THE GIST OF DIGITAL TECHNOLOGY FOR LOCAL CULTURE PRESERVATION: INTRIGUING FAIRY TALES

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Abstract

*Fairy tales have long been used as learning materials for Indonesian as well as English subjects in secondary schools to instil and preserve local wisdom and culture in addition to enhancing students' linguistic competence. Based on classroom observation and interview, current practices in schools show that learning activities developed out these materials revolve around students' involvement in reading, comprehending, appreciating, and identifying moral stories of the tales, be it orally and or in written form. Through R & D procedure, involving several junior high school students in Yogyakarta Special Region (DIY) and Central Java (Jateng), a digital media called "SoON" (**S**tory **o**n **O**dyssey **N**aturally) was used to develop those tales into more interactive and cognitively engaging learning materials (Littleyoung, 2015). Learning activities involve students not only to find information, retell, and identify moral story but further to enhance their soft skills and creativity*

through responding to the tales depending on students' creativity. During the tryout, it was observed that the students were occupied doing all activities. Their high enthusiasm was observed in the last activity in which they got space/freedom to express themselves/their dreams. From students' worksheet, it could be inferred that the resulting materials were also effective in exercising students' creativity, and were effective as a means of character education. Based on the findings, the researchers contended that more folklore materials need to be converted into more innovative and interactive digital materials which are effective model not only for their preservation but for richer educational values.

Keywords

Character Education, Cognitively Engaging, Fairy Tales, Digital Materials, "SoON"

1. Introduction

The cultural dynamics of a developing nation follow the mindset of the community by involving technology and language (REVIN: Industrial Revolution 4.0 era) in its preservation. As a millennial generation, especially for junior high school students demand to master more than one language in communication. To convey language, students need communicative strategies to use appropriate language based on the context (Falkheimer & Mats, 2018). In improving language competency, the AEC perspective becomes a challenge and opportunity, especially for language teachers. Therefore, the negative effects of digitalization, cyber-physical technology, computing power must not defeat character education. The negative impact of Revin 4.0 according to Bonekamp (2015) and Sutopo (2018) must be considered by national and international regulations.

To improve language skills in teaching can be used fairy tales (Banez, 2018). This is related to the role of fairy tales that will lead to character education to support society 5.0. Fairy tales have been used as learning materials to instil and preserve local wisdom and culture. The "Culture and Nation Character Education" movement launched by the Ministry of National Education since 2010 must be implemented. Dewantara (2013) stressed the need for our children to bring their lives closer to people's lives so that they do not only have "knowledge" about the lives of their people, but also can "experience it" themselves, and then do not live apart from their people. From various character values, nationalistic and national cultural love is needed.

Currently, students tend to be interested and enjoy learning using a digital platform. This must be considered by the teacher in managing to learn in terms of teaching materials, media, and learning strategies (Burn, 2007). Digital teaching materials must be equipped with tasks and activities to suit

students' needs. Wang (2020) states students encounter in the classroom lacks a sufficient range of relevant examples of social interaction. It can be supported to create digital materials deal with the cultural heritage collection, preservation, and promotion (Adane, 2019). Digital materials also need to be linked to the activities and lives of students to be interesting for them to show cognitive engagement (Littlejohn, 2015). Learning activities involve students not only to find information, retell, and identify moral story but further to enhance their soft skills and creativity through responding to the tales depending on students' creativity. By providing students with cognitive engagement, the students become excited in learning creatively (Tiasari, 2019). Therefore, the purposes of this research are to reveal kinds of fairy tales from the Yogyakarta Special Region and Central Java and to develop them into digital form.

Teaching material for fairy tales laden with character education already exists. However, it is usually still in the form of text, arranged in one language, or the form of media but without a learning guide (Alvarado, 1987). As a result, teachers still rarely use digital teaching materials. To assist the teachers in delivering materials to the students effectively, the researchers have developed digital technology for local culture preservation: Intriguing Fairy Tales. The research questions are: (1) What are kinds of fairy tales from the Yogyakarta Special Region and Central Java? (2) How the digital fairy tales materials called "SoON" (*Story on Odyssey Naturally*) that consists of three parts: **S**tory, **o**n **O**dyssey, and **N**aturally are developed using the android platform to preserve local wisdom and culture for the eighth graders of the junior high school?

