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Developing A Digital Learning Game as a Medium for Cultural Enrichment on Descriptive Text

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Abstract: This study is aimed to develop a digital learning game as a medium to enrich students' insight about their local culture embedded in descriptive text material. Adapting the "system approach" model designed by Dick and Carey, this study employed need analysis, material development and formative evaluation as steps to develop the product. The need analysis was conducted by analyzing the documents, administering questionnaires to the students, and interviewing the teachers. The material development was done by designing a blueprint of the product's content, pictures, and sound in the computer applications. The formative evaluation consisted of theoretical validation and empirical validation. The result of the theoretical validation was classified into four categories involving multimedia, language content, cultural and pedagogical aspects. The multimedia validator graded the most criteria of the game's design and layout on a very good scale. The language content validator graded the most criteria of the learning game's content in the balance between "very good" and "good" scale. The cultural aspect had been validated by the natives of mentioned places, consisting of a native of Java, Bali, and Flores. Lastly, the pedagogical aspect was validated by two teachers who taught seventh grade and eighth grade at SMPN 26 Surabaya on a "very good" scale. Those final scales obtained after some revisions from the validators had been conducted. The result of empirical validation was obtained from the tryout of the product to fifteen students of SMPN 26 Surabaya. The result of the empirical validation showed that the students have positive responses to the developed learning game, consisting of the "very good" and "good" scale for the mentioned criteria. In conclusion, the digital learning game has met its final product to

be used by the students to learn the culture for descriptive text material.

Keywords: digital-learning game, culture, descriptive text, junior high school student

Abstrak: Penelitian berikut ditujukan untuk mengembangkan media pembelajaran berbasis permainan digital untuk memperkaya wawasan siswa mengenai budaya, terutama budaya lokal yang dilekatkan pada teks deskripsi. Dengan mengadaptasi model pendekatan sistem yang didesain oleh Dick dan Carey, penelitian ini menerapkan analisis kebutuhan, pengembangan materi dan evaluasi formatif dalam mengembangkan produk. Analisis kebutuhan dilaksanakan dengan menganalisis dokumen, menyebarkan angket kepada siswa dan mewawancarai guru. Pengembangan materi dilakukan dengan mendesain kisi-kisi isi produk dan mendesain gambar dan suara di beberapa program komputer untuk menghidupkan isi game. Evaluasi formatif terdiri dari validasi teoritis dan validasi empiris. Hasil dari validasi teoritis diklasifikasikan menjadi empat kategori yang terdiri dari aspek multimedia, konten bahasa, budaya dan pedagogis. Secara keseluruhan, validator multimedia memberikan skala "sangat baik" pada kriteria desain dan tata letak. Validator konten bahasa memberikan skala yang seimbang antara "sangat baik" dan "baik" pada kriteria isi materi dan kebahasaan. Aspek budaya telah divalidasi oleh penduduk asli dari tempat yang disebutkan, yang terdiri dari penduduk asli Jawa, Bali dan Flores yang mana isi game telah sesuai dengan budaya setempat. Terakhir, aspek pedagogis divalidasi oleh dua guru yang mengajar kelas tujuh dan kelas delapan di SMPN 26 Surabaya. Kedua guru menilai permainan pembelajaran digital ini dengan skala "sangat baik". Penilaian akhir dari beberapa validator tersebut diperoleh setelah beberapa revisi telah selesai dilaksanakan. Hasil dari validasi empiris diperoleh dari uji coba produk kepada 15 siswa di SMPN 26 Surabaya. Hasil dari validasi empiris menunjukkan bahwa siswa memberikan skala "sangat bagus" dan "bagus" untuk sebagian besar kriteria pembelajaran dalam game. Dapat disimpulkan bahwa permainan digital berbasis pembelajaran dalam penelitian ini telah mencapai produk akhir untuk digunakan sebagai media untuk mempelajari budaya pada teks deskripsi.

Kata kunci: permainan digital berbasis pembelajaran, budaya, teks deskripsi, siswa SMP

INTRODUCTION

The government has set a visionary goal in engaging English subjects into the 2013 Curriculum. Adopted from School-Based Curriculum (*Kurikulum Tingkat Satuan Pendidikan*), English as a local content subject in 2013 Curriculum is basically set up as a medium to assist learners' need and support the development of local heritage like tourism potential as stated below, "*meningkatkan penguasaan Bahasa Inggris untuk keperluan peserta didik dan untuk mendukung pengembangan potensi daerah, seperti potensi pariwisata*" (Kemendikbud no. 81A, 2013: 16). Furthermore, English as a compulsory subject for secondary schools has more specific goals set in the core competencies consisting of spiritual, social, knowledge and skill that are elaborated into a set of basic competencies. One of the basic competencies of English subject postulates the acknowledgment of English as an international language as an initial competence to be known by junior high students in learning English. This acknowledgment is a basis to grow in learning English by understanding the factual, conceptual and procedural knowledge in line with science, technology, art and culture in this global competition (Kemendikbud no. 68, 2013, p.58).

