

Interactive Media Design to Train Basic Singing Technique for Kindergarten Students

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Abstract—Learning activity for kindergarten students can't be separated from arts activities, including singing. In general, children fond of singing activity. Singing training for kindergarten student is not simple because children are usually restless and easily bored. Learning activity for kindergarten children must be accompanied by media that support the learning process. This article describes the design of interactive learning media to improve the singing ability of kindergarten student. Interactive media is used to deliver teaching that presented recorded video material using electronic media. One of the learning media used is through interactive innovative and interesting videos to introduce to children/students. This interactive media design procedure includes a preliminary study, the planning stage, and the product manufacturing stage. The purpose of this design is a product in the form of interactive media. The resulting product is in the form of an interactive learning CD, consisting of an introduction, basic singing technique material, then focusing on breathing material, articulation, and the results through the theme of a storytelling model that is easy for children to understand, accompanied by animated pictures, and using interesting musical instruments. Children are not only expected to listen and watching the video, but also to give an active response. Therefore, through interactive media, children will feel happy learning singing, do not get bored quickly. This media can be used by teachers and parents.

Keywords—*interactive media, singing, resonance*

I. INTRODUCTION

Early childhood education is a basic learning process that is given for children before they study in elementary school. Early childhood education in Law Number 20 of 2003 describes a coaching effort aimed at children from birth to six years of age is carried out through providing educational stimuli to assist physical and spiritual growth and development, thus, children have readiness to enter further education [1]. The education provided for early childhood is an effort that can provide stimulation in assisting child development. Early childhood education provides an effort to stimulate, guide and provide activities that will produce children's abilities and skills [2].

The authors find the data through the observation in a kindergarten in Bandung. The author obtained data that singing

training for kindergarten students is not simple because the children are still very active and always wanting to play. Thus, the focus of this problem is on kindergarten students aged 4-6 years. Children aged 4-6 years are included in the "Golden Ages" category known as the period of child development. Childhood is an important period for individual development. Early Childhood Education is an educate that is given to children who are newborns up to six years old. Kindergarten students, or generally children really fond of singing activities. The implementation of education in early childhood (Kindergarten) adheres to the principle of playing while learning or while playing. Kindergarten students are still energetic and enthusiastic in doing anything, including singing activities [1].

Singing is a part of children's life that is often conducted by singing a song that has been heard before. Singing can be done at any time in the learning process, for example in initial or final activities, or games. By singing, children can find happiness, express, and explore themselves. Singing is a means of expressing thoughts and feelings. This activity is important for children's education. Besides, singing is a fun activity that gives satisfaction to children [3]. However, most teachers only introduce or make singing just a medium of entertainment for children. In fact, there are important aspects in singing, such as the existence of basic vocal techniques. Vocal techniques usually consist of the aspects of posture, breathing, articulation, intonation, resonance and expression. Yet, the basic techniques of singing on breathing, and the articulation and production of the sound or producing sound are more focused in this medium.

Material of introduction and breathing exercise are the initial stage to train/teach children to sing. To attract children to be interested in participating in learning must be through storytelling models because giving learning material to children is usually through storytelling activities. Storytelling activities can be a stimulus for children to concentrate while studying and to make them not to get bored easily. Through storytelling and singing methods, children aged 4-6 years can be given a stimulus to add language vocabulary in storytelling or singing to obtain a picture of the meaning of the word [1].

The use of technology for learning nowadays is related to daily life. Most parents allow their children to play gadgets without any time limit. There are many and varied learning media that are fun for early childhood. This encourages teachers to be creative in using various learning media. In fact, in the field, there are still several schools for early childhood who tend to avoid and refuse to use electronic media as a learning medium. With the design of using learning media through interactive media, it is expected to have benefits to increase children's learning motivation. In this discussion, it is more focused on using Interactive CD media to develop singing skills. Interactive CD is an attractive medium, easy to use, and it has many functions.

Based on the the problems above, the authors want to make a design of interactive media. This interactive media aims to train singing skills for kindergarten students. Thus, the authors compile an interactive media design entitled "Interactive Media Design to Train Basic Singing Techniques for Kindergarten Students". The design of this media aims to produce learning media products to ease music teachers or kindergarten teachers to teach singing material and introduce sound resonance to children. Besides, this media can also be used by parents at home. It is also expected that this can be a stimulus for children to be more enthusiastic and like singing activities that it later can be useful for their development.

