DEVELOPING HOT POTATOES-BASED MATERIALS FOR ENGLISH TEACHING AND LEARNING AT SMK

Fran Safer , Urai Salam, Ikhsanudin.
Masters Study Program of English Language Education, Teacher Training and
Education Faculty, Tanjungpura University, Pontianak
Email: *saferchou@yahoo.com*

Abstract: The aim of this study was to develop mulimedia-based materials for teaching and learning English at SMK Negeri 1 Balai. The development of Hot potatoes-based materials adopted research and development study. This study applied ADDIE steps as follows. Firstly, need analysis. The need analysis found that there was a need of multimedia-based materials for teaching and leaning English at SMK Negeri 1 Balai. Secondly, design, the design of the materials was based on need analysis and english subject curriculum. The blue print or lay out of the materials were created in this stage. Thirdly, development. The development involves some author wares, such as hot potatoes application,adobe reader, picture editors and web page maker. The pilot product was created in this stage. fourthly was implementation of the materials. There were 30 students of SMK Negeri 1 Balai were involved in this stage. Based on thier responses, there is norevision on the materials. The last step was evaluation. This stage involved two media-materials experts and a language expert. They evaluated and responded that the materials are useable for teaching and learning English.

Keywords: ADDIE steps, Multimedia-based materials

Abstrak: Penelitian ini dilakukan dengan tujuan untuk mengembangkan bahan ajar berbasis multimedia untuk pembelajaran bahasa Inggris di SMK Negeri 1 Balai. Pengembangan bahan ajar ini menggunakan metode penelitian riset dan pengembangan. Penelitian ini menggunakan langkah-langkah ADDIE. Langkah pertama yaitu analisis kebutuhan. Pada tahap ini ditemukan bahwa adanya kebutuhan akan bahan ajar berbasiskan multimedia untuk proses pembelajaran pada SMK Negeri 1 Balai. Tahap kedua, Desain bahan ajar ini berdasarkan pada hasil dari analisis kebutuhan dan kurikulum bahasa inggris. layout dari bahan ajar dibuat pada tahap ini. Tahap ketiga yaitu pengembangan. Tahap ini menggunakan beberapa software pendukung, seperti aplikasi hot potatoes, picture editors, dan web page maker. Tahap ini menghasilkan bahan ajar percobaan. Tahap keempat adalah implementasi dari bahan ajar. Tahap ini melibatkan 30 orang siswa SMK Negeri 1 Balai. Berdasarkan respons mereka, bahan ajar ini tidak membutuhkan revisi. Langkah terakhir adalah evaluasi. Tahap ini melibatkan dua ahli bahan ajar multimedia dan seorang ahli bahasa. Mereka mengevaluasi dan merespon bahwa bahan ajar ini dapat digunakan didalam proses pembelajaran.

Kata kunci: langkah-langkah ADDIE, Bahan ajar berbasis multimedia

Technology development has a significant impact in educational field. It provides valuable opportunities for teachers to use and develop technology

based instruction or materials for their teaching and learning in the classroom. The technology-based materials contain media-enhanced activities, interactive activities and engaging learning environment for creating various activities in teaching and learning process (Frey, 2010). Traditional print-based materials are being converted into more multimodal, interactive, technology-mediated learning format. Multimedia enhancements may include video and audio elements, recorded lecture presentations, interactive audio-enhanced diagrams and simulations, interactive quizzes and graphics.

In addition, based on Birch & Sankey (2008: 852-861), multimedia can be used to represent the content knowledge in ways that may interconnect with different learners' learning styles that may appeal to different modal preferences. The use of multimedia in teaching and learning English may also create a better learning experience for students and teachers, since multimedia contains colors, animations, pictures, sounds, and interactive activities. there are some previous researches about technology support learning, such as (Norhayati 2004:1; Kamat & Shindee) their researches show that the appearance of computer and internet can attract the attention of learners, because they compromise a wide variety of text, sound, video, and other multimedia

Moreover, the use of technology has become parts of daily needs of teachers and students. They may need them for communication, learning, teaching, and finding information. Both teachers and students may also have the products of technology, such as mobile phones, smart phones, laptops and other technology devices. This also means that teachers and students have been familiar with the technology itself so that it may not be problem for them to use or interact with technology-based materials.