Unfortunately, the acknowledgment of English as an international language is not depicted in the textbook which is released by the government entitled *When English Rings the Bells*. The contexts of the textbook merely represent English as a national language in Indonesia instead of English as a foreign language. Most of the context of English conversation in the seventh grade's textbook takes place between students and parents. Moreover, the textbook for eighth-grade students merely provides a monotonous classroom context with the minimum illustration of the real usage of English in Indonesia. One of the materials for seventh grade which mentions "From now on, I will say "good morning", "good afternoon" or "good evening" when I meet people" (Kemendikbud, 2014 p. 21) indicates that the sentence implicitly guides the students to use English in their daily lives as a first or second language instead of English as a foreign language in Indonesia. Those mentioned misconceptions are manifested from the preface of the textbook that postulates the expectation of English usage in daily communication - "*Materi yang berfokus kepada kehidupan peserta didik sehari-hari diharapkan dapat diaplikasikan secara langsung dalam komunikasi aktif kepada semua orang di sekitarnya*" (Kemendikbud, 2014).

However, replacing indigenous language as a means of daily communication with an influential and world language like English will lead to language shift and threaten language death (Graddol, 2006 & Crystal, 2014). When a language dies, the local wisdom could be culturally devastating. For this case, language takes its essential role as a repository of civilization that links to the historical meaning. Baker (2003:2) states that “every language will reflect the values, beliefs and assumption of the culture it came from”. Culture itself has two main domains, encompassing ‘Culture’ with a capital ‘C’ related to aesthetic sense such as art and literature and ‘culture with little ‘c’ related to patterns of behavior, values and beliefs (Kumaravadivelu, 2003, p. 267). Hence, the loss of a language means losing an identity, value, belief, custom and a unique canon of literature such as sagas, folktales, songs, rituals, proverbs, and many other practices.

Fundamentally, every subject of study including English subject is aimed to develop students’ self-potential for rational thinking and intellectual academic by understanding what they see, listen, read and learn based on the various perspectives of national cultures (Kemendikbud no. 68, 2013, p.4). The curriculum requires the eminent culture to be learned by the students in order to grow pride in the Indonesian culture and heritage that are expected to be applied and manifested in social life and social problems (Kemendikbud no. 68, 2013, p. 4).

Hence, although the core competence in the curriculum states that the context of English communication for junior high school is their social environment, it should not solely mean that they have to replace the means of communication from local or national language to English when doing communication with their parents or their surroundings of native Indonesian. It is absolutely alright to have English conversation among students in a classroom context but it should not be in the social context. In a social context, English language teaching should make the students familiar with various kinds of English speakers supposed to communicate successfully with all sorts of speakers no matter they come from. Hence, it is truly possible to develop a situation in which intelligibility in learning English and the student’s local identity equally co-exist.

LITERATURE REVIEW

Descriptive text as a first text type learned by students in junior high school plays an essential role to mirror a contextual circumstance related to cultural aspects. In the 2013 Curriculum, the basic competence of descriptive text for the junior high school level is aimed to understand the structure of texts and language elements for implementing the social function of the text by stating and asking a short and simple description of people, animals, and things based on the appropriate contexts (Kemendikbud no. 68, 2013, p. 59). The context itself entangles a variety of cultural aspects such as religion, habit, custom, tourism object and other related aspects that are different from one place to other places. Hence, descriptive text is the only text type discussed in this study without considering other text types since it is the first text type learned by students and might serve a good medium to describe and promote Indonesian culture and heritage. Creating a contextual environment in English language teaching is not an easy thing to do since English is used as a foreign language in Indonesia but the advancement of informatics technology gradually wipes out any difficulties in ELT. Heinich et al., (2002) proclaim that informatics technology can facilitate a rich and contextual environment. In addition, Brown states that technology “could offer linguistic input and output, feedback, student collaboration, interactivity, and fun” (2000, p. 143).

