

Boosting the Quality of EFL Class Through HOTS-based English Activity Book: Upgrading Independent Active Class During Pandemic

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ABSTRACT

Adapting to rapid changes of technology and information in the midst of Covid-19 spread requires the quality improvement of students learning independently. Therefore, students need an appropriate, challenging, and meaningful support to boost their English learning process. This study aims to develop a HOTS-based English activity book for students grade 6 elementary school. This study uses D&D research and combined with ADDE model (Analysis, Design, Development, and Evaluation). The product result of this research is still in the form of prototypes and it was tested by using the Expert Test and User Test. The result of the test shows that English Activity Book is very relevant and suitable for students' need. While the quality of product indicates that it is categorized as an 'excellent activity book', which can increase students' high-order thinking skill (HOTS).

Keywords: *English Activity Book, Independent Learning, HOTS*

1. INTRODUCTION

The development of technology and science is changing the way of life of global society. Various patterns of life and new habits are emerged with the quality improvement in all aspects of life. In this kind of situation, the challenge is placed on whether the one owns the ability to adapt to fast-paced changes or not. If the generation of a society is not equipped with the knowledge and skills in accordance with the demands of 4.0, that generation will be left behind [1].

The ability to adapt is even increasingly needed nowadays to face the pandemic COVID-19 that has hit countries around the world. The need to have critical and creative generation increasingly demand the quality improvement of graduates to be ready to work and ready to compete in the global era [2]. This is a tremendous project that should be put on teachers' shoulder beyond all the burden and limitation during pandemic. How can teachers fulfil reaching their target in teaching by having

only half of their power in controlling and managing their class?

According to the adjustment on learning policy that have been made by Education Ministry of Indonesia through Circular Number 4 of 2020 on Education Policy Implementation in Emergency during COVID-19 spread, teachers and students should alter their face-to-face class interaction to online learning [3]. The contrasting condition of students' background economy even dig a deep more gap in accessing information and material to support their study as the implementation of online learning. The privileged backgrounds students who supported by their parents could have more option to access other alternative learning resources in pandemic situation, while students with disadvantaged family backgrounds often remained shut out when their schools shut down [4]. This crisis has further clarified the gap between education systems and facilities. Even though every student is labeled as receiving the same portion of education, educational process quality that the one receives is not up to standard to construct his/her

High-Order Thinking skill (HOTS). HOTS as a higher level of cognitive skill is highly needed by students in every education levels especially in preparing critical, creative, and problem solver generation [5].

To help students learn independently at home, the schools and government provide books for students. The book is then used as a reference in teaching and as a source for student doing exercises in studying the material provided during online learning. The only help that student have while they study at home is that book especially when they have lack of access to internet connection during online learning. Unfortunately, the surprising finding found in some schools in Buleleng Regency is that books that students have to help them learn independently are not compatible with HOTS-based learning. In the preliminary interview, the teacher stated that HOTS is important, but there is a lack of support in the implementation. Teachers agree that the students learning activity should be designed to relate to the 21st-century educational demands.

Based on the identification of problem, the study focused on the development of students' HOTS-based English Activity Book for Grade 6 Elementary School. The English activity book based on HOTS was designed to help elementary school teachers providing interesting, authentic, and meaningful learning activities for boasting EFL students' level and achievement in learning English.

2. METHOD

In order to develop interesting, authentic, and meaningful English Activity Book which focuses on the implementation of HOTS-based activity, Design and Development (D&D) was used as the research design. Design and Development is an organized design, development, and assessment technique that includes creating instructional and non-instructional products and tools, modified or new developmental models [6].

This study used one of elementary schools in Buleleng Regency to conduct an evaluation test. SDN 1 Banyuasri was used as a setting meanwhile the teachers and several elementary school students grade 6 were selected using the random sampling method as research subjects. The principle of this simple random sampling is every object has the same opportunity to be used and selected. This research was then coupled with the ADDE research model (Analysis, Design, Development, Evaluation) so that it has clear and detailed stages of work. For having clearer understanding of ADDE model, the following figure (Figure 1) can help to catch the research's flow of process.

