Development of A Trilingual E-Dictionary for Early Childhood; Indonesia-English-Lampung

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Abstract

The development of this trilingual e-dictionary (Indonesian-English-Lampung) is expected to help children learn multi-languages and make it easier for children to learn Indonesian, English, and Lampung language. This study aimed to develop a trilingual e-dictionary (Indonesian-English-Lampung) for early childhood students at TK Pertiwi Metro. The study used a Research and Development approach, where the data were collected through questionnaire and interview. Qualitative data were analyzed using interactive analysis and quantitative data analysis used percentages. The research participants consisted of 25 Kindergarten teachers at TK Pertiwi Metro and TK PKK 1 Yosodadi Metro. The results showed that learning media in the form of e-dictionary is very needed to introduce languages to early childhood. The contents of trilingual e-dictionary consist of three volumes. Volume one consists of five themes: numbers, colors, fruits, vegetables, and animals. Volume two consists of four themes: family, human body, transportation, and profession. Volume three consists of four themes: classroom, bedroom, nature, and time. The total vocabulary of the entire volume is 158 vocabularies. Furthermore, the teachers’ responses toward the trilingual e-dictionary (Indonesia-English-Lampung) showed that 0% expressed disagreed, 10% less agreed, 41% agreed, and 49% strongly agreed. The average score is 3.38 and, if converted on a table with a scale of 4, includes into a very good category. Therefore, a trilingual e-dictionary (Indonesia-English-Lampung) is declared suitable to be used as an interactive media in learning languages for early childhood.

Keywords: E-Dictionary, Early Childhood, Language Education, Learning Media

INTRODUCTION

The development of the trilingual e-dictionary is an attempt to objectify the slogan “Prioritize Indonesian language, preserve regional languages, and master foreign languages”. The slogan initiated by the Language Development and Cultivation Agency contains an invitation to learn multiple languages. Indonesian language as a unifying language is the Indonesian national character identity. Indonesian language must be used according to its function and position. On the other hand, mastering English is a
recommendation and a must. English is a world language and a link among the nations. English has a vital role in all aspects of life. By mastering English, children will be better prepared to face a globalization era in the future. Maintaining the existence of regional languages is not just an obligation, but it should become a habit. Regional languages as one of the unique and ancestral heritage must be preserved. The regional languages’ noble values will shape their speakers’ character.

Based on the observation results, the people of Metro City have various social and cultural backgrounds. Due to the heterogeneous society, finding Lampung language speakers in Metro City is infrequent. The development of this trilingual dictionary is essential to maintain the existence of the Lampung language in Metro City. The results of previous studies stated that the Lampung language was starting to be abandoned due to the declining number of Lampung language speakers based on data on the number of indigenous Lampung tribes(Ariyani et al., 2022; Putri, 2018; Rusminto et al., 2021; Septiyana, 2021; Wulandari, 2019). Nearly 86% of Lampung’s population are from other ethnicities, while only 14% are Lampung natives. If this is not anticipated, it will impact the extinction of the Lampung language as data submitted by Dadang Sunendar that 11 regional languages are categorized as extinct, two regional languages are almost extinct, and 19 regional languages are threatened with extinction(Sari, 2018; Warisman Sinaga, 2019).

Multilingual learning in the early years of a child’s life often referred to as an early age, is the most appropriate period. This is because this period is called the golden age, where the growth and development of children determine their future. This statement is supported by research conducted by Hulukati that early age is the most crucial period in learning. At this time, children have strong and long-lasting memories(Hulukati et al., 2017). Multilingual learning can be conducted from an early age through formal, non-formal, and informal education(Nursyam, 2017). Children can learn a language in schools as formal education, such as early childhood education (PAUD) and kindergarten (TK). In non-formal education, children can learn language through courses, playgroups, or homeschooling. While informally, children can learn language from their family, as well as from their social environment in the community.