The underlying theory for developing this product is based on the CALL field. Beatty stated that “CALL is a young branch of applied linguistics discipline” (2010, p. 2). Starting from the 1980s, CALL (Computer-Assisted Language Learning) becomes a prominent language instruction that incorporates real-life skill-building through the computer program (Brown, 2000). Games and simulations as one of the CALL programs provide the stimulation of problem-solving tasks that involve verbal language as goals of the program. Through games and simulation, students can rapidly access exercises, vocabulary glosses and pronunciation in a fun way (Brown, 2000).

There have been a number of researchers that conduct a study related to CALL. Utami (2007) conducted a quantitative and descriptive qualitative study about the use of the CALL program for Maritime vocabulary learning in Surabaya Merchant Marine School by analyzing the materials and the activities developed in that school through the CALL

program and also analyzing the effectiveness of the program. In addition, Khamid (2011) conducted a qualitative study by developing reading tests for national exam preparation through computer-based testing (CBT) in SMK PGRI which is completed by tutor's and student's courseware as a guideline in using the program. Furthermore, Assyururia (2011) conducted a qualitative study by developing reading materials using e-learning XHTML editor (EXE) in SMKN 2 Buduran Sidoarjo which adapted the TOEIC-like format.

Those applications developed by the previous studies are merely aimed to provide interactive teaching and learning that can be accessed every time and provide quick feedback for the students. They mostly adapt the available printed book that is eventually stored in an electronic module and tasks. The content of the application is mostly designed in a decontextualized task with a series of explanations and questions and few and no animations that reflect the explanations and questions. Therefore, this research is aimed to develop a contextualized task that mirrors a real context of English usage by presenting a cultural aspect in each case. The task will be designed through Macromedia/adobe flash in the form of a game-like format since Macromedia/adobe flash provides a learning interaction menu that enables the user to develop a digital learning game with various kinds of animation. Therefore, this research is aimed to develop a digital learning game as a medium for cultural enrichment on descriptive text for junior high school students.

METHOD

This research employs the research and development (R&D) method. Borg et al. (2003) define educational research and development as a process to develop and validate educational products by conducting a series of integral cycles. The purpose of R&D efforts in education is not to formulate or test theory but to develop qualified products designed to meet specific educational needs (Gay, Mills & Airasian, 2012).

A series of cycles that are used to conduct research and development is initially adopted from Dick and Carey model of instructional design. However, in that R&D project requires a substantial amount of financial and personnel support which is commonly completed by an industry-based

development model, Borg et al. (2003) suggests that R & D project for a thesis or dissertation might undertake a small-scale project that involves a limited amount of original instructional design and limit the development steps of R&D cycle.

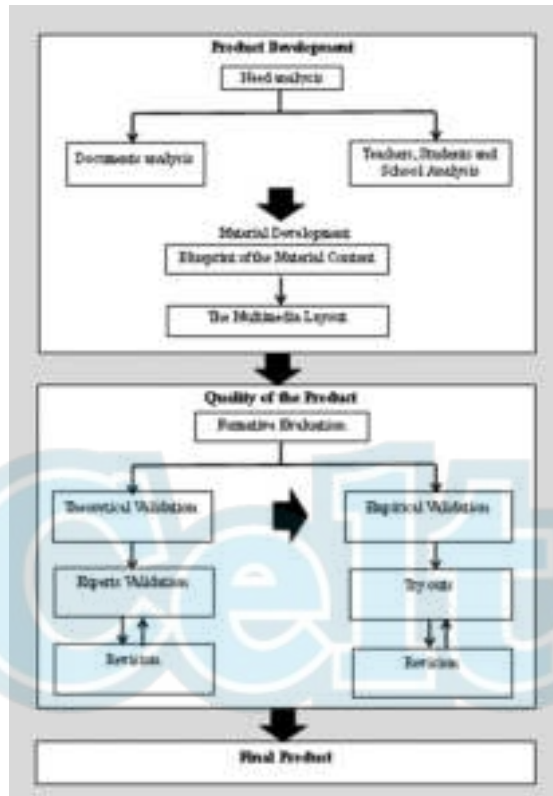


Figure 1:
The Modification of the Instructional Design
Adapted from Van der Akker (1999) & Dick and Carey (2001)

So, this study limited the steps of Dick and Carey model by conducting the first until the ninth steps without conducting the summative evaluation. Dick and Carey (2001 8) stated that summative evaluation is “not considered as an integral part of the instructional design process, per se,” because it “usually does not involve the designer of the instruction, but instead it involves an independent evaluator.” Van der Akker (1999, p. 7) outlined that the prominent elements to be conducted in development research are 1) preliminary investigation, 2) theoretical embedding, 3) empirical testing and 4) documentation, analysis and

reflection. Thus, the design and procedure of development research conducted in this study were adapted from Van der Akker (1999) elements and Dick & Carey (2001) design as illustrated in Figure 1 and is elaborated in the next sub-points.

