

## Development of Blended Learning-Based Learning Media to Improve the Language Capability of Children Aged 5-6 Years Old at Kindergarten Bunda Gemilang, Bogor Regency In 2021

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**Abstract** This study aims to analyze: 1) The process of developing learning using the blended learning method to improve the language skills of children aged 5-6 years, 2) The feasibility of multi-language interactive multimedia learning based on Android on the ADDIE model in an effort to apply language skills to children aged 5-6 years at Bunda Gemilang Kindergarten, Bogor Regency. This research method is development research or also called Research and Development (R&D). By using the ADDIE development model (Analysis, Design, Development, Implementation, Evaluation). The subjects in this study were Bunda Gemilang Kindergarten students, Bogor Regency. The results shown are the assessment of the feasibility of multimedia by material experts obtaining a score of 84.3% (Eligible). The feasibility assessment by media experts obtained a score of 74, 8 and the feasibility assessment by learning design experts obtained a score of 74.3%. Based on a feasibility assessment by media and instructional design experts, this multilingual dictionary is considered feasible to use. The response of Bunda Gemilang Kindergarten students with the multilingual learning dictionary in the Gemilang Multilingual Dictionary application in the individual trial was categorized as good (BSH) with a score of 71. In the small group trial, it showed an average score of 72 which was categorized as Good as Expected (BSH). And in the field trial, the N-Gain value was obtained in the range of 0.3 g 0, so it can be concluded that the development of blended learning-based learning media applied to students in Bunda Gemilang Kindergarten is very feasible and good in improving children's language skills. 5-6 years old.

**Keywords:** Multilingual dictionary, Blended learning, Early childhood.

### Preliminary

#### Background

Early childhood is a very valuable asset. Therefore, early childhood education must be taken seriously so that in the future it becomes a human being who has character, knowledge, and is useful for human survival. Childhood is a golden age to learn everything. One of them is learning the language. Language is a tool for communicating, expressing oneself, and part of aspects of child development that must be stimulated optimally. Language learning in early childhood education must be considered in terms of learning methods and media used by teachers in language learning. Because this is one of the keys to success in language learning activities.

Based on observations at Bunda Gemilang Kindergarten, Pangkal Jaya Village, Nanggung District, Bogor Regency, language learning is taught using the lecture method. The media used are still simple in the form of print media such as magazines, story books, and children's worksheets. Language mastery of children aged 5-6 years is still not as expected. Children's vocabulary is still limited and children still have difficulty retelling a story. This condition is not in accordance with the expectations of the curriculum at Bunda Gemilang Kindergarten, namely 80%-100% of students develop according to expectations. This condition is caused by the lack of supporting facilities in schools and the limited ability of teachers to make digital learning media.

The development of children's language skills is influenced by cognitive development. Language development can be used as a benchmark for children's intelligence in the future. Children's language development includes phonological, syntactic, and pragmatic development. There are two important things that must be considered in educating early childhood, namely language development and parenting. Parenting that supports language development is parenting that provides sensory-motor stimulation by frequently telling stories and discussing with children and providing encouragement to express themselves.

Language learning at Bunda Gemilang Kindergarten is currently still using conventional learning methods and media. So that the expected language learning outcomes are not optimal. In addition to the methods and learning media used, the characteristics of children are also one of the factors that cause language learning not to achieve maximum results because early childhood is a unique person, has a strong egocentric attitude, and the concentration is also quite short. However, early childhood also has imagination and fantasy that will continue to develop.

Ideally, teachers must be creative and able to collaborate between learning materials and technological advances. In the era of digitalization like today, learning is more practical and fun using a smart phone (smartphone). The use of smartphones is not only used by adults but children are also good at operating it. In relation to language learning, smartphones can be used as learning tools that are practical, easy, and fun. Especially in the current Covid-19 pandemic situation, learning is demanded online. Thus, teachers need digital learning media that allow students to use them to study at home.

One of the interesting, creative, and digital learning media to support language learning is a multilingual audiovisual dictionary for early childhood. The dictionary is used as a learning medium for online or offline learning or often referred to as blended learning. The word blended learning is used to describe a learning process that combines face-to-face learning (offline) with online learning. The development of learning media is carried out using the ADDHIE development model, which is a model with five stages of development, namely Analysis, Design, Development, Implementation, and Evaluation.

Based on this description, researchers are interested in conducting research with the title "Development of Blended Learning-Based Learning Media to Improve Language Skills for Children aged 5-6 years at Bunda Gemilang Kindergarten, Bogor Regency in 2021".

### **Identification of Problems**

In order for this research to be more focused and in-depth and to achieve the specified goals, it is necessary to focus on the problem. The focus of the problem in this study is as follows:

1. Language learning in early childhood regarding vocabulary mastery is still very minimal
2. Lack of supporting facilities in schools
3. The limited ability of teachers to make learning media that is digital.
4. Learning media is needed that supports teaching and learning activities in accordance with the Covid-19 pandemic

Thus, this study focuses on the procedure for developing learning media in the form of a multilingual audiovisual dictionary for early childhood and the effectiveness and feasibility of a multilingual audiovisual dictionary for early childhood.

### **Formulation of the problem**

Based on the description above, the formulation of the problem in this study is:

1. What is the procedure for developing Gemilang Multilingual Dictionary learning media for early childhood in Bunda Gemilang Kindergarten, Bogor Regency?
2. What is the feasibility of Gemilang Multilingual Dictionary media for early childhood in Bunda Gemilang Kindergarten, Bogor Regency?
3. How is the effectiveness of Gemilang Multilingual Dictionary media for early childhood in Bunda Gemilang Kindergarten, Bogor Regency?

## Theory Review

### Model Development Concept

#### 1. Definition of Development Research

Development research is known as R&D (research and development). This research is widely used in education. In the process of development research produces products in the form of models or modules or others whose effectiveness is measured. In general, research develops a product with the initial step of identifying problems and needs and then refining the product as a solution. Saputro defines research and development as a research method that produces a product in a particular area of expertise, which is followed by certain by-products and has the effectiveness of a product (Saputro, 2017).

#### 2. Development Research Model

A model can be interpreted as a representation of both visual and verbal. The model presents something or information that is complex or complicated into something simpler or easier (Setyosari, 2016).