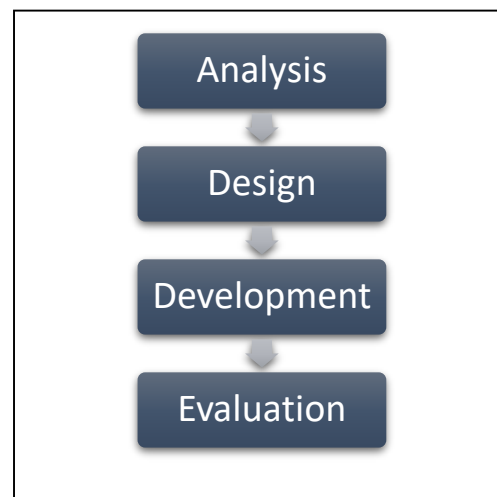


Figure 1. The ADDE Model by Richey & Klein (2007)

According to Figure 1, in this D&D research with ADDE model, there are 4 phases carried out to develop a prototype of the English Activity Book for students grade 6 elementary school. The development process began with the analysis phase, which was conducted by checking and analyzing the syllabus, books, and other supporting documents. At the analysis phase, observations and interviews were also done to determine the quality and condition of teachers, students, and schools in Buleleng Regency. It was continued by conducting the design phase. The phase of design is focused on making blueprints by ensuring the scope of topics and materials list that would be developed into an English activity book. After the blueprint has been successfully designed, the next process was development. It was done by selecting the images, designs, type of letters and fonts that would be used on the product. This phase is a challenging process because it should pass some works process and several times of revision. The aim is to ensure the product of English Activity Book meets all the requirements and standard of a good and attractive book and worksheet. The product should provide guidelines and steps for solving problems to help students understand the topics and master the material. At the same time, their skills in developing critical and creative thinking are also challenged and trained through a series of HOTS-based and fun learning activities.

In order to check the quality of product, evaluation phase was conducted. There are 2 kinds of test given in this research, those are: expert test and user test. The test results are examined and analyzed carefully to find out the strengths and weaknesses of the product. At the evaluation phase, the advantages possessed can be maximized, while if they still have shortcomings, solutions must be immediately found to improve the quality of the English Activity Book.

In collecting the data, seven instruments are used: observation sheets, interview guides, syllabus analysis, content validity, product quality, and teacher and student questionnaires. Those instruments are used in different phases of ADDE model. By having those instrument, the data in this D&D research could be gathered well.

3. RESULT AND DISCUSSION

This study reveals the results of the finding analysis of the condition of learning English in elementary schools, especially for grade 6 students in Buleleng Regency. Based on these findings, the design and development of the HOTS-based English Activity Book was carried out. The process used the ADDE model which has structured stages. In addition, the results of expert judgment and user tests are also displayed to determine the quality of English Activity Book. Based on the quality test conducted by experts, the HOTS-based English Activity Book for students grade 6 elementary school showed “very good” quality. The results of the Expert Test are also supported by the results of the user test that the activities developed in the English activity book are very appropriate for developing higher thinking skills for students.

3.1. The Result of ADDE Model

The following are the phases of conducting ADDE Model.

3.1.1. Analysis

In the analysis phase, observations and interviews were conducted with elementary school teachers and students in Buleleng Regency. Observation was conducted to find out the conditions and obstacles faced by teachers at school. It was done to gather information about teachers, students, and school in terms of their quality. Based on the data of the observation and interview, appropriate prototype of English activity book could be designed and developed well. The syllabus used by teacher and also the other books and document were also gathered as the guideline for the material scope but they still should be checked whether the activities belong to LOTS (Low Order Thinking skill) or HOTS (High Order Thinking skill). According to the result of finding, The book used by teachers only focuses on LOTS level, such as: knowledge (C1), understanding (C2), and application (C3). While the thinking skills needed by students in developing their HOTS should focus on analysis (C4), evaluation (C5), and creation (C6) [7].

3.1.2. Design

After analyzing the needs and problems that occur in the field, the prototype of activity book was designed.

This process was started by constructing blueprint based on the syllabus that is used in the elementary school especially for grade 6 in Buleleng Regency. The list of topics in the blueprint was then divided, made, and developed into several learning activities by completing the explanatory instructions and the developed worksheet. All of this process was done while still paying attention to HOTS as the basis for developing English activity books. Furthermore, the design of English activity book was enriched using relevant learning activities which can train their skills, especially thinking skills with higher-order thinking patterns. The selection of activities that had been developed was carried out carefully. The aims are that the English activity book developed is in accordance with the level of student development and can help students in upgrading their level of HOTS in English learning process.