A. Need Analysis

Need analysis was the first step to be conducted to identify specific goals of the developed learning instruction. The procedures used to collect information in needs analysis is known as need survey. As Richards (2001) mentions a variety of procedures that can be used to conduct need surveys, this study employed some of those procedures to collect information such as delivered questionnaires, did interviews and analyzed the available documents such as the textbooks, curriculum content and students writing. The procedure in conducting need analysis is elaborated as follows.

1. Document analysis

A preliminary need analysis conducted in this study was analyzing the documents related to teaching and learning process for junior high school level. The documents analyzed consisted of the 2013 Curriculum and the teacher's and student's textbooks of seventh and eighth grade delivered by the government. The result of those document analyses was elaborated specifically in the background of this study in which some problems and obstacles were found and needed to be solved by conducting this research.

2. Analyzing students' need

The samples of the students' writing revealed students' interests and problems in expressing thought in English. Most students were enthusiastic about composing a writing task decorated by artistic designs. Their imagination and creativity implemented in the form of writing and drawing brought meaningful contexts for their texts. Despite the students' eminence in designing the writing tasks, the students also faced some difficulty in composing the text. Most of their writings contain some grammatical errors, incoherent sentences, misspelling, unsuitable punctuation and some other mistakes of language elements. In short, there was a gap between the competencies that the students were able to do and what they needed to be able to do.

3. Analyzing teachers' need

The main obstacle that the teachers faced was the lack of the textbook's content. The textbooks entitled "When English Rings the Bell" were only as a guide to deliver the lessons. The teachers must search other related sources and browsed to the Internet to enrich the materials. The teachers postulated that it was easier to deliver the lessons by using the media. However, the teachers expected that they could edit and might develop a media like video because sometimes the video or game they found on the Internet had some irrelevant contents that needed to be cut. In addition, a teacher stated that the students needed much more exposure to the reading materials to enrich their vocabulary competence and familiarity with the structures.

The data obtained from the need analysis above were significantly used to develop the product which is elaborated in the following subtopic. After obtaining those significant data, the product was specifically developed and described in the following sub-topic

B. Product Development

The process of product development was started by deciding the content of the multimedia and lasted by programming the content in the form of a game-like format. The specific description of the product development was elaborated in the following sub-point.

1. Designing blueprint of material content

The main material for the game was developed from the core competence and basic competence of the 2013 curriculum. The competencies chosen to develop the multimedia product are presented in Table 1.

Table 1:

The Core Competences (KI) & Basic Competencies of Descriptive Text for SMP

7th Grade	8th Grade
KI 3 <i>Memahami pengetahuan (faktual, konseptual, dan prosedural) berdasarkan rasa ingin tahunya tentang ilmu pengetahuan,</i>	KI 3 <i>Memahami dan menerapkan pengetahuan (faktual, konseptual, dan prosedural) berdasarkan rasa ingin tahunya tentang ilmu pengetahuan, teknologi, seni, budaya</i>

<i>teknologi, seni, budaya terkait fenomena dan kejadian tampak mata.</i>	<i>terkait fenomena dan kejadian tampak mata.</i>
<i>KI 4</i>	<i>KI 4</i>
<i>Mencoba, mengolah, dan menyaji dalam ranah konkret (menggunakan, mengurai, merangkai, memodifikasi, dan membuat) dan ranah abstrak (menulis, membaca, menghitung, menggambar, dan mengarang) sesuai dengan yang dipelajari di sekolah dan sumber lain yang sama dalam sudut pandang/teori.</i>	<i>Mengolah, menyaji, dan menalar dalam ranah konkret (menggunakan, mengurai, merangkai, memodifikasi, dan membuat) dan ranah abstrak (menulis, membaca, menghitung, menggambar, dan mengarang) sesuai dengan yang dipelajari di sekolah dan sumber lain yang sama dalam sudut pandang/teori</i>
<i>KD 3.10</i>	<i>KD 4.12</i>
<i>Memahami fungsi sosial, struktur teks, dan unsur kebahasaan dari teks deskriptif dengan menyatakan dan menanyakan tentang deskripsi orang, binatang, dan benda, sangat pendek dan sederhana, sesuai dengan konteks penggunaannya.</i>	<i>Menangkap makna dalam teks deskriptif lisan dan tulis, pendek dan sederhana.</i>

2. Developing the content in the computer's software

Macromedia/ Adobe Flash was the main software used to program the game's format. At the beginning of the product development, the learning game was developed in Macromedia Flash but because the *actionsript* in Macromedia Flash was not compatible with all versions of flash program, the product development was finally continued in Adobe flash. Beside using Adobe flash, the product was developed through Photoshop, Audacity and Format Factory.