The development model can be in the form of procedural models, conceptual models, and theoretical models. The procedural model is a descriptive model that describes the flow or procedural steps that must be followed to produce a particular product. The model is descriptive, showing the steps that must be followed to produce the product. Procedural models are commonly found in learning design models, for example Dick & Carey, Borg & Gall Models, and ADDIE Models (Analysis, Design, Development, Implementation, Evaluation) (Setyosari, 2016).

The following describes some procedural models commonly found in learning design models, namely:

##### a. Model Dick & Carey

The systems approach model developed by Dick and Carey (1990) views development activities as one component of the teaching system that is directly related to other components of the teaching system. The development activity is a systematic and tightly organized step that describes the sequence of development procedures and the relationship between components in a serial manner. The Dick and Carey model is one of the learning design models that is systematic and based on the theoretical foundation of learning.

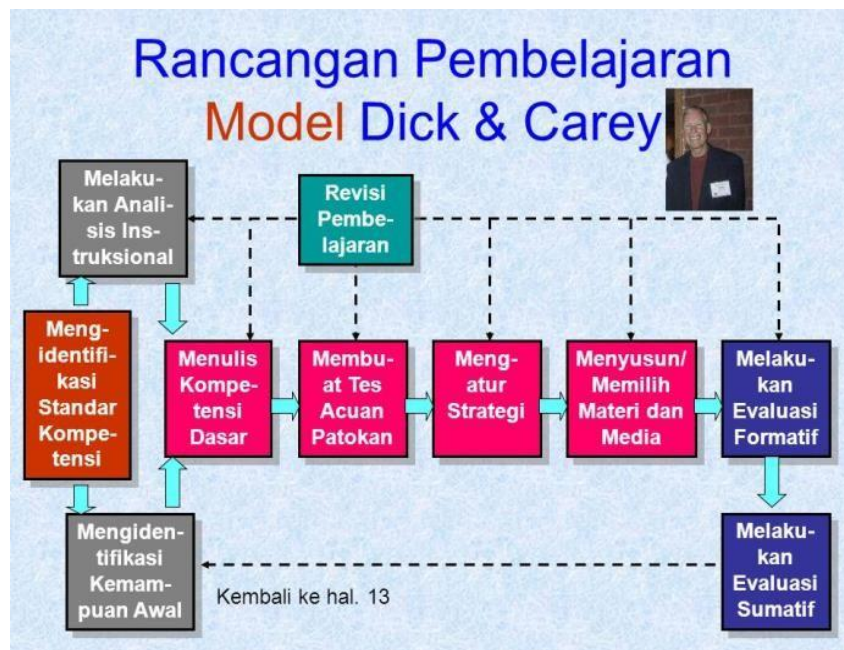


Figure 1. Dick & Carey's Learning Design

##### b. Borg & Gall models

The Borg and Gall model was developed by Walter R. Borg and Meredith D. Gall Borg and Gall with the aim of developing and validating products. The model has the following steps: (1) problem identification, (2) information gathering, (3) product design, (4) design validation, (5) design improvement, (6) product testing, (7) revision product, (8) trial use, (9) final product revision, and (10) mass production (Borg and Gall, 1983).

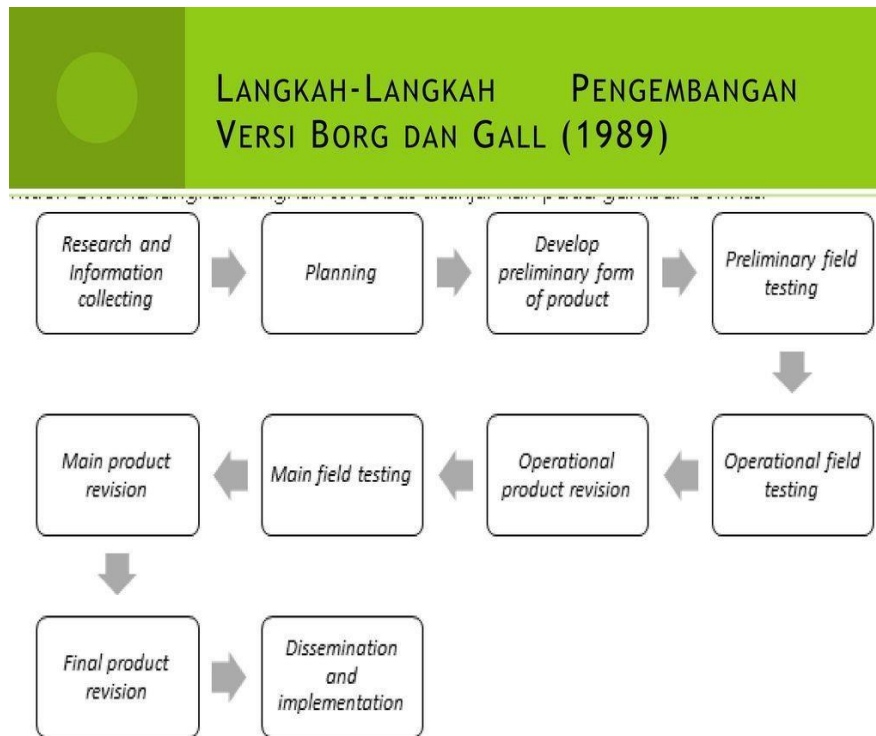


Figure 2. Borg & Gall Learning Design

c. Lee & Owens Model Learning Design

This development model was proposed by Lee & Owens. The reason for choosing this model is because the model is a model that is devoted to developing multimedia. According to Lee & Owens, this development model consists of 5 stages, namely assessment / analysis (assessment / analysis) which includes needs analysis (need assessment) and front-end analysis, design (design), development (development), implementation (implementation), and evaluation (evaluation) (Akbar, 2016). The product development plan is arranged in a chart which can be seen in the Figure 3.

The first stage is the assessment and analysis stage (assessment/analysis) which is divided into two parts, namely a needs assessment and a front-end analysis. Need Assessment (need analysis) is done by direct interview and observation. The front-end analysis stage aims to obtain more complete information about what will be developed. At this stage, audience analysis, technology analysis, situation analysis, task analysis, critical analysis, objective analysis, media analysis, extended-data analysis and cost analysis were conducted (Lee & Owens, 2004).