3.1.3. Development

In development phase, the design of the activity book was further developed to be clear, fun, and attractive for students. Starting from selecting some pictures, caricatures, letter-font and size must be considered. The picture or photos was downloaded from www.freepick.com. This website provides images that are free to download with a license, so they are safe to quote. The choice of color and type and thickness of the paper must also be considered. So that the resulting product is of good quality in terms of content and print.

The development process takes longer than other processes. This was because during the development process, both the content and design of the book should pass many processes of prototype revision and refinement. The prototype must meet the standard of activity books, both in terms of presentation of materials and activities as well as book design and format

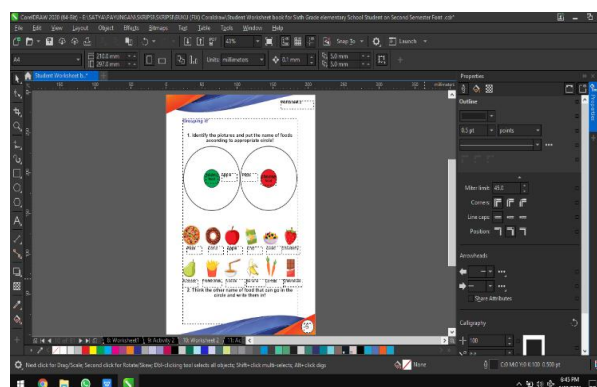


Figure 2. Design and Develop Process of English Activity Book used CorelDRAW 2020

In this process, the application used to design and develop the product was CorelDRAW 2020. As shown in Figure 2, the activities designed must challenge and

train students' critical thinking skills. In addition, the appearance of the English activity book as much as possible should be attractively designed with the appropriate picture and colors. So that the portion is not excessive or less than needed.

3.1.4. Evaluation

The last phase of ADDE model is evaluation. In this research, there were 2 kinds of tests: expert test and user test. To begin the evaluation process, content validity of the blueprint and prototype were checked by using content validity by expert judges. The content validity of this research was done by using the Gregory formula. The Gregory formula was presented in table 1.

Table 1. Gregory Formula

Judge I			
Judge II	Relevant	A=0	B=0
	Irrelevant	C=0	D=0

Gregory Formula:

$$\text{Content Validity} = \frac{D}{A+B+C+D}$$

Meanwhile, to assess the quality of the English Activity Book, 32 quality evaluation criteria and scores were used. The lowest possible score is 1, and the highest possible score is 5. As a result, the minimum and maximum total points are 32 and 160, respectively. Following the determination of the minimum and maximum cumulative scores, analyzed M_i and S_{di} are needed to obtain a rating score for each standard. The scores were calculated as follows.

$$M_i = 1/2 (\text{Score Maximum} + \text{Score Minimum})$$

$$S_{di} = 1/3 (M_i)$$

M_i and S_{di} 's result, according to the formula, would be:

$$\begin{aligned} M_i &= 1/2 (\text{Score Maximum} + \text{Score Minimum}) \\ &= 1/2 (160 + 32) \\ &= 1/2 (192) \\ &= 96 \end{aligned}$$

$$\begin{aligned} S_{di} &= 1/3 (M_i) \\ &= 1/3 (96) \\ &= 32 \end{aligned}$$

Table 2. The Accumulated Score of Each criterion for Expert Judgements

Score	Criteria
$X \geq 144$	Excellent
$112 \leq X < 144$	Good
$80 \leq X < 112$	Average
$48 \leq X < 80$	Below Average
$X < 48$	Poor

After collecting the judgements from the experts, they were calculated and checked by using the criteria shown in table 2. The result of expert test shows that the

first expert's total score was 150, the second expert's score was 154, the third was 151, and the fourth expert's score was 158. The average total score from those four experts was 153,25. That accumulated score then checked by using the criteria for expert judgment and was found that 153,25 is categorized as an "Excellent Activity Book,"

Table 3. The Accumulated Score of Each criterion for User Review

Score	Criteria
$X \geq 45$	Excellent
$35 \leq X < 45$	Good
$25 \leq X < 35$	Average
$15 \leq X < 25$	Below Average
$X < 15$	Poor

In addition to expert judgments, the quality of the developed English activity book was also tested using the User test. The users used in this study were teachers and students in grade 6 who were selected by using the random sampling method. Based on this method, the user subjects used were teachers and students at SDN 1 Banyuasri, one of elementary schools in Buleleng Regency.