The animation and design were originally created by the researcher. Finally, the product of the learning game was ready to be validated by some experts in formative evaluation.

C. Formative Evaluation

Borg et al. (2003) states that the preliminary form of the product must be able to be field tested to know whether or not the tentative product could meet its objective. Hence, the preliminary finishing product was reviewed and validated by some experts based on their fields before the product was tried out to the students and teachers.

1. Theoretical validation

The product was reviewed and validated by two experts, consisting of the expert of multimedia and the expert of language content. In addition, the content of culture was validated by each native of the mentioned places, including Javanese, Balinese, and Flores. Finally, the product was validated by teachers before the product was tried out to the students.

2. Empirical validation

The empirical validation of the D.O learning game was conducted by trying-out the product to the students. The try-out was conducted in SMPN 26 Surabaya on December 11th, 2015. The students involved were eight grade students. Fifteen students were chosen randomly. The students gave feedback through questionnaires. The students were expected to give their opinion about the general outlook of the game related to the learning game.

D. Final Products

The final product of this study is D.O. (Describing Object) learning game in the form of .exe application. It is a digital learning game about cultural aspects in descriptive text addressed to teacher and student of junior high school level. The .exe application of this game is compatible to most computer's operating systems (OS). The product had been passed the validations and revisions. This interactive reading task can be used as a medium to learn descriptive text material and cultural aspects for the students. In addition, it can be used as a medium for experimentation step of the scientific approach for teachers to teach descriptive text.

RESULTS AND DISCUSSIONS

The findings of this study were obtained from the formative evaluation. The formative evaluation consisted of theoretical and empirical validation. The theoretical validation dealt with the evaluation of the developed learning game obtained from experts' evaluation. The empirical validation dealt with the evaluation of the developed learning game obtained from the students' point of view. The data of the formative evaluation were collected from questionnaire and observation sheet.

A. Types of Validity Achieved by the D.O (Describing Object) Learning Game

Based on the formative evaluation that has been conducted, the product of this study has met its validity. The validity was measured by some criteria evaluated by some experts. The product achieved its validity after it did not have any poor scale. The product once obtained two poor criteria from the multimedia validator which were about the layout of the text and the contents of navigation. Yet, two poor criteria could be revised based on the multimedia's suggestion and finally could achieve scale 1 (very good). Finally, the product could meet the validity of multimedia aspects, language content, culture content and pedagogical value. As this product emphasizes more in the reading skill, the criteria to develop the question within the game is adapted from the criteria to develop a reading test by Brown (2004) and Weir (2005). Types of validation that the product obtains from each aspect are described in the following passages.

1. Content validity

Weir (2005) calls content validity as context validity that deals with the representative aspects of competency covered in a test. The D.O learning game is mainly aimed to deliver descriptive text competence derived from the Basic Competence (*Kompetensi Dasar*) 3.10 and 4.12 of 2013 Curriculum for junior high school. Basically, this descriptive text was employed to promote culture. Thus, the content validity in D.O learning game can be achieved based on the representative aspects of the curriculum's competences measured by the teachers and the suitability of representative cultures measured by the chosen native people.

The criteria of the game's content that represent curriculum competences are covered in the second aspect of the questionnaire administered to the teachers. The result of the teachers' measurement shows that the scale for the game's material is balanced between "very good" and "good". In addition, the content validity based on cultural content was also measured by three native people of Javanese, Balinese and Flores people. After conducting the revision, the cultural content achieved its appropriateness to be performed in the learning game.

2. Construct validity

Brown (2004) defines construct validity as major components within a particular domain of competence. As this learning game mainly presented reading skill which is still integrated with listening skill, the quality of the written and spoken text had to be definitely measured. The measurement of the language construct was measured by a language validator. The criteria that covered this construct are presented in the questionnaire administered to the language validator. The language content criteria measured by the expert results 44% for both “very good” and “good scale” and 12% for “average” scale. These scales indicate that the language criteria of the game has passed the minimum scale although some revision is also needed to improve the game’s content.

