomodasi siswa tunarungu. Disimpulkan metode mesatue dengan media kartun dapat meningkatkan kemandirian siswa sesuai dengan indikator yang telah dirumuskan dalam tujuan pembelajaran.

ABSTRACT

Deaf children face problems with independence. The attitude of independence has a very positive impact on their daily lives. This study aims to analyze the cartoon media mesatue method in the Hindu religious confidence of students with disabilities. This type of research is development. The research method of developing media uses the 4D model, including the define, design, development, and dissemination stages according to the characteristics of students with hearing impairments. The data collection used is the observation method, with the instrument aspects of student independence, interviews, and in-depth documentation. The analysis in this study uses a qualitative descriptive method that focuses on how to increase the independence of deaf students in learning Hinduism. This research was conducted with an initial evaluation before using cartoon media and a final evaluation after watching Hindu religious education. The research for the deaf category showed that the introduction of Hindu religious values by the mesatue method with cartoon media reached 72% for the elementary level, the junior high school increased by 58%, and high school by 97% with a total of 16 students. Interactive image displays can accommodate deaf students. It was concluded that the mesatue method with cartoon media could increase student independence according to the indicators formulated in the learning objectives.

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1. INTRODUCTION

Innovation and maximum efforts from educators are needed so that students can receive learning well (Fatkhurrahman & Zuber, 2022; Howard et al., 2018; Huda et al., 2019). The development of learning technology in education makes it easier to access knowledge (Anshari et al., 2017; MacLachlan et al., 2018; Smith et al., 2018). Learning demands in the COVID-19 pandemic are prioritized in delivering learning materials with exciting methods processed online. This condition triggers a lack of social interaction between teachers and students. The lack of interactive learning media and social interaction due to online learning during the pandemic, which students accepted gave rise to the development of student independence, is hampered because awareness to achieve independence requires the help of others (Amir et al., 2020; Robandi & Mudjiran, 2020; Syahroni et al., 2016). Because the role of peers, teachers, families, communities and the surrounding environment can trigger interactions to train communication (Angelina Widyastuti & Widiana, 2020; Pramono et al., 2021). Learning gaps occur in outstanding schools with minimal media use in era 4.0 (Djumabaeva &

Kengboyeva, 2021; Saridewi & Dewanti, 2019). The use of very minimal media in learning will inhibit the achievement of learning goals in all three aspects, namely cognitive, psychomotor, and affective aspects. The aspect focused on in this research is the affective aspect.

Educator creativity is needed to overcome problems, especially in deaf students. The existence of deaf students, behind their limitations, can generally use their sense of vision (Allen et al., 2014; Villwock et al., 2021). It is supported by the prior study that found the human sense of sight can receive information from the visual display (McKeown & McKeown, 2019; Rodrigues et al., 2022). Reinforcement for children who experience well-being in hearing is focused on the eyes. Learning methods are part of learning strategies because they present, describe, and set examples and models for achieving specific goals (Alshwabkeh et al., 2021; Saridewi & Dewanti, 2019). This research focuses on storytelling methods in the material introducing the basics of Hindu holidays with pleasure of fostering independence.

The term independence aspect means that everything can be done independently (Cahyana et al., 2019; Haslbeck et al., 2012; Prayekti, 2018). Independence also implies confidence and no doubt in setting goals and not being limited by the power of doubt (Hafidzah et al., 2019; Iswari, 2017; Sapri et al., 2019). The independent attitude of deaf learners in the readiness of individuals to stand alone is characterized by taking the initiative, diligently learning, doing something without the help of others, acting creatively and taking the initiative to generate new ideas, and being responsible for completing tasks thoroughly (Fathurrahman et al., 2017; Gralewski, 2019). The independent attitude of deaf children can be fostered and instilled by providing concrete examples because naturally children are urged to be independent. Attitudes and behaviors are not easy to rely on others to complete tasks. Independence also educates children to be responsible for meeting their needs (Fathurrahman et al., 2017).