The development of this trilingual e-dictionary (Indonesian-English-Lampung) is expected to help children learn multi-languages and make it easier for children to learn Indonesian, English, and Lampung language vocabulary. In addition, it is expected to help children interpret words from Indonesian to Lampung language and English and vice versa. This e-dictionary is equipped with clear and attractive colors and images, making it easier for children to store new vocabulary in their minds. Besides, the audio also provided to help the students in pronouncing the languages. There were so many previous studies to support that the use of technologies plays an important in learning and preserve the languages (Aziz et al., 2016; Bettinson & Bird, 2017; Bosch & Griesel, 2020; Cassels & Farr, 2019; Koen, 2018) Therefore, the researchers aimed to develop a trilingual e-dictionary (Indonesian-English-Lampung) for early childhood at Pertiwi Kindergarten in Metro.

METHOD
This research was carried out using Research and Development approach, as it is deemed a suitable model to “develop and validate product”(Gall & Borg, 1989). This development research was carried out for 6 months with research subjects of early childhood in Kindergarten level in Metro, Lampung. The researcher took Pertiwi
Kindergarten in Metro as the research location. This location was chosen because TK Pertiwi is one of the Kindergarten schools that has an “A” accreditation. In addition, based on the results of the pre-survey, the teachers at TK Pertiwi introduced Indonesian, English, and Lampung languages to children in learning activities at school.

Process

The steps used in this study consisted of eight steps adopted from Borg and Gall, namely 1) research and data collection, 2) planning, 3) product development, 4) small data experiment, 5) revision and experiment results, 6) large data experiment, 7) product refinement, 8) final product refinement(Gall & Borg, 1989).

1) Research and Data Collection: at this stage, the researchers identified the problems and conducted a need analysis. The researchers conducted interview with several teachers and school principal in TK Pertiwi Metro.
2) Planning; the researchers prepared the objectives, and materials which will be developed. The themes contained vocabularies that is often encountered by children around their environment; namely; numbers, colors, animals, vegetables, fruits, transportations, professions, family, the human bodies, classrooms, bedrooms, nature and time.
3) Product Development: The researchers developed the dictionary entitle: “Kamus Anak 3 Bahasa; Indonesia-Inggris-Lampung).” After determining the theme and vocabulary, the researchers continued by making a list of languages from the existing vocabulary. The languages used are Indonesian, English, and Lampung dialect A and O. The researchers also prepared the audio of how to read the vocabulary in order to make the teachers easy to introduce the languages.
4) Small data Experiment: The researchers requested the experts, namely; content material expert, language Expert, and learning media expert to give assessments related to the products. There were three languages experts, they were one English language expert and two Lampung languages experts.
5) Revision of Experiment results: The researchers revised the products based on the comments and suggestions from the experts.
6) Large Data Experiment: The large sample experiment was conducted on 25 teachers of TK Pertiwi Metro and TK PKK 1 Yosodadi Metro.
7) Product Refinement: Product refinement was conducted based on the results of the large sample experiment. A trilingual e-dictionary (Indonesia-English-Lampung) was revised based on the suggestions from the teachers of TK Pertiwi Metro and TK PKK Yosodadi Metro.
8) Final Product Refinement: the teaching materials that had been designed were then refined so that it can be applied as a media for early childhood students in learning multilanguage.

Data Collecting Technique

The data of this study were collected through questionnaires and interviews. The interview sheets were used to collect the data on the need analysis. The questionnaires used to validate the model of by content material expert, language Expert, and learning media expert and by the students to find out their responds towards the developed textbook. The interview sheets contain of open-ended questions that must be answer by
RESULT AND DISCUSSION