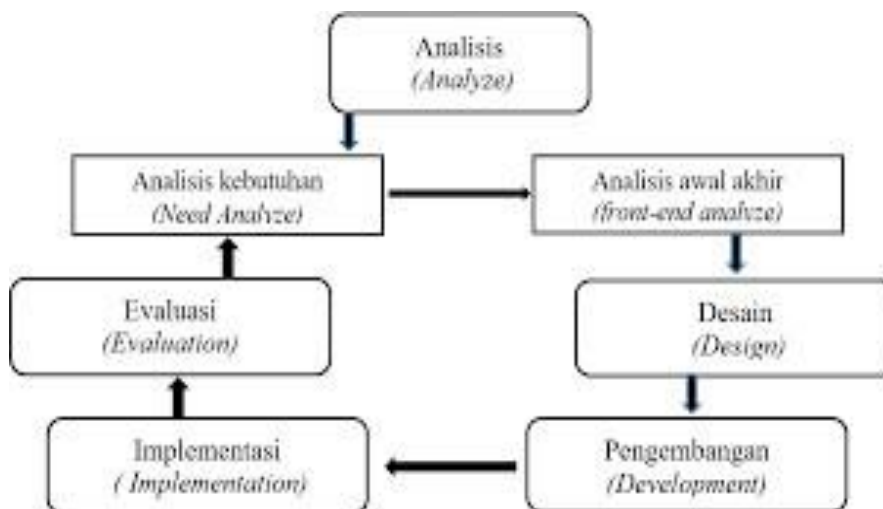


Figure 3. Lee & Owen Model Learning Design

d. Assure Learning Model

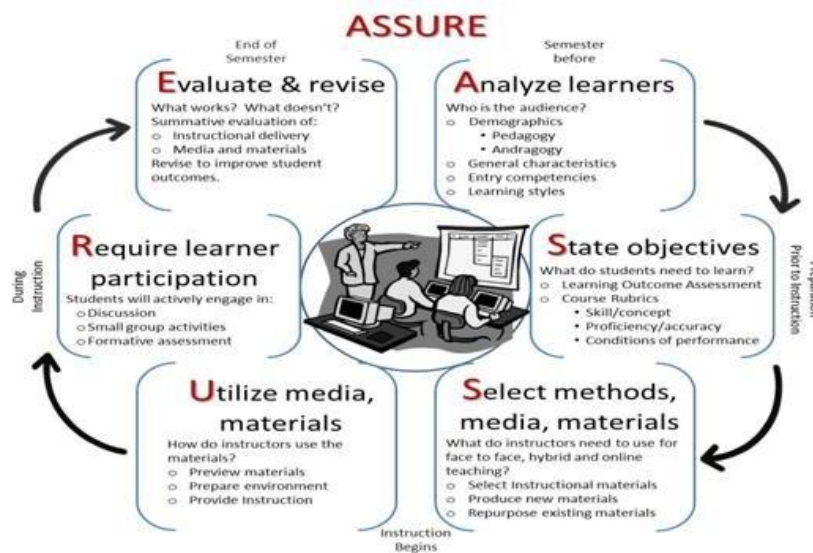


Figure 4. Assure Learning Design

The ASSURE Learning Model was developed by Sharon Smaldino, Robert Henich, James Russell and Michael Molenda. This learning design model is an abbreviation of the important components or steps contained in it, namely: analyzing the characteristics of students (analyze learner characteristics); set learning objectives (state performance objectives); choose methods, media and learning materials (select methods, media and materials, utilize materials); activate student involvement (requires learner participation); evaluation and revision (Pribadi, 2010).

This learning model is more oriented to the use of media and technology in creating the desired learning processes and activities. The use of the ASSURE learning design model needs to be carried out step by step (systematic) and comprehensive (holistic) in order to provide optimal results, namely the creation of successful learning.

The ASSURE learning design model emphasizes the use of media and teaching materials that are well planned, which makes students learn actively. This learning design model is a procedural model built to create an effective, efficient, and interesting learning program. In this model, the use of media and technology is a must because it is used to assist students in achieving learning objectives.

e. Kemp's Learning Model

Instructional development according to Kemp (1977) or what is called instructional design, consists of eight steps, namely: The first step: determining general goals (the 1994 curriculum is called TIU, the 2004 and 2006 curriculum is called the 2013 curriculum) called core competencies and basic competencies). This general goal is the goal to be achieved in facilitating each subject.

The second step: make an analysis of the characteristics of students. This analysis is needed, among other things, to find out whether the educational and socio-cultural background of the students allows them to join the program and what steps need to be taken.

The third step is to determine operational and measurable competencies and indicators. Thus students will know what to do, how to do it and what measure that he has succeeded. From the learner's point of view, the formula will be useful in compiling an ability or success test and selecting the appropriate material.

The fourth step is to determine the material / learning materials in accordance with the indicators. The fifth step is to determine the pre-test. Thus, students can choose the required material without having to present unnecessary material.

The sixth step is to determine teaching and learning strategies according to general criteria for the selection of teaching and learning strategies that are in accordance with specific instructional objectives including: (a) efficiency, (b) effectiveness, (c) economical and (d) practicality, through alternative analysis.



The seventh step is to coordinate the necessary supporting facilities including costs, facilities, equipment, time and energy. The eighth step is conducting an evaluation. This evaluation is very necessary to control and assess the success of the program as a whole, namely students, instructional programs, evaluation instruments or tests, and methods.