Furthermore, creating technology-based instructions or materials is a need as they have also contributed positive impacts on teaching and learning. Technology can create different atmosphere of learning compared to traditional classrooms that have only blackboards and chalks, as multimedia-based materials contain multiple features, such as color, sound, videos, music, and interactive activities (games or quiz). The use of technology in teaching also provides more opportunities for learners to experience the learning as they have various learning styles, such as audio and visual or kinesthetic learners.

In addition, SMK Negeri 1 Balai is a vocational school with three major of studies, those are *agrobisnis tanaman perkebunan* (Plantation agrobusiness), *akuntansi* (accounting) and *teknologi komputer dan jaringan* (Computer technology and network). Among all those majors, the most number of students are in computer technology and network so that in this study focus on computer and technology class. Besides that, most of the students have laptops as their main learning media since they are also required to have computer/ laptops in their class.

Based on the pre-observation in the computer and technology network class, the students' laptops specification are considered standard with windows as the most operation system. Besides students own laptops, SMK Negeri 1 Balai has also some multimedia facilities, such as computers, laptops, and projectors. Those devices can support teaching and learning process in the classrooms. In order to

assure that those multimedia devices have already supported students learning. Informal interview was conducted in order to know about students' English learning, computers, laptops, and English multimedia materials. The result of interview on computer technology and network students showed that there was still lack of learning multimedia materials that they could use in their laptops. Even they had some e-books and power point slides from the teachers but they also required to have interactive activities that may attract them in learning English.

Based on all facts above, this study was conducted to develop hot potatoes- based materials for SMK Negeri 1 Balai. Hot potatoes-based materials became a choice in this study as it can create interactive activities to support language learning. Hot potatoes-based materials contain pictures, interactive quizzes, the objectives, the instructions, the activities, and the feedbacks. The students can use hot potatoes-based materials anytime, inside or outside the classroom.

Hot potatoes-based materials development applies research and development study based on Richey & Klein (2007:1-14). It defines this study as the systematic study of design, development, and evaluation processes of the creation of instructional and non-instructional products and tools and new or enhanced models.

METHOD

This research adopted research and development study, Richey and Klein (2007:1-14). According to Albion cited in Shariffudin (2007:97-98) This study adopted the procedural model as it was intended to develop hot potatoes-based materials for English teaching and learning for grade X of SMK Negeri 1 Balai. This study applied ADDIE procedures in Beatrice (2011:21). The ADDIE models can be described as follows. First step was analysis. Need analysis was conducted in form of questionnaire about learning process and media of learning for the students, and some interviews on students at SMK Negeri 1 Balai, especially X grade specialization on *teknik komputer dan jaringan* (computer technology and network). The second step was design. In design, there were some processes, such as formulating a set of learning objectives, overview on learning theories, and creating the layout or flowchart of the hot potatoes-based materials. The third was development stage covers some processes, thus were content development, storyboard development and courseware development. The fourth was implementation. In this stage, hot potatoes-based materials were delivered to 30 students of X *Teknologi komputer dan jaringan*. Finally, the students gave responses that were to assure the useable of hot potatoes-based materials. The last stage was evaluation. The purpose of evaluation was to get the evaluation on hot potatoes-based materials. The media-materials experts and a language expert evaluated the products

RESEARCH FINDING AND DISCUSSION
Finding

The findings are presented in the order of the research questions raised in this study. The study specifically addressed the folliong questions:(1) *What hot potatoes based materials do students' need for learning?,(2) What is design of hot potatoes-based materials?,(3) How is the development of hot potatoes-based materials?,(4) Are hot potatoes-based materials useable?,(5)What are the experts' evaluation results on hot potatoes-based materials?*

In this study, research finding and discussion reported ADDIE process of development hot Potatoes-based materials for SMK Negeri 1 Balai. Based on the research questions.

Questions : 1. What hot potatoes based materials do students' need for learning?