At first, the users were asked to observe and use English activity books in carrying out English learning process. They were asked to randomly implement some learning activities taken from book. Then, they were asked to fill out a questionnaire based on the quality of English activity book they had used. The questionnaire consists of 10 statements which covers the criteria of a good activity book. Teachers' and students' questionnaires were designed slightly different. It was done to meet the level of users' understanding. Student questionnaires are designed with simpler statement so that students can choose the right point based on what they have experienced. Likewise, the teacher's questionnaire is delivered in clearer language so that the results obtained truly reflect the judgement of elementary school teachers in Buleleng Regency.

After the user data was collected and calculated, it was found that the final mean score of the user ratings was 46.40. If it is matched with the User Test Criteria table, then the mean value of user test is categorized as "excellent"

3.2 Discussion

Based on the observations and interview, the data shows that the teachers of the elementary schools in Buleleng Regency have not carried out HOTS-based learning activities in the classroom yet. The schools also did not provide students with English exercise books or any other worksheets that require high-level thinking. The findings show the worksheets at several sampling schools in Buleleng Regency still lacks emphasis on

HOTS. Many activities in the worksheets and English book still apply LOTS. They only focus on “remember (C1), understand (C2), and apply (C3)”, while the HOTS purpose should be “to analyze” (C4), “to evaluate” (C5), and “to create” (C6). Most teachers in Indonesia only apply to the extent of LOTS in terms of the type of questions, reading texts, and others. It makes the outcomes received do not match the desired results in this era [8].

Besides, the process of English learning did not apply innovative, creative, and meaningful activities as what they should experience in the real life. It triggers the students’ need to have their English activity book so they can be accommodated to independently practice and upgrade their English level and achievement. Moreover, English teachers nowadays are not only responsible to present the instruction that can help the students to be able to communicate in English, but also to help them achieve 4C and higher thinking skills [9]. Therefore, English Activity Book is needed by students to help and boost their higher order thinking skills as well as their English skills.

In this research, the development model used was ADDE model. Each phase of ADDE has an important role and is connected to each other. In the analysis phase for example, the initial data was in the form of observational data related to the quality of teachers, students, and schools in Buleleng Regency. In addition, the syllabus used by teachers in teaching English was also compiled so that the English materials and topics presented for grade 6 could be listed well.

Each topic in the syllabus was then designed into appropriate HOTS-based activities in the form of blueprint. These learning activities were designed to help students develop their critical thinking skills. Critical thinking skills help them understand the relationship between problems and other things, arrange them in a system, express and analyze them, so that students are able to solve them[10]. In addition, through HOT-based learning activities that require students to think critically, they will feel more challenged and motivated[11].

The next phase of ADDE is Development. This phase was quite challenging because it requires a longer time and process when compared to the other ADDE phases. The previously designed blueprint was then developed in the form of a prototype of English Activity Book. In the development process, there are 32 criteria related to the quality of book development that must be considered. English activity book should lead students to find fascinating and valuable thing from what they learn. In developing phase, English Activity Book still needed to be examined, revised, and refined again before proceeding to the evaluation phase.

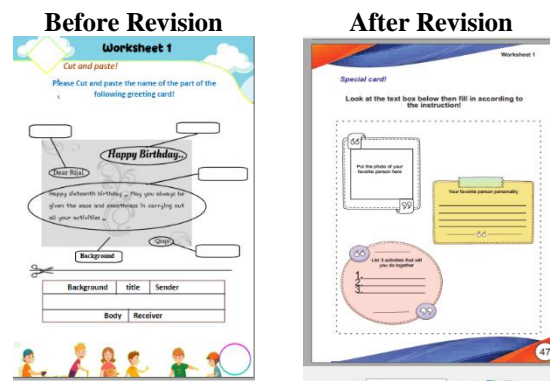


Figure 3. Development Phase: Revision Process

Figure 3 is one of example of the revision series conducted in this research. Before the revision, student activities tend to be more complex and not following the given level. Furthermore, the images from these activities are less exciting and innovative because they just showing the text. Meanwhile, after revision, the given activities immediately took on the factual context by assigning tasks to find data and then reporting their findings by following the instructions. Of course the revised activity should be more challenging and contextual for students than the previous one.