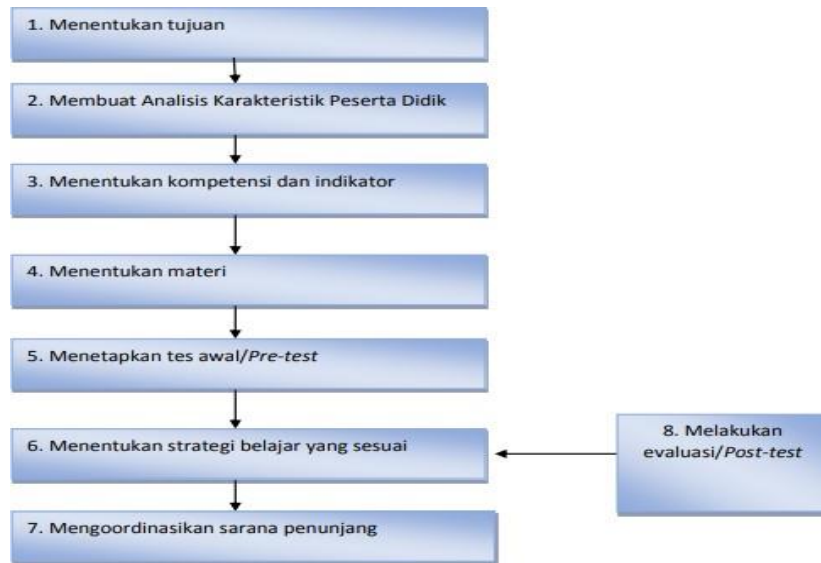


Figure 5. Kemp Model Learning Design

f. ADDIE Learning Model

The ADDIE model is structured programmatically with systematic sequences of activities in an effort to solve learning problems related to learning resources that are in accordance with the needs and characteristics of the learner. This model consists of five steps, namely: (1) analysis, (2) design, (3) development, (4) implementation, and (5) evaluation ( Cahyadi, 2019).

**Core Elements of the ADDIE Model**

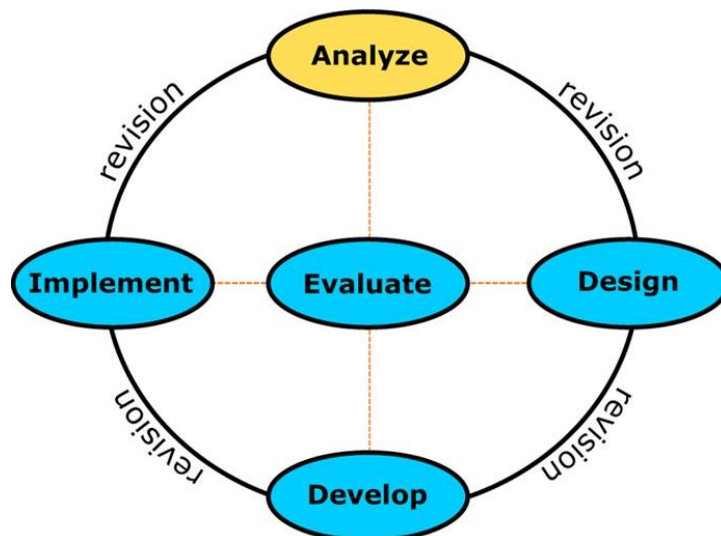


Figure 6. ADDIE Learning Design

**Theoretical Studies**

1. Understanding Learning

The word media comes from the Latin *medius* which literally means "middle", intermediary or delivery of messages from the sender to the recipient of the message (Azhari, 2015). Media is a means of distributing messages or information in the teaching and learning process to be conveyed by the message source to the target or recipient of the message (Mahnun, 2012).

The development of learning media is the process of designing, creating and perfecting everything that can be used to channel messages containing teaching purposes from the sender in this case the teacher to the recipient (student) so that it can stimulate students' thoughts, feelings, concerns, and interests in such a way that the learning process is more effective and efficient so that the learning objectives are achieved perfectly (Arsyad, 1997).

In general, the function of the media is as a message distributor. In addition, it also arouses curiosity and interest, generates motivation and stimulation and can affect students' psychology. The use of media can also help students improve understanding, present material/data in an interesting way, make it easier to interpret data and condense information (Rosyidi, 2009).

Media based on the way of delivery and reception are divided into three, namely audio media, visual media and audio visual media. Audio media or listening media are media that can convey messages through sounds or sounds that are heard.

## 2. Blended Learning

Blended learning (b-learning or hybrid learning) consists of a combination of e-learning and a face-to-face educational approach. The combination in question can be a combination of several kinds of teaching technology, for example video, CD-ROM, film, or the internet with face-to-face teaching carried out by the teacher.

Blended learning used to describe a learning situation that combines several delivery methods that aim to provide the most effective and efficient experience. According to Graham stated that blended learning is; a) a definition that combines various modalities of learning media; b) definitions that combine various learning methods, learning theories, and teaching dimensions; c) a definition that combines face-to-face and online learning (Purwaningsih and Pujianto, 2009).

Five key important elements of the blended learning process, Tufan (2009):

- a. Live Events: synchronous, guided learning, where students participate at the same time as in a "virtual classroom".
- b. Independent Learning: learning experiences where students complete individually, at their own pace and time, such as interactive, internet-based or CD-ROM training.
- c. Collaboration: an environment where students communicate with each other, such as email, chain discussions, and online chat.
- d. Assessment: a measure of student knowledge. Pre-assessment can measure before the event itself or direct events, to determine the main knowledge, and post-assessment to measure the transfer of knowledge.
- e. Performance Support Materials: reference materials that improve memory and transfer of learning, including PDA downloads, and printable references, summaries, and work aids.

## 3. Teaching Materials

### a. Understanding Teaching Materials

Teaching materials are a set of subject matter that refers to the curriculum used in order to achieve predetermined competency standards and basic competencies (Lestari, 2013). Teaching materials are useful to help educators in carrying out learning activities. For educators, teaching materials are used to direct all their activities and what should be taught to students in the learning process. As for students, it will be used as a guideline that should be studied during the learning process. Teaching materials can function in individual learning that can be used to organize and supervise the process of obtaining student information.

Good teaching materials must meet several criteria (Daryanto, 2013):

- 1) The substance discussed must include a body of competencies or sub-competencies that are relevant to the graduate's ability profile.
- 2) The substances discussed must be correct, complete and actual, include concepts of facts, procedures, terms and notations and are arranged based on a hierarchy/step of competency mastery.
- 3) The level of readability, both in terms of language difficulty and substance, must be in accordance with the level of learning ability.
- 4) The systematic preparation of teaching materials must be clear, coherent, complete and easy to understand.

## **Multilingual Audiovisual Dictionary Teaching Materials**

### 1. Definition of Dictionary

A dictionary is a kind of reference book that explains the meaning of words. Its function is to help someone recognize the word. In addition to explaining the meaning of words, in the dictionary there are also ways of pronouncing, the origin of the word, and is equipped with examples of the use of the word. Etymologically the dictionary comes from the word qamus which is an absorption from Arabic which means 'to move in search of' or 'to dive in'. The 'ocean' which is synonymous with a very wide and deep sea is contained in the dictionary word, which is a description of an infinite number of scientific containers (Chaer, 2007).