3. Face validity

Face validity deals with the appearance of a task whether the task performs familiar format, items, direction, length, language level, practicality and other related aspects (Brown 2004 and Weir, 2005). The face validity in D.O learning game can be achieved based on the judgment of the multimedia validator and students. Most questions that were asked to the multimedia validator covered criteria in face validity, including the design, navigation, aspect of communication and sources format. After finishing a series of revisions, the result of multimedia validation is dominated by a “very good” scale that shifts the preceding dominance of “average” scale. Furthermore, the face validation was also measured by the students including the aspects about the general outlook of the game, the relevancy of the game’s content, and the contribution of the content to language competence. Students has various judgments in assessing this matter, yet most of the criteria assessed are dominated between “very good” and “good” criteria.

4. Criterion validity

Brown (2004) defines criterion validity as the extent to which the criterion has actually been reached. Moreover, Weir (2005) extends the criterion validity into the comparison of a particular aspect to other aspects in measuring the same product. Thus, the result of the validated criteria is confronted between each other validator in that one criterion occasionally

was asked to two or more validators. The confronted criteria encompass the basic criteria as follows.

Table 2:
The Confronted Criterion Validity among the Validators

Criteria	Scale			
	Teach- ers	Stu den ts	Lang uage Valid ator	Multi media Valid ator
The attractiveness of the game	5	5		
The familiarity of the format	4	4		
The clarity of the direction	4	4	4	4
The challenge throughout the game		4		4
The suitability of the descriptive text's content	5	5	5	
The suitability of the cultural content	4&5	5	5	
The suitability of the language for its intended audience	4&5	4	5	

The types of validity above reinforce the equivalent quality of the product in the theoretical and empirical validation.

B. CALL Principle within D.O (Describing Object) Learning Game

The product of this research, which is in the form of a digital learning game, is developed on behalf of the CALL principle. The product employs a computer program to create and run the application (flash player) for language learning. It ties tightly between learner autonomy in which learners can work at their own pace and computer science (Beatty, 2010). The design of the product is in the form of multimedia which is part of the integrative approach of CALL principle which is developed from a constructivist view. This integrative approach emphasizes on socio-cognitive competence by familiarizing the students with genres and discourses through the integration of pictures and sounds (Warschauer, 2004 & Beatty, 2010). In offering immersive environments for an integrative

approach, the product implements game as the main format of the multimedia. Game is one of eight generic CALL applications (Beatty, 2010).

The developed digital learning game in this study endorses pedagogical purpose. While the students enjoy playing with the animation, the delivery of descriptive text as the main genre employed within the game should be comprehended. The comprehension of the students in responding to the descriptive text can be analyzed from their ability to answer each question supposed to be able to continue to next scenes of the D.O learning game. Besides, Beatty (2010) notes that the fundamental aspect in using game-like formats for language skills is “to what degree are skills learned in a game of use in the real world?” Answering Beatty’s question, D.O learning game covers listening and reading skill of descriptive text performed in contextual environments. The students can imitate the way they describe their closed environments, including describing people, animals and things by using the cultural vocabulary used in daily communication. Furthermore, according to Prensky (2001), digital-educational games attract players because they are “a form of fun and play”, and they also contain six structural elements.

Responding to Prensky’s statement, based on the students’ questionnaire, most students thought that the D.O learning game is a very fun learning game. In addition, D.O learning game also fulfills six structural elements recommended by Prensky including (1) rules, in which a player must answer correctly to continue the next challenge and the player must follow the direction to answer correctly such as using capital letter for the first letter of people’ and month’s name, pay attention to the listening and reading passage and other rules; (2) goals and objectives, in which the main goal of D.O learning game is providing a joyful learning media to develop students’ English skills in descriptive text by embedding culture to its content while its objective is developing students competencies in structure, vocabulary and pronunciation; (3) outcome, shown by the dancing animation, checks, and a button to continue the scene that may evoke players’ emotions like satisfaction; (4) Conflict, competition, challenge, and opposition, shown by the various format of the questions such as multiple-choice adapted, essay, matching, and true or false task; (5) Interaction, D.O game engages player to interact with the characters within the game by helping the characters to solve the problem so that the

characters can continue the destination; (6) representation, shown by the contexts that represents Indonesian students who guide the foreigners to know Indonesian culture and heritage.