1. Model of A Trilingual E-Dictionary (Indonesian-English-Lampung) for Early Childhood

The following is a description of the digital-based trilingual visual dictionary (Indonesian-English-Lampung) for early childhood that has been developed:

a. Format : Digital
b. Title : Kamus Anak 3 Bahasa (Indonesia-Inggris-Lampung)
c. Author : Linda Septiyana
d. Voice actors :
   - Indonesian : Aneka
   - English : Anita Suciati Rahayu and Fivty Travika Sukma
   - Lampung dialect A : Yusminar
   - Lampung dialect O : Hasanuddin Muhammad
e. Cover & layout : Sekar Ayu Anggraini and Nur Kartika Sari
f. Editor : Hasanuddin Muhammad and Aldi Permana Putra
g. Total volume : 3
h. Thickness :
   - Volume 1 : 20 pages
   - Volume 2 : 18 pages
   - Volume 3 : 16 pages
i. Size : 25cm x 20cm
j. Font type : Chewy
k. Applications : Canva and FlipBuilder

The researchers compiled this digital-based trilingual visual dictionary (Indonesian-English-Lampung) through several steps, namely:

a. Determining the Theme and Vocabulary

The researchers determined the themes and developed the vocabulary concepts according to the needs of early childhood by integrating learning competency standards in school. The researchers chose the themes and basic vocabulary from words that children often encountered in the surrounding environment. This dictionary is divided into three volumes. Volume one consists of five themes: numbers, colors, fruits, vegetables, and animals. Volume two consists of four themes: family, human body, transportation, and profession. Volume three consists of four themes: classroom, bedroom, nature, and time. The total vocabulary of the entire volume is 158 vocabularies.

b. Making a List of Languages

After determining the theme and vocabulary, the researchers continued by making a list of languages from the existing vocabulary. The languages used are Indonesian, English, and Lampung dialect A and O.

c. Designing the Images

The following process was designing the images. This trilingual e-dictionary (Indonesian-English-Lampung) was created using Canva. Canva was chosen because it has a very varied layout and image features and is easy to apply. The image design was adapted to the daily conditions of children to make it easier to capture the
dictionary’s contents. In addition, the dictionary was also made by providing bright and interesting colors for early childhood.

d. Numbering the Pages

After the image design was completed, the author gave the page number to the dictionary in a simple yet attractive way. Numbering was done to make it easier for readers to find themes and vocabulary. Page numbers were placed in a strategic location in the lower right corner.

The other supporting parts of the dictionary are the table of contents and the front and back covers. The cover was made with attractive graphic designs and colors that were very suitable for children.

e. Creating a Table of Contents and Cover

f. Writing Vocabulary Text

Vocabulary text in the image design was created using Flip PDF. Writing vocabulary consists of three languages (Indonesian-English-Lampung). The choice of font type is based on its ease and clarity but is also interesting for children, so they do not get bored while reading the dictionary.

g. Recording the Audio

After the trilingual visual dictionary (Indonesian-English-Lampung) was completed, the researchers continued by recording audio for each predetermined vocabulary. The selection of voice actors was based on their language skills. The chosen voice actors have good pronunciation and a distinctive dialect.

h. Inserting the Audio

The last process of this step was inserting the audio that the voice actors recorded into the text. In inserting audio, the researchers used Flip PDF. The dictionary created in Canva was converted into PDF format then the audio was inserted one by one using Flip PDF.

The trilingual e-dictionary (Indonesian-English-Lampung) developed by the researchers has several parts. They are:

a. Cover

This section contains the trilingual visual dictionary’s (Indonesian-English-Lampung) front and back cover.

1) Front cover

The front cover contained the dictionary’s title, “Kamus Anak 3 Bahasa (Indonesia-Inggris-Lampung)”. At the bottom of the title was a description stating that this dictionary is equipped with audio features. Audio features can be downloaded by scanning the barcode on the front cover of the dictionary. Therefore, this dictionary is not only in printed form but also in digital form or e-dictionary. The images on the front cover of the dictionary contain the themes used, such as transportation, animals, numbers, vegetables, professions, and others. In addition, on the front cover, there are also icons such as the National Monument (Monas) in Jakarta, which is an icon of the struggle of the Indonesian people, and the tower of Big Ben in London, which is an icon of the capital city of Great Britain, and the Siger Lampung Tower which is a symbol of Lampung province. In the upper right corner, there is a volume description. This dictionary consist of three volumes. Volume one consists of five themes: numbers, colors, fruits, vegetables, and animals. Volume two consists of four themes: family,
human body, transportation, and profession. Volume three consists of four themes: classroom, bedroom, nature, and time.