### 2. How to Compile a Dictionary

The compilation of the dictionary is carried out in several stages. The compilation of the dictionary is divided into several stages, namely: (1) Dictionary design; (2) Development of corpus data; (3) Filling out and alphabetizing data; (4) Data processing; and (5) Giving meaning (Chaer, 2007).

### 4. Language Skills for 5-6 Year Olds

#### a. Language skill

One of the areas of development in the growth of basic skills in Kindergarten is language development. Language allows children to translate experiences into symbols that are used to communicate and think. Therefore, language is a tool for thinking, expressing oneself and communicating. Language skills are also important in the formation of concepts, information, and problem solving. Through language, we can understand the communication of thoughts and feelings (Susanto, 2011).

According to Gatot and Dodyansyah, early childhood must optimize language development, especially literacy, namely listening, speaking, reading, and writing with fun methods (Gatot and Dodyansyah, 2018).

#### b. Early childhood

Early childhood is an individual who is undergoing a very rapid growth and development process, even said to be a developmental leap. Early childhood is children aged 0 to 6 years who go through infancy, toddlerhood and preschool. At each period that is passed by early childhood will show different developments between infancy, toddlerhood and preschool.

Cross believes that there are several characteristics of early childhood, namely (Puspita 2020):

1. Egocentric
2. Active and energetic
3. Explorative and adventurous
4. Rich with fantasy
5. Still easily frustrated
6. Lack of consideration in doing something
7. Have a short attention span
8. More interested in friends

According to Ahmad Susanto, aspects of early childhood development are (Susanto, 2011):

#### a) Physical Development

When physically developed well allows children to be able to further develop their physical skills, and exploration environment without the help of others. Physical development of children is also marked by motor development, both fine and gross motoric.

#### b) Intelligence Development

Intelligence is not a material thing, but a scientific physics to describe individual behavior related to intellectual abilities. In understanding this intelligence (intelligence) experts have various meanings.

A quantitative description of the development of cognitive functions can be developed from the results of reports of various measurement studies using intelligence tests as a measuring tool which is carried out longitudinally on a group of subjects from and up to a certain age level by means of a retest-test whose measuring instruments are arranged sequentially (Standfort Revision Benet test).

#### c) Language Development

The language possessed by children is the language that has been owned by the processing and has developed. Children have received a lot of input and knowledge about this language from the environment, both the family environment, the community, as well as the peer environment, which develops in the family or mother tongue.



d) Social Development

Children's social development is strongly influenced by the process of parental treatment or guidance for children in various aspects of social life, or the norms of social life as well as encouraging and giving examples to their children how to apply these norms in everyday life. The process of parental guidance is commonly called socialization.

e) Moral Development

Moral comes from the Latin word *mos* (*moris*), which means customs, habits, rules/values, or ways of life. Morality is the willingness to accept and carry out the rules of moral values and principles. These moral values are a call to do good to others, maintain order and security, maintain cleanliness and maintain the rights of others, prohibition of gambling, stealing, adultery, killing and drinking liquor (*khamr*). A person can be said to be moral, if his behavior is in accordance with the moral values upheld by his social group.

### **Language Development of Children Age 5 – 6 Years**

Nurbiana suggests that language development is related to cognitive development. This can be seen from the language skills of early childhood. Based on the phase of cognitive development, the child is in the preoperational phase. Symbolic function to develop rapidly. The symbolic function is related to the child's ability to imagine about an object or other objects. Language is one aspect of development that must be developed in early childhood 4-5 years because language is a medium of communication for children so that they can become part of their social group. Language can be in the form of pictures, spoken, written, sign. Language skills include listening, speaking, reading, and writing skills. The development of children's language skills will also make it easier for us to recognize the child's own emotions. If we already recognize the child's emotions then we easily respond to these emotions. Language is a wonderful thing. Language is one of the highest achievements achieved by humans. Although some animals have some kind of communication system, only humans develop it in verbal or verbal form, or verbal speech (Islamiyati, 2020).

The characteristics of the child's language that function to influence the speech partner to do what the speaker recommends.

Children's language development seen from the developmental aspect is as follows (Sari, 2010):

- 1) The first is the developmental aspect of receiving language which includes understanding several commands simultaneously, repeating more complex sentences in the title of the story, understanding the rules that apply at home and at school.
- 2) The second is the aspect of revealing language, which includes answering more complex questions in the title of the story, mentioning groups of pictures that have the same sound, communicating orally, being able to answer questions asked, and recognizing symbols for preparation for reading and writing.

## **Research Methodology**

### **Research Purposes**

The objectives of the research on the Development of Blended Learning-Based Learning Media to Improve Language Skills for Children aged 5-6 Years at Bunda Gemilang Kindergarten, Bogor Regency, are as follows:

1. To design the development of Gemilang Multilingual Dictionary learning media in language learning for early childhood in Bunda Gemilang Kindergarten, Bogor Regency
2. To analyze the feasibility of developing Gemilang Multilingual Dictionary learning media in language learning for early childhood in Bunda Gemilang Kindergarten, Bogor Regency
3. To analyze the effectiveness of developing Gemilang Multilingual Dictionary learning media in language learning for early childhood children in Bunda Gemilang Kindergarten, Bogor Regency

### **Place and Time of Research**

1. Research Place
2. Research on the Development of Blended Learning-Based Learning Media to Improve Language Skills for Children aged 5-6 Years at Bunda Gemilang Kindergarten, Bogor Regency, was carried out at Bunda Gemilang Kindergarten, which is located at Jalan Antam Pongkor, Kp. Pangaduan Kuda RT 001 RW 008 Pangkal Jaya Village, Nanggung District, Bogor Regency 16650.
3. Research time

4. Research on the Development of Blended Learning-Based Learning Media to Improve Language Skills for Children aged 5-6 Years at Bunda Gemilang Kindergarten, Bogor Regency, was carried out for four months. This research starts from August to November 2021 with details of activities as follows:

Table 1. Design of Learning Activities

No	Kegiatan	Agustus				September				Oktober				November			
		Minggu Ke-				Minggu Ke-				Minggu Ke-				Minggu Ke-			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	Persiapan Awal		√														
2	Penelitian Pendahuluan	√	√														
3	Penyusunan Proposal				√	√	√										
4	Pembuatan Produk					√	√	√									
5	Validasi Ahli							√	√								
6	Pengumpulan Data									√							
7	Pengolahan Data										√	√					
8	Penyusunan Laporan Hasil Penelitian											√					
9	Seminar Hasil												√				
10	Ujian Tesis													√	√		

**Research Methods**

Research on the Development of Blended Learning-Based Learning Media to Improve Language Skills for Children aged 5-6 Years at Bunda Gemilang Kindergarten, Bogor Regency uses the Research and Development (R&D) research and development model because the results of the research will create a product, namely a process used to develop an existing product so that it can be accounted for.