Evaluation is the final phase in the ADDE development model. The prototype of English activity book was first tested by 4 experts. The mean result of the expert test showed a value of 153.25 which after being examined through the table of criteria, it was categorized as an Excellent Activity Book. The expert judges’ result means the development of English activity books is in accordance with the criteria for developing HOTS-based books. The English learning activities presented in the book are considered to be able to improve students’ critical thinking and creativity. It is because some activities used are asked students to analyze, synthesize, and evaluate information to solve problem and make decisions, instead of repeating information or memorizing[12]. Some activities are also in the form of reinforcement, prompting, modeling, and situation manipulation which focus on developing creativity skill[13].

Because the product is still in prototype form, product testing only used one of elementary schools in Buleleng Regency, SDN 1 Banyuasri. Teachers and 6th grade students at that school were then used to test the quality of English activity books as the users. They were asked to use and do several activities taken from the book. After that, they were given questionnaire to review the quality of English Activity Book judged by the users. Based on the result of user test, it was found that the final mean score of the user ratings was 46.40. If it is matched with the User Test Criteria table, then the mean value of user test is categorized as “excellent”.

Both of expert and user test showed the same result. English Activity Book is considered “excellent” in accommodating activities that are fun, meaningful, and able to improve students' HOT skills. Teachers who have been complaining about the difficulty of developing English learning activities due to internet signal constraints and technical problems in online learning can solve those problem by using English Activity Book. Students can also be guided or learn material independently to develop their skills in both English and critical thinking skills.

The quality of English education, especially in elementary schools, can be further improved. Students will not easily feel bored because there are many fun, interesting, and contextual activities that they can do through activity books. Young learners and adults have different characters, so information and activity given must be adapted to the child's age criteria[14].

4. CONCLUSION

To improve the quality of English learning especially during the pandemic, teacher should be able to design learning activities that are fun, meaningful, and based on HOT skills. The development of HOTS-based English Activity Book for grade 6 elementary school students is the right step to improve the quality of learning. HOTS-based English activity book was developed by using D&D research with ADDE (Analysis, Design, Development, Evaluation) model. The results of the analysis at the beginning of this development research revealed that English learning carried out in elementary schools in Buleleng Regency still tends to use LOTS (Low-Order Thinking Skills).

The HOTS-based English Activity Book for grade 6 elementary school students was developed into several activities, such as: analyzing (C4), developing (C5), and creating. (C6). Attractive pictures and colors as well as designs that are suitable for young learners increasingly make English activity books the right learning media in maximizing students' abilities.

Based on the 2 tests conducted at the evaluation phase, both the expert test and the user test showed the same results. Both indicated that the English Activity Book was categorized “excellent”. The point is that the English activity book has HOTS-based activities and is able to improve students' achievement and skills in learning English.

Previous problems experienced by both teachers and students in learning English can be overcome by using HOTS-based English Activity book. Even though there are some limitation and restriction given in this pandemic situation, students are able to learn independently by implementing some activities taken from the book. All in all, the quality of English learning can still be improved and boosted well.

Actually, this HOTS-based English activity book can still be further developed by adding aspects of communication and collaboration skills in addition to critical and creative thinking skills. So that 21st century 4C skills can be fully implemented in developing students' HOTS. However, it requires further research and development. In addition, it is also possible to upgrade the level of students from the elementary-school level to the high-school level. Because HOTS is a high-order thinking skill that is indispensable especially in the 4.0 that is approaching 5.0 era.

AUTHORS' CONTRIBUTIONS

The contribution of the authors are as follows:

1. I Nyoman Adi Jaya Putra: conceptualizing and designing research, collecting material sources, processing data.
2. Putu Kerti Nitiasih: conceptualizing and designing research, collecting material sources, processing data.
3. Ni Luh Putu Era Adnyayanti: collecting data, processing data, and writing research articles
4. Luh Gd. Rahayu Budiarta: collecting data, processing data, and writing research articles

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