In short, the D.O learning game has fulfilled the CALL principle. Hays, (2005:15) states that a digital game for language teaching is “an artificially constructed, competitive activity with a specific goal, a set of rules and constraints that is located in a specific context”. The artificially constructed performance is presented by the animation within the game, including the animation of the people, animals and things within the game. The goals, rules and constraints have been elaborated within Prensky’s theory above. The context in the D.O learning game entangles various places in Indonesia.

C. The Delivery of Culture through D.O Learning Game

The delivery of culture becomes one of the objectives in developing digital learning games in this study since 2013 Curriculum requires the eminent culture to be learned by the students. The delivery of culture is aimed to grow students’ pride to Indonesian culture and heritage which can be applied and manifested in social life and social problems (Kemendikbud no. 68, 2013, p.4). In this developed learning game, the delivery of culture is implicitly embedded in descriptive text material as an enrichment of the learning activity. The context of culture addressed in this learning game is intercultural learning. Byram (1986: 323) claims that “intercultural learning encourages the learners to compare their own and foreign culture and arrive thus at a better understanding and appreciation of their own.” So, because junior high school students are still in the beginning level in studying English lessons, the percentage of local culture in the D.O learning game is more exposed than the foreign culture. It is aimed to strengthen students’ own culture from a young learner before gaining interference from foreign cultures. The analysis of culture delivered in the D.O learning game is analyzed based on Adaskou & et al's classification of culture (1990: 3) as follows.

First, the sociological sense in D.O learning game covers culture with small c which encompasses “the organization and nature of family, of home life, of interpersonal relations, material conditions, work and leisure, customs and institutions” (Adaskou & et al., 1990, p. 3). In the D.O learning game, the sociological sense is presented through the presentation

of people's characters in which the distinction of performance and environment appears between Java, Bali and Flores. Java, which is dominated by Moslem is portrayed by the use of headscarf, kopyah and sarong. Bali, which is dominated by Hindu is represented by the Balinese kebaya, ritual offering, temple, and barong. Flores, which is dominated by Christian is represented by the bishop and church. Moreover, the nature of greeting in each family environment indicates a different sociological sense in each place in Indonesia. The ritual and customs also beckon the richness of Indonesian culture such as *Reog Ponorogo* from East Java, Barong ritual from Bali, and Patika ceremony from Kelimutu, Flores. In addition, peacock also symbolizes various meanings. In Reog Ponorogo, peacock symbolizes a crown of a powerful king, in India peacock feather symbolizes Krisna's sacred symbol and in the U.S peacock's feather symbolizes a know-all eye.

Second, the semantic sense in the D.O learning game deals with the conceptual system embodied in the semantic area related to life in Java, Bali and Flores. Skirt has several cultural models in Indonesia, namely *jarik* for Java, *kamben* for Bali and *ikat* for Flores. Also, cultural personnel are presented in several ways such as *hansip* for Java, *pecalang* for Bali and *mosalaki* for Flores. Beside what have been mentioned above, East Java in D.O learning game specifically covers some semantic senses such as *kopyah*, *lurah*, *ojek*, *bemo*, *Tugu Pahlawan*, *bung Tomo*, *suro boyo*, *dadak merak*, and *jaranan*. Some semantic senses in Bali are *rangda*, *barong*, *ubet-ubet*, chess-board like *sarong*, *Gede*, *Putu*, *Kadek*, *subak*, *I Gusti Ngurah Rai* and *meru*. Some semantic senses in Flores are *komodo*, *tabeote*, *kelimutu*, *tiwu ata polo*, *tiwu ata mbupu*, *tiwu ko'o fai nuwa muri*, *wae rebo*, *lingko* and *lodok*. Some semantic senses to common Indonesian culture and values are *musyawarah*, *gotong royong*, and *kebaya*. The semantic sense in India is *tanga*. Some semantic senses in American culture are *give-and-take* and *dog-cart*.

Third, the sociolinguistics sense in the D.O learning game deals with the use of language related to its sociocultural context in the various communicative functions. This sociolinguistics sense in D.O learning game includes the way to introduce one's self and greeting. In a common introduction, a person usually only mentions name and where s/he comes from, not mentioning all identities such as date and place of birth, hobby, occupation and other related identity when introducing one's self (Lestari, 2010, p. 17). The way to introduce one's self appropriately is presented in

the introduction of Dora, Dolu, Budi, Kadek and Yustus in which they only mention the needed information in an introduction. In addition, the urge to apply English with family and closed environment like what is mentioned in *When English Rings the Bells* textbook – “From now on, I will say “good morning”, “good afternoon” or “good evening” when I meet people” – is culturally inappropriate because this urge might mediate to language shift. So, the students need to maintain the culture to use local language when communicating with their closed environment but they are still able to speak English with the foreigners. This circumstance is presented by some characters in the D.O learning game such as when Budi greets his mother by saying *Assalamu’alaikum*, Kadek greets her mother by saying *Omswastiastu* and Yustus greets his father by saying *Tabeoite*. This suitable sociolinguistic implementation is expected to grow awareness to the students so that they still maintain their local language in line with their ability to speak English.