This study aims to be able to develop media in learning activities. The product developed in this research is the Gemilang Multilingual Dictionary media for early childhood language learning. The approach used for the development of Gemilang Multilingual Dictionary media uses ADDIE (Analysis, Design, Development, Implimentation, Evaluation) procedures and steps.

**Development Research Steps**

1. Preliminary Research

The development of a blended learning-based learning model, in this case the development of the Gemilang Multilingual Dictionary, is very possible to be applied in Bunda Gemilang Kindergarten considering the supportive potential possessed by schools and parents at home in general are familiar with the use of smartphones. The availability of internet access also makes it easier for teachers and parents to use smartphones for learning activities.

The learning environment at school, at home, and the sufficient economic capacity of parents can support the needs of independent learning both at school and at home. Parents are able to facilitate themselves with sophisticated smartphones so that they can be connected to the internet at any time. This is sufficient capital for teachers to implement a blended learning-based learning model in Bunda Gemilang Kindergarten.

Initial observations made by distributing questionnaires to 5 teachers concluded that 100% of teachers stated that teachers needed varied learning models. As many as 60% of teachers feel they have not been able to understand the entire learning model that must be applied in schools, especially during the pandemic. 100% of teachers stated that they needed creative, innovative, and digital learning models. The results of this survey also show that 80% of teachers view blended learning as having a positive impact on the learning process. Only 20% of teachers expressed doubt because they were still worried that students would later become addicted to smartphones.

Observations by distributing questionnaires were also carried out to 20 students' parents. The results concluded that 100% of parents agreed if the school used a varied learning model. As many as 80% of parents feel ready to accompany their children when learning to use smartphones, while 20% of parents feel they are not ready because the smartphones they have are limited. 100% of parents stated that they needed creative, innovative, and digital learning models that were easy to use when offline. 75% of parents view blended learning as having a

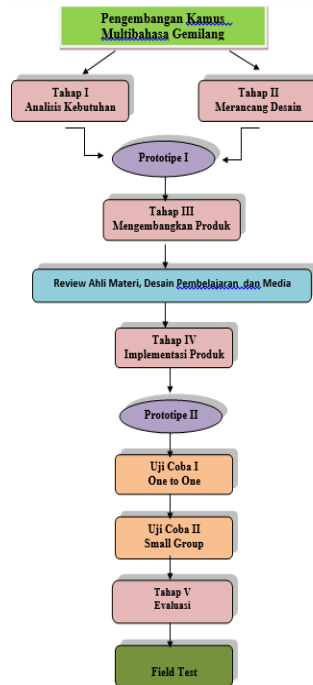
positive impact on the learning process. Only 25% of parents expressed doubt because they were still worried that students would later become addicted to smartphones.

Apart from the responses obtained from teachers and parents, so far Bunda Gemilang Kindergarten has never implemented a blended learning model. Therefore, the development of this learning model is expected to foster learning motivation and improve the competence of teachers and students in schools.

## 2.Brilliant Multilingual Dictionary Development Planning

In developing the Gemilang Multilingual Dictionary, researchers used the procedures and steps for the development of ADDIE (Analysis, Design, Development, Implimentation, Evaluation) with the following steps:

Table 1. Steps for Development of a Gemilang Multilingual Dictionary using the ADDIE Method



Based on the development process and test results on "Development of Digital-Based Learning Modules to Improve

### a.Stage 1 Analysis

At the analysis stage, three types of analysis were carried out, namely needs analysis, curriculum analysis, and student character analysis.

### b.Stage II Designing Design

The next stage carried out by researchers is to design / design. The design is still a concept and becomes a basic guide in the process of developing and designing concepts and tools. The Gemilang Multilingual Dictionary Media which the researcher tried to develop, has similarities with the previous Multilingual Audiovisual Dictionary Media, the difference lies in the addition of the main menu in the form of an evaluation and game menu.

Gemilang Multilingual Dictionary Media is a digital dictionary which contains four languages, namely, Indonesian, Arabic, English, and Sundanese. The main material consists of 5 (five) themes, namely the theme of Myself, My Environment, My Needs, Animals, and Plants. Each theme has 6 (six) vocabularies in 4 (four) languages and evaluations. After determining the theme and words, the next step is to determine the image to be used in the dictionary. The pictures used in the dictionary, the researchers took from private collections, this is done so as not to be exposed to the copyright of others. Pictures are taken by looking for real objects around the school environment. So that the display of pictures in the dictionary looks real so that students can learn the language with concrete pictures. After specifying the image, the next step is to determine the sound used in the dictionary. Researchers used the original voices of children.

#### c. Phase III Product Development

At the product development stage, the visual design, image selection, color selection, type and font size were developed. For the display design, the color chosen is the color of the rainbow because the color seems cheerful. The type and size of the font in the content of the material uses Arial font size 18 and 20.

The next step is to develop a storyboard. This storyboard is made based on the steps developed in the previous stage. The storyboard is used as a guide so that the learning materials developed are in accordance with the specifications/learning objectives that have been determined. The next step is to enter all the learning materials according to the storyboard that has been developed in the previous stage. After the design as described above, the next step is to produce the Gemilang Multilingual Dictionary.

The software (Software Development) used in this Gemilang Multilingual Dictionary application uses Website 2 Apk Builder Pro., UI/UX design uses Ispring Suite 10 Full, and for language programming uses Java for the Backend and XML for the frontend. The next step is to validate the product results to the experts.

Researchers conducted three types of product validation, namely material validation, learning design, and media. Validation activities are carried out by material experts, learning design and media experts. The results obtained from the validation will be taken as a reference for phase I revision activities for product development. This design revision/revision I is taken when validation activities have been carried out by material experts and media experts. Phase II revision/improvement will be carried out in more than one design revision.