In this study, need analysis section was conducted to find the students' needs at SMK Negeri 1 Balai, especially X grade majoring at *Teknologi komputer dan jaringan* (computer technology and network). Questionaire and informal interviews were conducted in analysis stage. Questionaire was used to collect the information that was related to the use of media in learning and the availability of media-based materials in learning, the students' preferences in learning, and types of learning activities. After doing the questionnaire, the interviews were conducted to assure students' responds or to confirm the data of the questionnaire. Based on the questionnaire, it showed that 54% of students have their own computers or laptops. All of students were also able to operate computers. Thus above aspects could be seen as a potential for development of multimedia-based materials for teaching and learning English. There were 41% students have hand phones that have android-based dictionary and for 90% students have e-dictionary and printed-dictionary for learning English. Then the interviews were conducted to collect the information why they needed to bring English dictionary. Based on the interviews, students of SMK Negeri 1 Balai were still lack of vocabulary and they really needed vocabulary improvement. The findings showed that students were still lack of vocabulary. The development of hot potatoes-based materials must accommodate vocabulary improvement activities for students of SMK Negeri 1 Balai. Based on the questionnaire, 64% students had no computer application for learning English. Then, few students (35%) have application for learning English on their computers. In other words, Students of SMK Negeri 1 Balai were still lack of English learning materials, especially multimedia-based materials. They had only *lembaran kerja siswa* (workbook), power point slides, and some e-books on their computers. The interviews were also conducted to collect the information about their responses to their current workbook and e-books. The results of interviews showed that most of students considered that they required interactive materials in learning English rather than *lembar kerja siswa*. There were 87.1 % students, who also needed to have interactive-based materials, in form of quiz (77.4%). 93.5% students required animations or pictures on their materials. There were 87% students felt unmotivated to learn English by using only *lembar kerja siswa* (workbook) because they couldnot get the feed back directly.

The second section was task-topic analysis on English curriculum on SMK Negeri 1 Balai to find the topic that could be used in hot potatoes-based materials. This analysis was conducted in order to find the relevance of English curriculum with the content of hot potatoes-based materials. One of the reasons was because curriculum couldnot be coverted completely into the content of hot potatoes-based materials. The next purpose was to set and determine the objectives of the activities in hot potatoes-based materials. All those analysis processes were to assure the materials covered the students' needs.

In conclusion, need analysis had covered two aspects. The first aspect was students' needs of multimedia-based materials. The materials must be in form of interactive-based activities or quiz. The materials also must accommodate individual or group learning. It also must provide colorful displays and support the feedbacks or corrections for the students. The second aspect was task-topic analysis on English curriculum of SMK Negeri 1 Balai. It was to set up the topics and the objectives that can be developed as Hot potatoes-based materials that were relevant with English curriculum.

Question 2 : What is design of hot potatoes-based materials?

In designing an instructional materials. Some aspects were considered, such as Overview on learning theories and the result of need analysis. Those aspects were discussed as follow.

The overviews on learning theories mean to get the perspectives on human learning process. First overview was on behaviorism theory. This theory points that to form positive behavior in learning, there must be rewards for correct response and punishments for wrong response. In the design process of hot potatoes-based materials, the implementation of rewards and punishments in hot potatoes-based materials was forms of scores and corrections for each response on the quiz activities. In short, students could directly get the result from quiz activities. The students also could get feedbacks or correction for the wrong answers or negative responses on the quiz activities.

Second overview was on cognitive theory. This theory emphasizes that learning process must be in line with the cognitive process. It means working memory on human brain has limitation in holding information for a limited duration, meaningful learning where students must construct the knowledge by their own efforts and experiences. Hot potatoes-based materials marked the cognitive theory since hot potatoes-based activities provide enough duration for students working memory to remember words or vocabulary. Hot potatoes-based materials activities allowed interacting with the quiz activities. This process could support students to construct the knowledge by experiencing it. They also could construct their knowledge of English from the feedbacks or corrections that were provided in the quiz activities.

Third overview was also on constructivism theory. The theory shows that learning is a process of constructing knowledge that combines the new information with the existing knowledge and experiences in their environment. In the design of hot potatoes-based materials, the point of constructing students'

English knowledge can be seen from the activities like filling the gap, and matching the pictures in the quiz activities. The students can also learn, like grammar rules, certain expressions, and vocabularies while they are doing the quiz. There are also clues for helping students to solve the quiz if they find it is hard to be solved. They also get the feed back after answering the quiz. All those activities can support students to use their previous knowledge and construct the new knowledge.

The fourth was multimedia theories; multimedia can carry multiple attributes in learning, such as words, pictures, or animations. The combination of more than one attributes positively delivers an educational experience. The educational experiences are informative and fun by incorporating the innovative tools and techniques used in computer, such as graphics, interaction, and skill-building challenges. Hot potatoes-based materials offer a number of advantages. It can be used to increase students' motivation and interest on learning. It is also to improve retention as it has pictures, interactions, and skill-building challenges.