The above phenomenon hints at the need for teachers who have innovation in learning. Innovation is needed in this pandemic period so that students continue to learn well and can understand the material properly (Chang et al., 2020; Lampong Klomkul, 2021; Pratama et al., 2020). Based on the results of library studies, fun strategies, and the presentation of exciting material, can attract students' attention. The solution of using cartoon media *mesatue* methods in Hindu religious learning in deaf students is expected to develop the independence of deaf students. Cartoons are images that use symbols that can attract attention and influence attitudes and behaviors because large-scale messages can be presented briefly, and the impression is long-lasting. Long time in memory (Batool et al., 2021; Fresno, 2018; Özer & Avci, 2015). Cartoons are visual media that can make abstract understanding of material to concrete things easier and strengthen memory. This visual medium can connect the lesson's content with the real world and develop science with illustrations that support students' memory (Nisak & Rukmini, 2021; Saisabila, 2018).

The storytelling method is one of the alternatives that can be used to convey the news pragmatically. The purpose of storytelling is to provide information to others through expressions, feelings, events experienced, and the desire to share experiences that have been experienced (Dewi et al., 2018; Mustika Sari et al., 2018; Nisak & Rukmini, 2021; Rohayati et al., 2021). Storytelling activities benefit from enriching vocabulary and training children's courage in communicating (Mustika Sari et al., 2018; Rambe et al., 2021; Ramdhani et al., 2019). Storytelling in past community traditions is an option to introduce ethical values to strengthen the child's beliefs, entertain and be an effort to reward the child. Previous study found that storytelling can improve a child's speech and confidence (Nurjanah & Anggraini, 2020; Rambe et al., 2021). In line with Gagne different types of components in the student environment can be an attraction for learning. Media is all a physical tool used to present a message and can get students excited about learning, such as books, movies, tapes, and other examples (Coleman & Cross, 2021; Lusiana & Maryanti, 2020; Puspitarini & Hanif, 2019).

Elaboration of the *mesatue* method with animated cartoon media is expected to be an alternative that attracts students with special needs. Animation is a series of images that form a movement with the main characteristics, namely: (1) images, the animation is depictions, (2) in animation a motion is depicted, (3) objects made with images or other simulation methods (Lestari & Mustadi, 2020; Nurhayati et al., 2022; Putri et al., 2020). Animated cartoons are films for television cinemas or computer screens, designed using moving images, made for educational commercial entertainment. Technology in the form of visual media hopes to make it easier to understand the material that is abstract and able to strengthen memory. This visual medium can connect the lesson's content with the natural world and develop knowledge through illustrations that support the student's memory (Melda et al., 2021; Sari et al., 2019).

Based on the description and reason of the problem, the urgency of this study was examined with the theme of using *mesatue* methods with cartoon media in Hindu religious learning to develop aspects of student independence. An independent person will benefit the future of children with special needs. By applying the *mesatue* method with cartoon media, learning activities will become more interesting so that language skills, communicating with sign language, and self-confidence will increase. Media states that the appearance of words and images makes learning more meaningful than just words (Pratiwi et al., 2022; Endang Saripudin et al., 2018; Trisnadoli et al., 2021). Related elements such as text images or narratives and animations presented

simultaneously will improve the understanding of learning skills (Amali et al., 2020; E Saripudin et al., 2018). Efforts to improve children's attitudes toward special needs require particular intervention in the learning process to touch on all aspects of student development and needs (Grzega, 2021; Jafarova, 2021). Similarly, prior study revealed that deaf students are learning more need images and interactive media because of sign language recognition applications that support active learning for deaf students (Winaldi & Setyawan, 2018). The presence of deaf students in receiving reinforcement is more dominant by using the sense of sight. This research was conducted to explore learning and present scientific evidence supported by empirical data and the excellence of *mesatue* methods and learning media for deaf students.

Deaf children are children with special needs with hearing and speech loss (deaf speech) in general, the obstacles they have are hearing and difficulty communicating verbally with others (Murray et al., 2020; Webster, 2017). Hearing loss causes difficulty in capturing sound stimuli through hearing. The situation has mild to severe severity, including a subset of deafness and hard vultures. People with hearing loss generally use hearing aids and have enough residual hearing to successfully process linguistic information through auditions (Hallahan et al., 2020; Marschark M, 2012). Using media in the *mesatue* method strengthens the child's spirit in listening to spoken stories. The literature is mentioned that visual improvement can improve memory in the learning process and can increase memory up to 71% of the original memory (Siregar & Nara, 2010). On this basis, visual additions and incoming auditory messages for students are more vital. The sensation of attention that students have will strengthen each other because what is heard is supported by a vision and vice versa.