Picture 1. The Front Cover of Dictionary

2) Back cover

On the back cover, the researchers included the slogan initiated by the Language Development and Cultivation Agency, namely “Prioritize Indonesian language, preserve regional languages, and master foreign languages”. The researchers also brought up Indonesian, United Kingdom, and Lampung province icons. In addition, the researchers also included the team that developed this trilingual e-dictionary for children (Indonesian-English-Lampung), consisting of authors, voice actors, editors, and cover and layout teams.

Picture 2. The Back Cover of Dictionary
3) Table of Contents

The table of contents page contains the themes used in this trilingual dictionary for children (Indonesian-English-Lampung) and the page numbers listed. Page numbers make it easier for readers to find the section they want to read.

**Picture 3. The Table of Contents of the Dictionary in Volume 1, 2, and 3**

![Table of Contents](image)

4) Contents

**Picture 4. The Themes of the Dictionary**

![Themes of the Dictionary](image)
The contents section contains vocabulary in three languages (Indonesian-English-Lampung) based on images and is equipped with audio features. The dictionary is compiled based on themes often encountered by early childhood children in their environment adapted to competency standards. The contents of the vocabulary on each page are equipped with appropriate illustrations, text, and audio to help with the pronunciation. The themes used in this trilingual dictionary children are numbers, colors, fruits, vegetables, animals, family, human body, transportation, professions, classrooms, bedrooms, nature, and time.

2. The Teachers’ Responses toward A Trilingual E-Dictionary (Indonesian-English-Lampung) for Early Childhood

The teachers’ responses toward a trilingual e-dictionary (Indonesia-English-Lampung) for early childhood that had been given to 25 teachers of TK Pertiwi Metro and TK PKK 1 Yosodadi Metro are very good. The table below showed the assessment frequency data in the large sample experiment conducted on 25 teachers.

<table>
<thead>
<tr>
<th>Statements</th>
<th>SA</th>
<th>A</th>
<th>LA</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1   The materials in dictionary are appropriate with the lesson objectives</td>
<td>11</td>
<td>14</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2   The content in the teaching materials is quite broad and profound</td>
<td>8</td>
<td>15</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>3   The materials in dictionary are easy to understand</td>
<td>16</td>
<td>9</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4   The materials are suitable as learning media for early childhood students</td>
<td>14</td>
<td>10</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Language</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5   I easily understand the language used in the</td>
<td>13</td>
<td>10</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>
The use of language is effective and efficient

The use of English structure is good and right

The font face used is easy to read

The writing layout is consistent, neat, and interesting

The audio in the dictionary has high quality

The teaching materials are systematically presented

The use of layout in the dictionary make the students be more interested in learning language

Sum

Sum x research scale

Total

Average

Description

Very Good

Table 2. The Product Experiment Assessment Frequency Distribution

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Disagree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2 Less Agree</td>
<td>32</td>
<td>10</td>
</tr>
<tr>
<td>3 Agree</td>
<td>122</td>
<td>41</td>
</tr>
<tr>
<td>4 Strongly Agree</td>
<td>146</td>
<td>49</td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td>100</td>
</tr>
<tr>
<td>Average</td>
<td>3.38</td>
<td>84.5</td>
</tr>
</tbody>
</table>

Based on the data above, it can be concluded that a trilingual e-dictionary (Indonesia-English-Lampung) for early childhood students include in the category of very good. It is shown in the average assessment score after being converted into quantitative data, which is 3.38.
trilingual e-dictionary (Indonesia-English-Lampung) is appropriate for early childhood students.