II. THEORY

A. Singing for Kindergarten Students

Giving singing material to kindergarten students is not simple because children very like playing and they can't concentrate so they often get bored. Learning activity will look attractive to children if it is accompanied by playing, singing and telling stories. Playing, telling stories and singing are three techniques that play an important role in any learning for early childhood [3]. Various things and activities can be conveyed in a fun and interesting way for children if these activities are packaged through playing, telling stories, and singing. Thus, even though singing activities are fun for children, it should still be followed by telling stories, for example to draw concentration so children don't get bored quickly. Singing has several benefits for children, especially in stimulating a sense of sensitivity. Heri Hidayat revealed that with appropriate singing activities children are able to Anti [1]:

- Add vocabulary, be creative and imagine (in terms of intelligence).
- Channel emotions, cause a sense of pleasure (in terms of emotions).
- Train body muscles, coordinate body movements (psychomotor aspects).
- Play together (social aspect).

Children very like singing and almost all learning activity for children can't be separated from arts, especially singing.

Singing activities are often associated with learning. Thus, learning activities will be fun because singing is so popular [3]. Moreover, children have known sounds, rhythms and melodies since they were babies. It eases teachers to develop activities in terms of the child's language through singing. Singing is a fundamental musical activity because children can hear through their own senses, voice various pitches and musical rhythms with their own voices [1].

B. Basic Technique of Singing

In singing activity, there are basic techniques to sing well. You have to learn the basics of singing technique. The basics of this singing technique must be studied in earnest, gradually, regularly and diligently. Thus, a good voice for singing is formed. Vocal techniques consist of posture, breathing, articulation, resonance, phrasing, vibrato, expression [4]. However, training/coaching basic vocal techniques for children is not simple. The basic singing techniques discussed are more focused on breathing and articulation techniques. Basically, children can't understand all the basic techniques of singing, thus, they must go through an approach or learning model that is close to the them. Breathing is the most important element in producing sound. Without using good and regular breathing, people won't be able to sing well [4]. Meanwhile, articulation is the pronunciation of words that must be clear and good. Therefore, the two basic singing techniques play an important role, especially to be introduced to the singing material of kindergarten children. Vocal teaching to early childhood is different from adults. Vocal learning in children tends to be more relaxed and fun because children think singing is playing. Children must be accustomed to singing in a good and correct way. Therefore, training basic vocal material is needed. The basic vocal material taught to early childhood includes: posture, breathing, articulation, resonance, vibration, interpretation [5].

C. Method of Story Telling Learning

Storytelling method is used by teacher to give learning experience for children. Stories that are told to children must be adjusted to the children's age and are meant to convey messages and information. Thus, stories can be easily understood by children. The storytelling method is a method we use a lot in Kindergarten. The storytelling method is one of providing learning experiences for kindergarten student by telling stories to children orally. The story told by teacher must be interesting and invite children's attention and it can't be separated from the educational goals for kindergarten children.

Storytelling is very suitable to teach kindergarten students. Teaching vocal material to early childhood requires the right approach. Thus, children are motivated and want to learn vocals well. Praising children occasionally can increase their motivation to learn. However, it is not uncommon to encounter obstacles in the learning process. The obstacles include children whose voices are not correct (false, not in tempo, not according to the octave, etc.), children who tend to be too active in class, children who have difficulty concentrating,

children who can't read, children who easily change their moods, children who less catching power [6]. Storytelling can instill honesty, courage, loyalty, friendliness, sincerity, and other positive attitudes in family, school and outside school life. There are some benefits of storytelling methods for children [1], as follow:

- Training children comprehension. It means that children can be stimulated to be able to understand the content in the story.
- Training children's concentration to focus their attention on the whole story.
- Developing children's imagination. By telling the story, children can imagine something that is beyond the reach of their senses. It helps to develop children's insights and be fantastic.
- Storytelling provides a learning experience to listen well.

D. Interactive Media

Learning media supports a process. Interactive media is used as a way of learning media to encourage teachers to be creative in using various learning media. Interactive media is a part of graphic design or visual communication design [7]. Interactive media is a large collection of data stored on a CD where the data or files in it affect each other or interconnected. Besides, interactive media users will be able to interact directly in their use [7].

Interactive media is for introduction or promotion that is widely developing. The interactive media has advantages in visualization, animation, content, and interactivity. It is very easy and helpful in the learning process. Multimedia combines two or more media elements (text, graphics, images, photos, audio, video and animation) in an integrated manner. Another opinion was expressed by Phillips that the multimedia component is characterized by the presence of text, images, sound, animation and video; some or all of them are arranged in a continuous program [8]. It is unexpected that interactive learning media can increase student interest and motivation, focus student attention, allow students to learn independently, make children active in the learning process and create a pleasant learning atmosphere. Therefore, learning can take place effectively, efficiently, and attractively.