Previous research found that independence is the third essential element of morality that comes from people's lives and grows and develops due to two factors, namely discipline and commitment (Durkheim, 2018; Iswari, 2017; Kane, 2021; Zag, 2020). The importance of an independent attitude is developed in children who need to serve themselves even within limitations. Attitudes and behaviors are not easy to rely on others to complete tasks (Fathurrahman et al., 2017). The independent attitude of deaf learners in the readiness of individuals to stand alone is characterized by taking the initiative, diligently learning, doing something without the help of others, acting creatively and taking the initiative to generate new ideas, and being responsible for completing tasks thoroughly. Based on this, this study aims to analyze the cartoon media *mesatue* method in Hindu religious self-confidence for students with disabilities.

2. METHOD

The media development used a 4D model including the define, design, develop, and disseminate stages according to the characteristics of students with deaf student (Tegeh et al., 2019). Using 4D model was based on six practical academic considerations, namely: (1) general research that refers to development research procedures starting from the analysis stage, concept design, development with evaluation, revising and finally deployment, (2) 4D development design is a basic aspect for carry out the development of learning materials for Hindu religion with cartoon media, (3) the procedure for developing learning materials with cartoon media is carried out in a sequential manner according to the 4D model procedure, (4) the stages of development are improving the development process with validation, testing, and evaluation. Validation from learning design experts, learning media experts, Special Education experts and religious teachers. Technological experts with the aim of validation so that cartoon-based Hindu Religion learning materials are developed according to the needs and characteristics of students with special needs and development orientation needs. (5) The 4D development model from a practical point of view has more straightforward stages but can still be accounted for based on ethical research and scientific studies, and (6) the stage of dissemination of making softcopy files and flash disks for students and through Google Drive for Hindu religious teachers.

The observation method in data collection used the instrument of student independence ability. The analysis was carried out descriptively and conducted at the Special School. The research subjects were 16 people categorized as deaf students. The combination of media with the *mesatue* method is one effective way teachers introduce Hindu religious values. *Mesatue* (telling) is a productive language activity because by telling a story, someone has used thinking, mental readiness, and courage in conveying the message that is shared so that others can understand it. There is no standard measurement to measure deaf student independence. Direct observation was used to measure criteria of independence (Table 1). The criteria were based on the student independent theory (Gralewski, 2019). Face validity was done to measure this instrument validity (Saridewi, 2022). The detail of measurements in Table 1 and Table 2.

Table 1. Assessment Criteria for of Independence Aspect

Item	CODE	Description
1	C1	Doing something self-motivated for one's own needs
2	C2	Diligent in studying

Item	CODE	Description
3	C3	Doing something without the help of other people
4	C4	Acting creatively and taking your initiative in generating new ideas
5	C5	Responsible for completing tasks thoroughly

Table 2. Student activity criteria

Percentage	Value	Quality	Predicate
86% -100%	A	5	Excellence
76% -85%	B	4	Good
60% -75%	C	3	Sufficiently
55% - 59%	D	2	Deficient
1% - 54%	E	1	Weak

The analysis in this study used a qualitative descriptive method to determine the effectiveness of the media and the increase in results after the use of the unified approach with cardboard media. Aspects of effectiveness are assessed by teachers, peers, and students. The rise in independence was analyzed through pretest and posttest data so that it was known the increase in the independence of deaf students. Pretest data were obtained before cartoon media and posttest data were received after cartoon media. A comparison of pretest and posttest was conducted to determine the increase in students' independence. Direct observations during learning can help find problems and solutions in learning activities at schools with special needs.

3. RESULT AND DISCUSSION

Result

First, define. The problem of learning in Special Schools is a problem that has not received significant treatment, especially in learning Hinduism. The practice of religious learning pays more attention to cognitive aspects than to affective aspects. This problem is growing because schools are being pursued with curriculum targets. The same perception from planning, learning process to evaluation has not been realized. The method used in religious learning is mostly lecture method (Dharma Wacana) and teacher mastery with sign language is very minimal. This method does not provide motivation to learn and has not been able to display real religious values, regarding the process of searching, discovering, recognizing, understanding and applying it in everyday life. Based on the findings by students, religious lessons are seen as a saturating subject. Parents of students also stated that the indoctrination of religious norms did not open up space for students to be more critical and creative in the teaching and learning process. Finally, it causes boredom and laziness of students to attend school to participate in learning. Low willingness and determination to practice religious values and awareness of developing religious values will have implications for the independence of students with special needs.