In the process of developing this media, the researcher designed an instrument to conduct an assessment by compiling an assessment instrument and a questionnaire to assess the product containing scores for material experts, learning design experts, and media experts.

#### d. Implementation Phase (Implementation)

The next activity that will be carried out is the implementation stage which is carried out through the following stages: (a) One-to-One Trial in the initial step carried out on a limited scale, namely by testing two subjects based on levels of different abilities; (b) Small Group Trial conducted on 10 to 20 students in which the selection is random; (c) Field Trial in the form of a feasibility test which is the last step of the trial carried out in this study.

#### e. Stage of Evaluation (Evaluation)

The evaluation stage is the last step in the ADDIE development model. At this stage, data was obtained about the evaluation of the Gemilang Multilingual Dictionary media used. This evaluation is carried out to measure how high the level of achievement of the effectiveness and feasibility of the purpose of developing this product is.

### **Data Analysis and Discussion Techniques**

In this development research, two data analysis techniques were used, namely:

#### 1. Qualitative Data Analysis Techniques

This qualitative descriptive analysis technique is used to process the data from the review of learning material experts, learning design experts, and media experts. The data or information obtained is then collected, identified and grouped according to the classification of assessments and answers to the questionnaire. Data and information from experts were obtained using instruments in the form of a rating scale and suggestions for improvement (Djaali & Pudji, 2008).

Calculation of data from each component is done using the average score with the formula :  $x = \frac{\sum \bar{x}}{n}$

Where :

$\bar{x}$  = mean score of components

$\sum \bar{x}$  = total average score of indicators

$n$  = lots of questions

To interpret this value, the interpretation according to Permendikbud No. 104 of 2014. The interpretation can be seen in table 2.

Table 2. Qualification of the Expert Review Instrument Rating Scale

INTERVAL NILAI	HASIL KONVERSI	PREDIKAT	INTERPRETASI
96-100	4,00	A	Sangat baik
91-95	3,66	A-	
85-90	3,33	B+	Baik
80-84	3,00	B	
75-79	2,66	B-	
70-74	2,33	C+	Cukup
65-69	2,00	C	
60-64	1,66	C-	
55-59	1,33	D+	Kurang
≤ 54	1,00	D	

### Quantitative Data Analysis Techniques

To test the effectiveness of the product developed, the researcher used the normalized gain score test by analyzing the results of the pre test and post test. Normalized gain or N-gain score aims to determine the effectiveness of the use of a particular method or treatment in one group pretest posttest design research.

In practice, the researcher gave a test instrument to students before and after using the product (dictionary). The student scores obtained are then collected, identified and grouped according to the assessment classification.

Then the data is processed with the expected amount.

Next is the N-gain test. The N-gain score test was carried out by calculating the difference between the pre-test and post-test scores. By calculating the difference between the pre test value and the post test value or gain score, it can be seen whether the use of a certain method can be said to be effective or not (Raharjo, 2016). The N-gain can be calculated using the formula:

The categorization of the assessment of the N-Gain Score can be determined based on the N-Gain value obtained.

### Research Result

In this chapter the researcher describes two main parts, namely the Development of the Gemilang Multilingual Dictionary and the Results of the Trial Analysis (Feasibility Test) of the Gemilang Multilingual Dictionary. In product development, it begins by presenting the results of the needs analysis and the development draft model. Meanwhile, in the Analysis Results section of the Model Trial (Feasibility Test) describes the implementation of the development process, the results of expert reviews, one-on-one and small group tests, and field tests.

Based on the results of previous research conducted by Adiningsih and Khasyar (2020), at an early age, children have great potential to learn language. Language learning is usually learned by children in formal and non-formal education. Interesting language learning requires supportive learning media. One of them is an android-based multilingual visual dictionary application. The results showed that the multilingual visual dictionary application can be used properly on Android-based smartphones with version 4.0. In its implementation, an Android-based multilingual visual dictionary can improve student learning achievement in adding vocabulary in four different languages.

### Learning Model Development

#### 1. Needs Analysis Results

The researcher divides needs analysis into 3 (three) aspects, namely needs analysis in the field in general, curriculum analysis, and student character analysis.

The results of the needs analysis in the field, it was found that there is no Android-based digital learning media that can be used in learning activities, especially using the blended learning method. On the other hand, the



availability of internet equipment and network facilities in the school and home environment is quite adequate and supportive. In addition, the good response from teachers and parents as well as students who are used to using smartphones supports the implementation of digital-based learning.

1. First, the researcher distributed a questionnaire to the teacher. The distribution of questionnaires was carried out to find out learning resources, available learning facilities and infrastructure, learning methods carried out at Bunda Gemilang Kindergarten, as well as the availability of facilities owned by schools to carry out learning using the blended learning method.
2. Second, researchers seek information on needs analysis activities by distributing questionnaires to parents. The distribution of the questionnaire was carried out to determine the extent of the readiness and role of parents in assisting children to study at home using smartphones. The results of student character analysis show that Bunda Gemilang Kindergarten students have different academic levels. In learning activities, Bunda Gemilang Kindergarten students tend to be interested in the visual media used in learning, both in terms of pictures and videos when compared to the learning system that is carried out without the use of media. So that the development of dictionary media can provide facilities for teachers and students so that the learning process is active and fun.

The conclusion from the results of the needs analysis is that there is a need to provide learning media that can help teachers and students overcome learning problems during the Covid-19 pandemic, as well as to improve early childhood vocabulary mastery skills while encouraging independence and motivating students to study harder.

## 2. Needs Analysis Results

### a. Preparing the Brilliant Multilingual Dictionary Material Design.

The development of the Gemilang Multi-language Dictionary material is carried out by determining the material that is in accordance with the curriculum currently used. With existence material development is expected to have a positive impact on student learning progress.

### b. Developing Brilliant Multilingual Dictionary Material

After the material design is organized into themes and subthemes, the next step is to develop the material into a visual form.

### c. Develop Flowchart

Flow chart is a map of the place where the journey of the learning process begins and ends. The flowchart was developed according to the needs of Gemilang Multilingual dictionary development.

### d. Developing Storyboard

At this stage a dictionary design storyboard was developed to make it easier to develop the Gemilang Multilingual Dictionary. Storyboard is used as a guide so that the material developed is in accordance with predetermined specifications. Storyboards help ensure that the developed dictionary material is in accordance with the correct specifications or flow.