III. METHODS

The approach into this research is using qualitative library development research. This system will enhance the writer in the process to produce the final result of the multimedia material for its common used such as training materials for teachers, learning materials, media, and management systems in learning. The final product of this research will be in a form of video production consists of movie clips, moving images, audio, and text by using the KineMaster software. In collecting data for the purposes of this paper, the authors concluded

several stages of the process in making this multimedia. First, the author pre-research by observing the object of research, the data obtained by the author is processed as planning material for making media, the writer looks for data sources through several journals, then makes this interactive media as a learning media material.

IV. DISCUSSION

Learning for children is starting from playing. Basically, learning for early childhood is playing by studying. It means that children learn in ways that are fun, active and free. Free means that it is not based on orders or targets of others and has flexibility when it starts and ends. In accordance with the characteristics of early childhood who are active in carrying out various explorations of their environment, playing activities are part of the learning process. Learning for children must be designed so that children feel free to achieve their developmental tasks. To make children happy in studying, learning atmosphere needs to be managed naturally, warm and fun.

Children tend to like activities that are fun for themselves. Therefore, the teacher must create a pleasant atmosphere in the learning process for children, especially pre-school children (4-6 years) with interesting strategies, methods, materials and media that are easy for children to follow. Singing is one of the solutions that teachers must apply to deliver material related to child development goals. Through singing activities, it eases teachers to communicate with children and it is easier for children to understand and interpret messages conveyed by teachers. Based on the observations made, there is a positive response generated by children from singing activities. This proves that singing activity is an approach that must be taken into account by teachers as part of the child development process.

In singing, children learn various things. They learn how to behave well that is important for them. To teach the material properly, a music teacher must apply vocal techniques properly. Singing for early childhood is not the same as for adult. Somethings that must be considered, how to teach breathing, articulation, and how to produce the sound. Yet, kindergarten children have to go through the storytelling method because their type is always active on the move, can't stay still, but they can be conditions to be good learners. The storytelling method is very effective to be given when teaching vocal techniques to children.

A. Design Procedure

There are stages in carrying out the interactive media design procedure. The authors conducted a preliminary study, compiled the planning stage, and the stage of making interactive media or its products. This stage is structured to simplify the process of designing the learning media.

1) Preliminary study: The Preliminary study was conducted through observation in January 2020 at a

kindergarten in Bandung. The authors made observations on children aged 4-6 years or from Kindergarten A-Kindergarten B. The authors found several problems including it was very difficult to teach singing material to kindergarten children. It was different from teaching singing techniques to junior high school or high school students. Basically, children really like singing activities and are very excited. However, if it has started with the basic techniques of singing, the child starts to get bored. The important thing to be pay attention is to attract children's attention. Learning to sing is not long, it takes 30-45 minutes, but after just a few minutes the children immediately want to go to play. However, the authors found one way to attract children's attention, namely through the storytelling method. The storytelling method used contained theme elements that are easily recognized by children. After going through the method of telling stories, breathing techniques, and articulation exercises, the child can be better and more excited. Thus, through a preliminary study, the author knows how the conditions are direct and motivated to make a learning media.

2) *Planning stage*: Planning stage consists of plans for making learning media through interactive media. Before starting to introduce songs to children, of course, in singing, there is an activity called warming up the voice. The singing technique applied by the authors was to focus on breathing material. The storytelling method was used as a start in the process of introducing breathing material. The storytelling method used was with a theme that was easily recognized by children. The author arranged the theme through the storytelling method, it was the animal theme.

Animal themes are still interesting for children. Learning vocal techniques with animal themes in teaching vocal breathing techniques, the teacher can compare it to telling stories about snakes for example. The teacher tells about snakes and encourages children to concentrate. For example, in the breathing technique, the snake's voice is likened to a hissing "ssssss" as is done in the breathing technique in warming up before singing. In addition, the teachers ask children to follow the animal's sound and then imitates it. The teacher instructed the children to imitate the hissing sound with a count. The teacher likens it to the shape of a long and short snake, then the sound of a long snake hissing "ssssss" is longer, if the teacher instructs the snake to be short, the hiss "sss" is shorter.