Second, design. The display of the content design of Hindu religion learning material with cartoon media is presented in a simple way to make it easy for students to understand. The material was equipped with concrete examples such as restrictions on the celebration of the holy day of Nyepi (Figure 1.a). This learning media content design makes it easy students in listening, studying, understanding, so that it is expected to be able to improve the interpersonal and intrapersonal abilities of students with disabilities (Figure 1.b).



Figure 1. (a) Screen page of Balinese Hindu Holy Days, (b) Screen page of Mayadanawa's Story

Third, develop. At this stage, the validators involved were experts, peers (peer reviewers), vice principals and teachers of Hinduism. The validation stages in this development include material experts, or content experts, design experts and media experts. Peer validation was carried out by 2 friends majoring in

computer technology, assigned to IAHN Gde Pudja Mataram, to determine the readability of material and media formats. In the validation of the teachers involved, there were 5 teachers of Hinduism and one deputy principal in the curriculum field who was in charge of teaching Hinduism with PLB qualifications. Teacher validation aims to determine the implementation of learning using cartoon media. Overall, these stages were carried out to find out, communicate and consult about the learning media that have been developed to experts.

Learning activities with the *mesatue* method are not a new method in learning Hinduism, but this method is rarely used because: (1) a long process is required in planning, (2) material is prepared following the characteristics of students with disabilities, (3) the development of cartoon media requires a lot of money, (4) it takes collaboration with researchers and training for teachers to design materials and instructional media, it takes encouragement and motivation for teachers in special schools to use this *mesatue* method. This alternative media choice does not necessarily get a response from special schoolteachers. It requires regular assistance to provide solutions for educators who want to improve their performance further.

The results showed that applying the cartoon media *mesatue* method can increase students' independence in the categories of deaf disabilities. The combination of stories with cartoon media reinforced by sign language and real pictures shows students' enthusiasm to listen and digest the education of Hindu religious values (as seen in Figure 1 and 2). *Mesatue* activities with animated cartoon media provide a very complete learning experience. Children with disabilities with the category of deaf disabled can see to material story narratives, display cartoons and examples of the values of religious education in the *Mayadanawa* story. Deaf students are very excited to watch the animated video which is equipped with audio narration in sign language.

The results of this study also explain that the *mesatue* method was beneficial for all aspects of the senses possessed by students with disabilities. Students with various categories of disabilities can listen to this method with enthusiasm. A complete learning experience can be obtained in *mesatue*, namely practicing listening to stories, practicing vision, and practicing memory through the cartoon media shown. Students with deafness can see pictures like reality and learn about the ethical values of Hinduism and the responsible attitude played by each character in the story. The importance of religious education contained in the stories presented can be learned, lived, and applied in the daily life of children. For the deaf category participants, they will be able to observe the *mesatue* method with the appearance of cartoon media images.

The process of learning activities using the animated cartoon media *mesatue* method provides: (1) real experience, (2) easy to attract students' attention, (3) arouses motivation, and (4) brings pleasure to children with special needs. The child's feeling of joy in learning is confirmed to be able to develop aspects of the child's ability to express, learn to communicate and learn to understand the contents of the story. This will also help the child has an independent attitude, namely an attitude of discipline and responsibility, which is shown in the characters in the cartoon media story. The findings of the implementation of learning using the cartoon media *mesatue* method can increase independence and foster student motivation to listen to a story. The total number of 16 students categorized as elementary, junior high school, and senior high school before and after the use of the cartoon media *mesatue* method can be classified as aspects of student independence in Table 3.

Table 3. Changes in Student Independence Attitude of Special Needs

Total Student	Level/ Student Category	Religious Value		Percentage Change
		Pretest	Posttest	
9	Elementary	110	189	72%
3	Junior high school	49	59	58%
4	Senior high school	72	98	97%

Fourth, disseminate. Based on the stages that have been carried out in the development of Hindu religious learning materials with cartoon media, the assessment results obtained from content experts, design, instructional media, students, teachers and colleagues have been declared suitable for use. This cartoon media learning material product was packaged in exe form stored in flash drives for students and Google Drive for teachers. The products were distributed to five SLBNs with Hindu students in West Nusa Tenggara.