**DISCUSSIONS**

The above findings can be accounted for using various theories as follows:

1. The first step before developing the e-dictionary was need analysis step. Based on the observations and interview with the headmaster and teachers related to the language learning for early childhood students in TK Pertiwi Metro, the problem was the teachers need interactive media in introducing multi languages such as Indonesia, English and Lampung. An interactive and interesting media will make the children more enthusiastic and easy in catching the messages which the teachers want to convey. A learning media in the form of e-dictionary is really needed to strengthen the students’ motivation in learning and the students’ knowledge of basic vocabularies that are often found in their surrounding environment. The use of interactive media integrating digital media enhance the students’ learning interest and learning achievement (Liliana et al., 2020). E-dictionary has some benefits such as enabling the students to learn vocabulary regardless of time and place, helping the students to learn proper pronunciation, and giving clearer vocabulary instruction in comparison to printed dictionary (Mohamad et al., 2017).

2. The next step was development of trilingual e-dictionary. The e-dictionary consists of three languages, namely; Indonesia, English and Lampung. The e-dictionary contains 3 volumes. In each volume composed of 1) book identity: front cover and table of contents, 2) book contents: themes and the language vocabulary which supported by picture and audio, 3) end of book: back cover. In developing the materials, the researchers used colorful pictures to catch the children’s intention and make the children enthusiastic and happy in learning the languages so that the learning objectives can be achieved easily. Besides, the researchers put the vocabularies based on the standard competence for early childhood of Pertiwi Kindergarten Metro and based on basic vocabularies that are often found in their surrounding environment. It supported the previous study that teaching materials can be defined as all materials in which systematically organized in the form of texts, tools, and information related to materials that support students’ competence in the learning process (Andi, 2011). Teaching materials designers should ensure that the information delivered to the students is accurately understood (Morrison & Ross, 2013). Several programs that can be carried out in optimizing early childhood learning are: 1) fun learning activities, 2) learning by playing, 3) making the students active in learning process, 4) combining various aspects of development, 5) learning in the form of activities which are real and related to daily activities (Rachmawati & Kurniati, 2011).

3. After the e-dictionary was confirmed valid, then the researchers conducted large sample experiments to the 25 early childhood teachers in TK Pertiwi Metro and TK PKK 1 Yosodadi Metro to find out the teachers’ responses toward the e-dictionary. Most of the teachers assessed that the e-dictionary are very helpful in introducing the languages to early childhood. The trilingual e-dictionary (Indonesia-English-Lampung) is assessed as an interactive media which raises children motivations and ensures their proficiency. In the same way, the findings
study conducted by (Amirian & Heshmatifar, 2013) that electronic dictionary is more useful than printed dictionary in learning vocabulary. The features in e-dictionary were found giving another motivation to learn. In addition, most teachers stated that mobile dictionary will help them learn vocabulary, pronunciation of word and word origin (Din, 2019).

CONCLUSIONS

A trilingual e-dictionary (Indonesia-English-Lampung) that has been developed is compiled based on vocabulary that is often encountered by early childhood children in their surrounding environment which is adjusted to standard competence. The contents of the vocabulary on each page are equipped with appropriate illustrations, text, and audio as support for knowing how to pronounce them. The themes used in this children's dictionary are numbers, colors, fruits, vegetables, animals, family, the human body, transportation, professions, classrooms, bedrooms, nature and time. Based on the large sample experiment that had been given to 25 teachers of TK Pertiwi Metro and TK PKK 1 Yosodadi Metro, the percentage showed that 0% expressed disagreed, 10% less agreed, 41% agreed, and 49% strongly agreed. The average score is 3.38 and, if converted on a table with a scale of 4, includes into a very good category. Therefore, a trilingual e-dictionary (Indonesia-English-Lampung) is declared suitable to be used. This research and development is expected to be able to provide inspiration for other researchers to produce better products with different materials.

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AUTHOR CONTRIBUTION STATEMENT

All the authors provided contribution to this manuscript. In the process of writing the manuscript, LS, and AN managed the data collection. Then LS and AN analyzed completely with the interpretation. BM conducted interviewed with the respondents to gain further insight. FSSR supported this research by providing other researchers’ needs.

REFERENCES


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