In addition, designing process also considered the result of need analysis in previous stage was transformed into a set of learning objectives. The learning objectives were set in order to develop Hot potatoes-based materials activities that fit to students' needs. The learning objectives and the activities were formulated in the activities of hot potatoes-based materials (see table 1). Here are some activities in hot potatoes-based materials that are useful to achieve the objectives. First, Quiz or Multiple choices activity is the activity where students must choose the right answer from the options. In this activity, it is possible to add texts or pictures. Second, matching activity is activity that students must match between option a and b. Third, Mixed-up activity is activity that students must arrange words into a correct sentence. Fourth, Gap-fill activity is an activity where students must fill the gap by using correct words or expression. Fifth, Cross-word activity is an activity where students can fill the crosswords by using correct words based on the clues.

Table 1
Learning objectives and activities on hot potatoes-based materials

Learning objectives	Learning activities	Topics on the materials	Story board
1. Students are able to use present continuous tense current event	Multiple choice	Present continuous tense	Slide 12
	Matching exercise	Describing present activities	Slide 9
	Mixed up sentences	Describing present activities	Slide 10
2. Students are able to use simple Present tense to express daily activities	Gap-fill activities	Describing present activities	Slide 6
	Cross word	Describing things	Slide 7
	Matching activities	Describing present activities	Slide 8
3. Students are able to use simple Past tense to express past event	Gap-fill activities	Describing past activities	Slide 2
	Cross word	Describing past activities	Slide 3
	Matching activities	Describing past activities	Slide 4
	Multiple choice	Describing past activities	Slide 5
4. Students are able to use correct expression of opinion in the dialogues	Gap-fill activities	Dialogue 3. Expression of opinion, preferences	Slide 15
	Gap-fill activities	Dialogue 4. Expression of opinion , preferences	Slide 16
5. Students are able to use correct word in the text.	Matching activities	Using Wh-questions	Slide 17
	Matching activities	Using Wh-questions	Slide 18

6. Students are able to arrange words into correct sentences.	Mix-up sentences	Describing present activities	Slide 11
7. Students are able to match pictures or signs with correct words.	Matching activities	Signs and pictures 1	Slide 19
	Matching activities	Signs and pictures 2	Slide 20
8. Students are able to use preference in the sentences.	Gap fill activities	Dialogue 1. Expression of opinion, preferences	Slide 13
	Gap fill activities	Dialogue 2. Expression of opinion , preferences	Slide 14

In this study, all activities were integrated into one course unit where each activity corresponds to the learning objectives. It also contributes to the achievements of the learning objectives. The outline of the hot potatoes-based materials could be seen as follows.
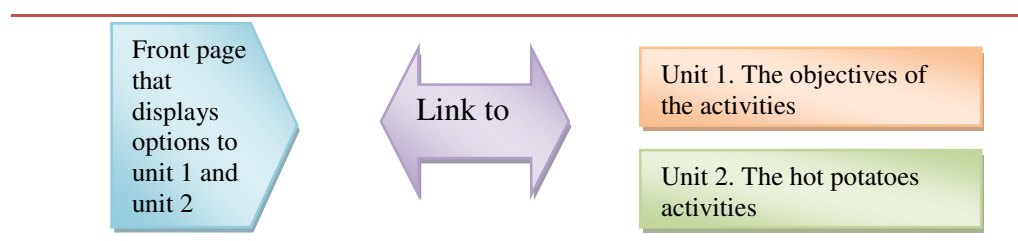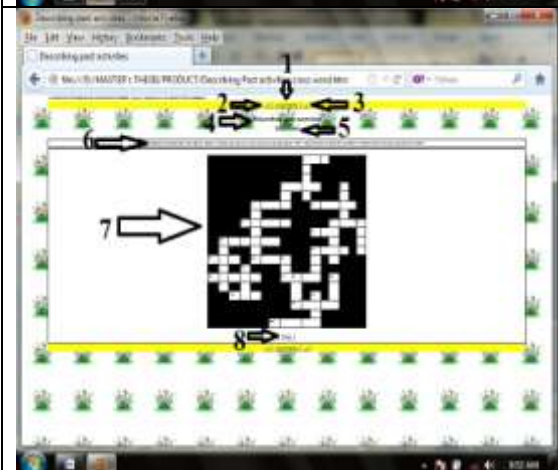

Figure 1

Based on figure 2, the front page consists of two sections that link to unit 1 and unit 2. The users can directly go to the unit 1 and unit 2 by selecting the options on the screen. Unit 1 consists of the objectives of the activities, the vision, and mission of the school. Unit 2 consists of the quiz activities.