## 3. Final Mode

After preparing the design of the Gemilang Multilingual dictionary material, then material development, flowchart development and storyboard development, the next step after all these stages is to make a Gemilang Multilingual dictionary draft. The final model compiled, starting from the initial menu display, learning activities, and evaluation can be seen in Figure 7.



Figure 7. Main Menu Display

### Results of Model Trial Analysis (Feasibility Test)

The results of reviews from experts are as follows:

#### 1. Material Expert Review Results

Product reviews conducted by material experts are intended to assess learning materials in the Gemilang Multilingual Visual Dictionary. Aspects that are assessed on learning materials include learning aspects, material aspects, and language aspects.

After making improvements on input from learning material experts, then the results of the recapitulation of the assessment of learning material experts are made which include aspects of learning, material, and language.

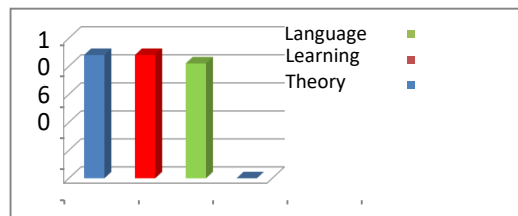


Figure 8. Graph of Learning Material Expert Recapitulation

Based on the results of the recapitulation of learning material experts in Figure 8, the results of calculating the assessment of learning material experts obtained an average value of 84.3 which means "Very Good". This means that in terms of the material aspects of the product developed, it is feasible to be used for research. More detailed calculation results can be seen in the appendix.

#### 2. Media Expert Review Results

Product reviews conducted by media experts are intended to assess the feasibility aspects of the media used in the Gemilang Multilingual Dictionary.

Furthermore, the results of the recapitulation of the assessment of media experts are made which include aspects of media display, aspects of program compatibility and accessibility, and aspects of learning. The recapitulation of media expert reviews is shown in the following graph:

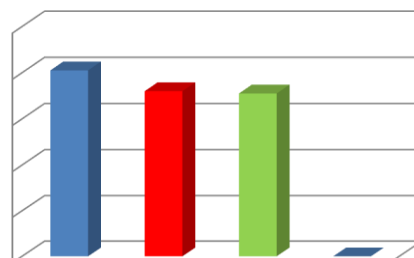


Figure 9. Media Expert Recapitulation Graph

Based on the results of the recapitulation of media experts in Figure 4.5, the results of the calculation of the media expert's assessment obtained an average value of 74.8 which means "Good". This means that in the media aspect, the product developed is suitable for research. More detailed calculation results can be seen in the appendix.

#### Learning Design Expert Review Results

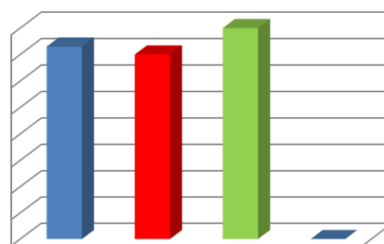


Figure 10. Graph of Learning Design Expert Recapitulation

### C. Model Effectiveness Test

There are several limitations to the Gemilang Multilingual dictionary developed, including the following:

1. The material presented does not cover all the material in the early childhood curriculum at school. The material is only up to one semester.
2. Gemilang Multilingual Dictionary can only be used on android based devices. If there are teachers or students who do not have an android device, then the dictionary cannot be used.
3. Requires a stable internet network to access or download the Gemilang Multilingual Dictionary application
4. The role of parents is needed in the use of this Gemilang Multilingual Dictionary.

## **Conclusions and Suggestions**

### **Conclusion**

Based on the research problem formulation and the results of the development of blended learning-based learning media to improve the language skills of children aged 5-6 years at Bunda Gemilang Kindergarten, the following conclusions were obtained:

1. The learning media development model used in this study is the ADDIE model which consists of 5 stages, namely 1) Analysis (analysis), 2) Design (design), Development (build), 1) Implementation (implementation), and 5) Evaluation ( evaluation).
2. The results of the needs analysis conducted at the Bunda Gemilang Kindergarten stated that the problem found by the researchers was the unavailability of special blended learning-based learning media that could be used for multilingual learning. Learning methods that are often used by teachers in delivering material are lectures, play, question and answer, storytelling and discussion. The learning materials used are textbooks and presentation slides, and music. Students feel that language learning is a very unattractive learning because of the large number of vocabularies that must be memorized. Therefore, the development of learning media as independent learning materials can be used as a solution to facilitate student learning activities as an effort to improve the ease of student learning processes.
3. The feasibility of a learning media product developed is determined based on the results of the validation of the test of material experts, learning design experts and learning media experts. The results of the feasibility test from the three experts, the results obtained with an average percentage of test results from material experts of 84.3% which means good and fit the criteria for use, the percentage of learning media expert test results is 74.8% which means that into the eligible criteria to be used and 74.4% obtained from the results of the validation of the learning design experts which means that the criteria are eligible to be used.
4. The results of the pre-test and post-test data analysis showed that there was an increase in children's vocabulary mastery skills effectively. This can be seen in the learning outcomes of 1 (one) respondent in the high category with an N-Gain value of 0.75 and 19 (nineteen) other respondents in the medium category with an N-Gain value in the range of 0.3 g 0.70 and there are no respondents in the low category in using the Gemilang Multilingual Dictionary. So it can be concluded that the development of the Gemilang Multilingual dictionary can improve the vocabulary mastery of early childhood.

### **Suggestion**

The results of this study still have shortcomings and there are still many things that need to be studied and developed again. Researchers have suggestions for future research or development, including:

#### 1. For Teachers

Teachers are able to use and optimize the Gemilang Multilingual Dictionary as an alternative learning media for students during the pandemic in order to provide variations in the delivery of more interesting learning materials.

#### 2. For Students and Parents

Students and parents can use learning media in the form of the Gemilang Multilingual Dictionary to increase vocabulary and improve language skills of children aged 5-6 years independently.

#### 3. For School

The school was able to optimize the learning media in the form of the Gemilang Multilingual Dictionary as a supporter in the learning process at Bunda Gemilang Kindergarten during the pandemic.

#### 4. Researcher

Other researchers are expected to improve the quality of the Gemilang Multilingual Dictionary to be even better, in terms of materials and ease of access for users to access materials online

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