Besides, with "animal" theme, the teacher can liken and tell stories about other animals such as cows, so children are directed to imitate the sound of cows. The purpose of this breathing technique using the animal theme is to attract children's attention, and indirectly, the child is stimulated to imagine, mimicking animal sounds that can directly train their breathing, but still have to follow the teacher's directions. Furthermore, for example, imitating the sound of a cow, the children imitate their voice by sounding "mooo". Children imagine and through imitating the sound of a calf are indirectly trained to sound low notes, while paying attention to breathing

techniques through teacher instructions. If the teacher instructs the sound of a cow to sound long, then the children imitate the sound of a cow with the instructed duration. For example, "let's now try to imitate the sound of a cow in 5 seconds," instructed the teacher. So the children sounded the "moooooo" cow sound with a duration of 5 seconds. Then, each time duration will be added. The point is to practice breathing techniques for longer and stronger breaths.

Other examples besides the above animals are the same as described above, where children are instructed to imitate bird sounds. This is useful for training breathing, besides training the high notes. The child will imitate the sound of a bird by sounding "cit cit ciit" with the time duration set by the teacher. Children will imagine and try to follow high pitch sounds that are likened to the sounds of animals, such as birds.

In addition to introducing how to train basic technique of singing through breathing, another thing that is no less important to train the child is articulation. Articulation is a way of pronouncing words well and clearly. Teacher ask children to remember animal sounds. For example, in interactive media a video of a goat animal that reads "mbeee" is displayed, the child will answer that the animal is a goat. The child says "goat" has provoked the child to practice his pronunciation to become clearer. Likewise, other examples of animals, teacher displays a video of an animal that reads "cit cit ciit," thus the students will guess and answer that the animal is a bird, the articulation that is trained is the letter u.

Practicing/training basic singing techniques in children needs a process and it can't be practice immediately. Thus, the authors focused on practicing breathing and articulation through storytelling methods with themes imitating animal sounds. After practicing breathing and articulation techniques, the teacher instructs the children to sing along to a song that is in the media, for example the song "*Anak Kambing Saya*". The song "*Anak Kambing Saya*" was chosen because it is still the same as the theme, about animals and there is also a special meaning that contains messages about being together with friends. The song "*cicak-cicak di dinding*" was also chosen by the teacher to be the filler in the video because almost every child must have memorized the song lizard on the wall. The basic techniques of singing, breathing and articulation are the main things that must be taught to children, so that children can be trained. in pronunciation and practice their breathing to be better.

3) *Stage of producing media (product)*: Interactive media made by author would be in the form of CD. Interactive learning multimedia products that are packaged in the form of learning CDs. Thus, the interactive CD media is very suitable to be used as a medium for language learning for early childhood. One of the purposes of using this media are that this media is very easy to apply, it has aspects that build children's understanding of learning, and this media is made in an attractive form so that children are happy and interested in learning both in class and at home. This interactive CD is

displayed in the classroom using a projector, so that the child becomes the focus of his sight, hearing, and attention on learning shows using the interactive CD. During the learning process, the teacher must be able to properly apply interactive CDs in the classroom. The teacher in this case acts as a mediator in the use of media, as well as an indicator of the flow of learning, in addition to the narrator. Thus, the skills of teachers in technology are needed. In the learning process using this interactive CD, it will become a learning medium that is loved by children.

Based on the video design, the author makes an initial appearance of the interactive learning video identity, namely "Basic Singing Techniques for Children" with written captions below, namely Breathing and Articulation. This video recording process is recorded by the Iphone camera. The author used the Kinemaster and Inshot video editor applications, the animated sound video from YouTube and the link has been included on the learning media slide. The duration of this interactive learning media was around 13 minutes. The Interactive Learning Media consisted of several sections such as the opening section, core activity/content, and closing, along with the explanation below:

a) Opening: The Opening is an initial activity in learning aimed to focus attention, generate motivation so that students are ready to take part in learning activities. Based on the planning design for making a video in the opening section, the author used the Instashoot application to create an animated image as an opening form, then continued to display the name of the author, the title of the learning media, all plain animations and those written manually by the author on the Instashoot application on the Iphone. Animations were already in the Inshot application, and audio was automatically in Kinemaster. Thus the author only adjusted the audio to the video display. In the 20 second duration, the author began the opening with greetings and greetings and explains a few themes, materials, and objectives of interactive learning media on basic singing techniques for kindergarten children through the storytelling method.

b) Core: Core activity conducted by author spent 2 minutes. The initial appearance that characterized the core/content section was entitled by the author "How to teach basic singing techniques through storytelling in class" with a plain white background. Furthermore, the authors began to practice being the role of "teacher" and likened to directly interacting with children. The author performs apperception as a way to arouse children's enthusiasm. The author asked several questions to children before immediately showing a video about storytelling methods. At minute 3, there was material about "animals". The author created an animated video downloaded directly from YouTube and then combined it with the author's own voice recordings. The purpose of the voice recording is to compare or become a supporting background sound so that children can pay more attention to the learning process.