Questions 3: *How is the development of hot potatoes-based materials?*

Development stage covered some processes, thus were content development, storyboard development and courseware development. Contents could consist of different elements, such as interactive content or simulation. This process also included the selection of suitable of activities in hot potatoes-based materials that could fit the objectives, collecting and selecting the pictures or animations. The supporting sources for hot potatoes-based materials could be taken from relevant books, internets, and real life pictures. This stage also enclosed the process of creating the objectives, the instructions, multimedia contents; the quiz activities and the feedbacks were also created at this stage.

The next process was storyboard development. Storyboard is a visual representation of the various scenes of film. In this study, storyboard could be in form of screen slides. The storyboard development followed the layout (blueprint) in the previous design process but some possible adjustments were still also allowed. The last process was courseware development. In this stage, authoring tool is required to integrate the whole units into products of learning. The authoring tool in this study was the masher. It is parts of hot potatoes program for

integrating the activities into a course unit. The sample of hot potatoes-based materials can be seen as follow.

	Front page Description: 1.A front page containing : Unit 1 consists of the objectives of the lesson, school vision and mission. 2.Unit 2 consists of 19 activities that are used to achieve the objectives of the lesson.
	Gap-fill activities "Describing past activities" contains 1. Main menu, it links to the main menu. 2."<= (left arrow)" links to previous activities. 3. "=> (right arrow)" links to next activities. 4. Title of activities" describing past activities". 5. Types of the quiz, "Gap-fill exercise" 6. The instruction and how to do the exercise. 7. The quiz activities 8. "check" button is to correct and get the result of the activities. it is in form of responds, feedback and scores. 9."hint" button is to help students by giving the clue in order to answer the questions if the students find the questions are too difficult.
	Unit 2 the second activities "Describing past activities" contains 1.Main menu, it links to the main menu. 2."<= (left arrow)" links to previous activities. 3."=> (right arrow)" links to next activities. 4.Title of activities" describing past activities". 5.Types of the quiz, "Crossword exercise" 6.The instruction and how to do the exercise. 7.The quiz activities 8."Check" button is to correct and get the result of the activities. it is in form of responds, feedback and scores.

	Unit 2 the third activities "Describing past activities" contains 1. Main menu, it links to the main menu. 2. "<= (left arrow)" links to previous activities. 3. "=> (right arrow)" links to next activities. 4. Title of activities" describing past activities". 5. Types of the quiz, "Matching exercise" 6. The instruction and how to do the exercise. 7. "check" button is to correct and get the result of the activities. it is in form of responds, feedback and scores. 8. The quiz activities 9. The answers options
	Unit 2 the fourth activities "Describing past activities" contains 1. Main menu, it links to the main menu. 2. "<= (left arrow)" links to previous activities. 3. "=> (right arrow)" links to next activities. 4. Title of activities" describing past activities". 5. Types of the quiz, "quiz or multiple choice exercise" 6. "show all questions" by clicking this icon to show all questions in the activities 7. "=>" button is to go o the next numbers 8. The questions 9. The answers options
	Unit 2 the ninth activities "Describing present activities" contains 1. Main menu, it links to the main menu. 2. "<= (left arrow)" links to previous activities. 3. "=> (right arrow)" links to next activities. 4. Title of activities" Describing Present Activities". 5. Types of the quiz, "Mixed-up sentence exercise" 6. The instruction and how to do the exercise. 7. "check" Button is to correct and get the result of the activities. it is in form of responds, feedback and scores. 8. "Undo" Button to undo the activities. 9. "Restart" to redone the activities. 10. "hint" button is to help students by giving the clue in order to answer the questions if the students find the questions are too difficult. 11. The answers options.

Figure 2

Discussion

Questions 4 : Are hot potatoes-based materials useable?