Overall, the product of this study in the form of a digital learning game, namely Describing Objects (D.O) game, has achieved its main objective which is as a medium for cultural enrichment on descriptive text for junior high school students. This product has achieved several types of validation assessed by some experts, teachers and students. Also, the product has fulfilled the CALL principle within the learning game. The learning game presents various cultural contents, involving the majority of local culture and a small degree of western culture. At last, this product is expected to be useful for Indonesian teachers and students in learning English, especially for descriptive text material, without neglecting value of local culture and national heritage because national culture and heritage is a fundamental foundation for education to build present and future patriotic civilization – “*Pendidikan berakar pada budaya bangsa untuk membangun kehidupan bangsa masa kini dan masa mendatang*” – (Kemendikbud no. 68, 2013, p.4).

CONCLUSION

The digital learning game developed in this study is mainly aimed to enrich students’ understanding about descriptive text and culture, mainly about local culture. The product has passed its validation after finishing some revisions based on four aspects, involving multimedia, language

content, cultural and pedagogical aspects. The teachers as validators of pedagogical value responded positively to the developed product and they thought that the product can be used as a medium to deliver descriptive text material enriched by intercultural content.

Furthermore, the students as the targeted audiences of this digital learning game also responded positively to the developed learning game. Students' interest can be marked out by giving good scales for the general outlook of the game. In addition, the delivery of descriptive text as the main genre employed within the game can be delivered as well while the students enjoy playing with the animation of the game. The students' comprehension in responding to the descriptive texts can be analyzed from their ability to answer each question supposed to be able to continue the next scenes of the D.O learning game. They also stated that the content of the game was relevant to their language competency. Lastly, the students' enthusiasm can be noticed by their suggestions for the developer to continue the game by adding many more local and foreign cultures within the game. However, the students' criticism was addressed to the quality of the graphics that needs to be enhanced. After a study in developing a digital learning game as a medium for cultural enrichment on descriptive text for junior high school students is finished, there are some suggestions that need to be delivered for some parties. The first suggestion is addressed to teachers, the next suggestion is addressed to educational institutions and the last suggestion is addressed to further researchers and developers. The details of the suggestions are elaborated below.

Teachers may use this digital learning game in implementing experimenting step of scientific approach. This digital learning game can be benefitted as a teaching aid to teach descriptive material by exploring Indonesian culture. In that this learning game is not completed by a module about a particular way to teach a descriptive text by employing this game, teachers should employ their own method and creativity to benefit this learning game for a teaching aid. Moreover, teacher or educator should deliver culture in language teaching to reinforce students' local identity.

Educational institutions such as school and ministry of education should develop and enrich more teaching and learning media in various forms such as video, cartoon, game and other teaching aids. This educational media should explore more about local wisdom and heritage within the related materials. There have been a number of attractive foreign

learning media provided freely on the Internet but most of them are embedded in the foreign cultures. In learning English, students still need to grow their pride in their local identity since Indonesian tend to be very welcoming and respectful of foreign cultures. Western culture is generally assumed to be more prestigious, Indonesian sometimes do not really respect their own identity and treat themselves as an inferior nation when facing foreigners. Consequently, if Indonesian holds this inferior principle, Indonesian generation may always keep a follower principle toward other nations, follow what is happening, not a developer, develop what should happen. An attractive and interactive digital media might serve a better understanding about Indonesian local culture and identity for the students to be proud of.

Finally, because this present learning game does not contain a final score to measure students' proficiency, further researchers may develop another learning game completed by final scores to measure students' accomplishment in the game. In addition, further developers of a pedagogical media should consider time and content appropriately before starting the project. Also, further researchers may conduct a study about the use of digital learning games to reduce a culture of fear in facing a test. The researcher of this present study has a subjective speculation that being afraid of a test has become a culture in Indonesia that bothers students' concentration. A number of pedagogical digital games may serve a good treatment to reduce the problem because students will be familiar to face tests in a fun atmosphere.

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