The story told in the video had the theme of animals. The author told a chronology or storyline about animals starting from the story of the "chicken". The authors showed an animated video of a rooster crowing accompanied by a voice recording as a filler for the story of the video. The story began by the writer saying "One day a rooster crows to welcome the morning" then invited the child to pay attention to the type of sound so that the child could imagine. The next slide was accompanied by the chirping of birds flying and perching on a tree, then the storyline was likened to the arrival of a sheep and its friends who were looking for food, but it turns out that there is a roaring and very hungry lion who has targeted the flock and wanted to eat it, but at the end of the story came, A snake that followed the lion turned out to be the lion running in fear so that it didn't eat the sheep. The storyline was made like a chain preying on each other. There was no specific purpose but the story was composed in such a way as to be interesting.

Furthermore, the author described the application of these animal sound used in breathing techniques. The author gave an example of breathing in and out so that the child could relax more. The author gave an example of a snake sound or hiss "sssssss" with a time rule then the children imitated it. He exemplified his breathing technique again through the sound of "moo" or cow. The author gave an example with a certain period of time, indirectly the children were trained in breathing techniques.

At a duration of 7 minutes 25 seconds, the author started the articulation material. Children are asked to guess the sound and video animation of the animal and then say its name. For example, in the first look at the articulation video, guesses about the "mmooo" sound. The author asked through voice recordings to children, "what animal is that?". It made children to think and stimulate to say "cow". By saying the word cow, the child is trained in the articulation of the child or the consonants of the word. The vowels a-i-u-e-o are trained to be clearer. Likewise, the next example was guessing sounds and video animation of birds and lions. The sound of the bird "cii ciit ciit" reaches a high note and the sound of the lion roaring "hhmmmm" also stimulates the child to reach low notes.

c) Closing: Closing is an activity carried out to end learning activities. In the 8th minute, the author closed the video or learning theme and concluded the results. After the author's video footage, then the screen displayed with the text "This is video clips of the Basic Singing Technique for Kindergarten children, breathing and articulation material" with a plain white background and a bit of color, then the display of some documentation that supported the making of learning media this interactive. The author only conducted a preliminary study in February 2020, but due to conditions that made it impossible due to the covid-19 outbreak, the research had not been continued. Thus, the author was more focused on making the design first, to make this interactive media and it has not been implemented directly in schools. The author interviewed a music or vocal teacher who was experienced in the field of practice singing for children, interviews were

conducted virtually and delivered via video via Whatsapp messages. Likewise, with another resource, namely an early childhood education teacher, who explained the important role of singing in the world of children.

V. CONCLUSION

This Interactive learning media is produced based on problems that occur in kindergarten students. Children generally really like singing activities. Practicing singing to kindergarten children is not simple because children generally can't stay still and get bored easily. Learning for kindergarten children must be accompanied by media that supports the learning process.

The material contained in this interactive media is about the basic techniques of singing in kindergarten children through storytelling methods. This interactive media lasts approximately 13 minutes. This interactive media design procedure includes a preliminary study, the planning stage, and the producing product stages. The purpose of this design is a product in the form of interactive media. The resulting product is an interactive learning CD, consisting of an introduction, basic singing technique material, then focusing on breathing material, articulation, and the results. All is packaged through a story-telling model theme that is easy for children to understand, accompanied by animated pictures, and uses interesting musical instruments. This interactive media was created and edited with the Kinemaster and Inshot applications, and recorded on the Iphone Mobile.

This learning media is expected as a strategy to make children attracted in singing. This interactive learning media is also expected to be useful for all teachers who are closely related to the world of children, both kindergarten teachers and music teachers, that can be used as learning media in the classroom. In addition, this learning media can be used by

parents to display this interactive media because the use of CD is quite easy to use.

The product made is still limited to a simple tutorial program on basic singing techniques with a storytelling method approach through the theme of animal sounds to children. Further product development on interactive learning CD can be developed into several learning themes, that later on in one CD can contain several other materials on singing techniques besides breathing and articulation.

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