Discussion

Student independence indicators are stated in the table above. Deaf students at the Elementary School level experienced an increase of 72% with 9 students, junior high school level increased by 58% for the number of students three people, and SMA by 97% with a total of 4 student people. The percentage results obtained in this study showed that the effective ability in the aspect of independence of deaf students was higher. The prior study found that audiovisual, specifically cartoon, method is significantly increase knowledge and attitude of deaf students (Glorioso et al., 2022; Kurniawati et al., 2022).

Developmental power is having problems in learning caused by intellectual, social, mental, physical, and emotional barriers (Batool et al., 2021; delphie, 2012). These obstacles slightly hinder students' development of independence, especially at the elementary school level. At the primary school level, students are less interested in doing something with their encouragement for their own needs, have not been able to focus on learning, and look restless in class (Budiwati & Fathoni, 2022; Mirlanda et al., 2019). At other points, such as creative action and new ideas slowly begin to emerge and being responsible for completing tasks even though they are still with the help of others. At the junior high school level, the five aspects of independence have started to develop well. At the high school level, the development of the independence aspect has begun to increase growth as shown in the table above. It is shown the difference between pretest and posttest. Deaf students with hearing impairments can listen to stories well from elementary to high school levels (Batool et al., 2021; Fresno, 2018; Zárate & Eliahoo, 2014). Additionally, deaf students have intelligence almost the same as normal students, while mentally disabled students have less intelligence than normal students (Delphie, 2012).

In general, the learning conditions with the cartoon media *mesatue* method in the Special School can understand learning. The advantages of the cartoon media *mesatue* method that was designed, developed, and applied in this research can be conveyed and displayed repeatedly. In Classical Conditioning theory, behavior can be formed by being repeated with inducements that can foster cool behavior (Mikhailov & Kolpaschikov, 2017; Rovers et al., 2018; Syahrial et al., 2019). The repetition process carried out on learning materials for children with special needs will be able to foster students' memory in understanding the content of learning (Isya', 2017; Widiastuti, 2014).

The use of the *mesatue* method in this study is also proven in the results of prior study that storytelling can attract students' interest to attend school because it has a re-creative and imaginative effect and provides a social barometer for children about educational values (Nurjanah & Anggraini, 2020; Şilbir et al., 2020). This is the ability to empathize and sympathize with others. Empirically in family education, the *mesatue* method is a community habit since time immemorial, cultivating the values of goodness so that humorous, attractive, and communicative storytellers stimulate children (De Clerck, 2019; Eden, 2014). The importance of kindness is integrated with various skills so that they can easily arouse children's desire to analyze problems that are found around them. Storytelling encourages children to interpret the learning process and encourages students to look at issues from the point of view of others so that they are easily digested (Dewi et al., 2018; Gürsoy, 2021; Isik, 2016; Rambe et al., 2021; Rohayati et al., 2021)

The use of the *mesatue* method in children with the deaf student will make students more independent individuals. But all cannot be separated from the role of the family as the essential foundation for starting character education related to student independence. Habits and good encouragement for children with disabilities are also strengthened by the inculcation of religious values, which is carried out gradually (Batool et al., 2021; Yanti, 2019). The family environment can also make an independent culture grow (Batool et al., 2021; Fatmawati et al., 2021). Naturally, habituation is an excellent thing to do in a family environment through assignments and useful activities. The school environment strongly supports fostering independence, the role of educators outside of learning, assignments, habituation, direction, teaching, and modeling direct students. Outside learning at special schools, students are combined in one class in *srada bhakti* activities contributing to education where simplicity and independence are contained. The small number of sample was the limitation of the study. Additionally, the cartoon focus in Hindu religion that could not use to another religion. Bigger sample size and historical cartoon media might be benefit to use because it can use in all kind of student. The cartoon of national heroes would help the development of this method for further study.

4. CONCLUSION

The development of independence of students with disabilities does not occur significantly. The ability of students is barely visible. In junior high school, children begin to show the attitude they naturally have, and the attitude of independence of students in adolescence equal high school can be observed. This independence arises due to repeated gaining of knowledge. This shows that the application of the *mesatue* method in Hindu religious learning can significantly increase student independence, and communication. Another thing raises students' self-confidence. *Mesatua* could inspire them to build their character. In this process, teachers tell stories thematically and relate to them moral norms regarding the subject topic. The conclusion is that the *mesatue* method on deaf children using cartoon media can empirically increase self-confidence, learning outcomes, and students' independent attitudes.

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