In implementation stage, hot potatoes-based materials were delivered to students of X *Teknologi komputer dan jaringan*. The learners were divided into 3 students for each group in order to maintain the availability of laptops or computers at SMK Negeri 1 Balai. Then the materials were distributed to the students so they could use it on their computers. The students were asked to use the materials. Finally, the students gave feedback on hot potatoes-based materials. The feedback was in form of students' responds questionnaire. The following figure displays the result of students' responses.
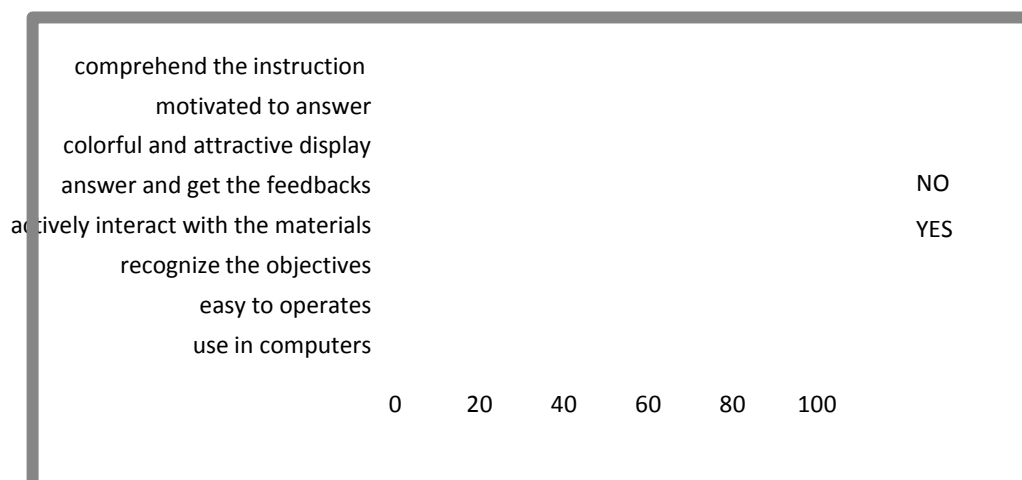

Figure 3

In general, several aspects were responded on hot potatoes-based materials based on the figure above. Those aspects were; first response was the use of hot potatoes-based materials in students' laptops. There were 100 % respondents agree that hot potatoes-based materials could be used in their laptops. Second response was about operating/ using hot potatoes-based materials. It was 58% respondents marked that hot potatoes-based materials were easily operated. The third response, it was 50% students could recognize the objectives and the instructions on hot potatoes-based materials. Then the forth response, all students (100% respondents) responded that they could interact actively with various quiz activities in hot potatoes-based materials. The fifth response noted that, there were 100 % respondents showed that they could get and learn from the feedbacks or corrections of the quiz activities. The sixth response showed; there were 92% respondents responded that they could enjoy the quiz activities in hot potatoes-based materials. Then, there were 83 % respondents confirmed that they could find colorful and attractive displays on hot potatoes-based materials. The last, there were 58% respondents confirmed that students motivated to learn English by using hot potatoes-based materials.

In conclusion, Students of SMK Negeri 1 Balai, especially grade X *teknologi komputer dan jaringan* responded positively (80% for total responses) on the hot potatoes-based materials.

Question 5 : What are the experts' evaluation results on hot potatoes-based materials?

Evaluation is the last stage in ADDIE process. In this study, there were three experts involved in evaluation process. They were two media-materials experts and a language expert. Here are the details the evaluation instruments that were used on the products.

Table 2
Expert' evaluation instruments

No	Aspects	Yes	No	Description
1.	Delivered Content meets the curriculum/ syllabus of SMK Negeri 1 Balai			
2.	Provide the objectives of the activities			
3.	Provide some quizzes activities or exercises			
4.	Provide the instruction for the students			
5.	Provide students' interaction directly to the quiz			
6.	Provide the feedback directly			
7.	Pictures suit to the content of the activities			
8.	Provide scores or result directly after the session			
9.	Provide hints or clues of the quizzes			
10	Provide systematic arrangement of activities			

The design (Display, layout and setting)

No	Aspects	Yes	No	Description
1	Provide attractive display of front page			
2	Provide attractive display of content			
3	Provide appropriate size and color of the text			
4	Provide appropriate pictures			
5	Provide objective, school vision and mission			
6	Icon are clear and understandable			
7	Provide icon for the quiz activities			
8	Provide well- arranged story board			
9	Provide smooth navigation			
10	provide spacious lay out			

Summarize from theory framework and product specification

In this stage, media experts did the evaluation. They evaluated content and media aspects of hot potatoes-based materials. The evaluation process was in form of the instrument that consists of 10 items for content aspects and 10 items for design aspect (see table 2). Those aspects were extracted from the theory framework and product specification. Based on both experts' evaluation in the instruments, Hot potatoes-based materials were fulfilling all indicators in experts'evaluation instruments. Beside that, They suggested some improvements on the products. They suggested that, first it was better Hot potatoes-based materials contains the activities for listening comprehesion and examination materials. Second, Background needed some variations and vivid colors.

Futhermore, a language expert did the evaluation on hot potatoes- based materials. There 10 language items were validated in the language aspects

instruments (see table 3). Based on the instrument, the language expert confirmed that hot potatoes-based materials had fulfilled all the language aspects.

Table 3
Instruments for Language Expert's Validation

No	Language aspects	Yes	No	Description
1.	The course uses inclusive language to promote an atmosphere of respect and equality.			
2.	Writing is clear, objective and specific.			
3.	The course uses a positive and supportive tone in course instructions, learning activities, introduction, etc., which models appropriate online communication and helps to build a learning community in the course.			
4.	Learners are oriented to online communication strategies through non-graded, hands-on activities that provide instruction, opportunities to practice, and feedback.			
5.	The course material(s) is available to learners in a plain language version.			
6.	Vocabulary and symbols are clarified			
7.	The course has no grammar, punctuation, and spelling errors			
8.	All key concepts are provided in more than one representation (e.g., text and audio, video and sign language)			
9.	Instructions for each activity are easy to locate.			
10	Instructions are clear and complete enough for learners to understand what is to be done, how it is to be completed, and how it is to be submitted.			

In conclusion, hot potatoes-based materials were developed by using a systematic ADDIE steps (Beatrice 2011:8). The ADDIE steps can assure that hot potatoes-based materials are useable products. The products were developed based on first, need analysis included task-topic analysis. Second, design and develop hot potatoes-based materials by using language-learning software (Hot potatoes application). Third, the products were implemented to students of SMK Negeri 1 Balai. Fourth, Two Multimedia-Materials experts, and a language expert evaluated the products. Based on all those process, Hot potatoes-based materials are valideted as useable materials for students of SMK Negeri 1 Balai.

CONCLUSION AND SUGGESTION
Conclusion
Hot potatoes-based materials were developed according to ADDIE procedures. The procedures of development were explained one by one, this work aims to contribute to the development of computer-based multimedia or learning environment for SMK Negeri 1 Balai.

During analysis phase, this study started from the need analysis to the target group as X grade students of SMK Negeri 1 Balai. The need analysis involved 30 students of target group. The result of this analysis showed that there were needs on English materials, especially in form of multimedia-based materials and the readiness of using technology-based materials. They also required having

interactive English learning materials, such as quiz. By taking into consideration, there were not many technology-based materials available. It was essential to develop multimedia-based materials, such as hot potatoes-based materials. Task-topic analysis was conducted in order to suit the topics on English curriculum, the objectives, and the activities in English learning.

During the design phase, it was discussed how to deliver the materials. One of considerations was not all English topics can be transformed into hot potatoes activities. The content was also developed by considering the objectives, learning activities, students' level, and insight from learning theories.

During the development phase, the components of hot potatoes-based materials, which were planned during the design phase of the study, were developed. After development, the creator did pre-implementation. This was to assure the product could run as it is.

During the implementation phase, there were 12 groups of students; each group consists of 3-4 students. The students tried hot potatoes-based materials in their groups. At the end of implementation, students groups' responses forms were applied to obtain the students' opinion about the materials. There were 80% students' responds that the products were useable for their learning.

Finally, during the evaluation phase, the media-materials experts, and a language expert evaluated hot potatoes-based materials. They confirmed that hot potatoes-based materials are useable. Some suggestions and feedbacks on the hot potatoes based materials from the experts were accommodated for betterment of the product. By completing whole ADDIE steps, hot potatoes-based materials in this study were done.

Suggestion

Based on the process of development of hot potatoes-based materials in this study, there are some suggestions on developing hot potatoes-based materials that can be concluded.

1. Hot potatoes-based materials as interactive materials can be used as supplementary for students in their learning.

2. Hot potatoes-based materials also have some weaknesses in the display. It only can display a single background or picture that is used for all activities.

3. Hot potatoes-based materials focus on vocabulary and grammar so that other skills, such as listening or speaking needs teacher's creativity while using hot potatoes-based materials.

4. It is suggested to try the effectiveness to inmprove students' achevement

5. For further development of hot potatoes-based materials, it is suggested for other developers to use the newest hot potatoes software, as this research used Hot potatoes version 6.0 half- baked.

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