2. Theoretical Framework

2.1 The Power of Fairy Tales

The fairy tale is one of an example of literary texts that has the power to encourage the students recognizing not only their local culture preservation but also as storytelling to inculcate values, love and respect towards others' culture (Nassim, 2018). It can be found in songs and short stories form (Pace, 2017). In Indonesia, fairy tales become a subject matter of language both in Indonesia and English. However, the material that is taught is fairy tales Nusantara or abroad that are well known (Lwin, 2015). Fairy tales materials have not introduced about stories related to the place where students live yet. Instilling fairy tales to students who come from the area where they live will foster the character of cultural love and the spirit of nationalism in students who begin to fade

(Satriawan, 2012). Many fairy tales that develop in the community unknown to students and have not been documented in writing (Danandjaja, 1995).

2.2 Digital Teaching Materials

In developing, digital teaching materials need more efforts to cognate the materials to the students' needs. According to Ratiyani (2014), there are four stages in developing digital teaching materials, namely define, design, develop, and disseminate. The touch of not only ecological literacy values (Suwandi, 2019) but also psychology values when developing teaching materials is also necessary, for example, fun, relating to life, and educating students. Besides, critical thinking and creativity also need to be developed in tasks and activities to achieve the desired competencies. Developing digital materials as facilitating second language acquisition must be presented by accommodating individual differences, affective attitudes, students feel comfortable and fun in achieving communicative competence of the target language in diverse levels of digital adoption in education (Tomlison, 2018).

According to Rochmiyati (2015), to foster a love of Indonesia, learning material should contain various things about the geographical situation and natural wealth of Indonesia, national and regional documents, such as fairy tales. The character was due to the basic development which had been influenced by the teaching (Dewantara, 2013).

Character education according to the Ministry of National Education (Kemdiknas, 2016) includes 18 values, namely religious, tolerance, love and peace, environmental care, love the motherland, the spirit of nationality, discipline, honest, responsibility, appreciate the achievement, hard work, curiosity, creative, like to read, friendly/communicative, autonomy, democratic, and social care. Character education aims to make students able to behave with God, themselves, family, community, and the environment. Character education through indoctrination will only lead to false success, give bad effects, and even kill student creativity. Hartono (2018) considers this model to be incompatible with the humanistic theory.

3. Method

3.1 Research Method

Through R & D procedure (Borg & Gall, 2003), a digital material as media called "SoON" (*Story on Odyssey Naturally*) was developed to enable students not only to retell and to identify moral story but further to modify the story depending on students' creativity. The researchers simplified the model R & D by modifying and choosing some stages to be applied in the study.

3.2 Participants

The research was carried out for several the eighth graders of junior high schools in Special Region of Yogyakarta and Central Java Provinces. For completing the data kinds of fairy tales, the researchers did it with the community around those schools.

3.3 Technique of Collecting the Data

Researchers have created two instruments to collect the data before doing the observation, interview, and documentation (Sukmadinata, 2005) such as observation guidelines, interview guidelines to help the researchers to elicit information from the students, teachers, and community. There are two experts reviewed the prototype using a questionnaire about the developed media in the review stage. The questions are divided into four components, namely the aptness of content, the education character, the language, and the graphic. The result of the experts' judgement questionnaire was used to revise the first draft of the prototype before trying out the product to the classroom. Then, the data from the needs analysis and the expert judgement questionnaires were analyzed qualitatively through a descriptive approach (Miles, 2014).

3.4 Procedures

The model of media development in the research was as follows: First, Exploration stage: Researchers conducted the observation, interview, and documentation to identify the problems related to fairy tales in schools and community to draw the needs analysis. Second, Developing media stage: Researchers developed the media that cognate the fairy tales' course grid. The last, before the prototype was tried out, two experts have reviewed them in FGD stage. The researchers got feedback and suggestions. Then, the researchers revised the first revision media based on experts' feedback and suggestions. Finally, the prototype was ready to be tested on a limited basis at school.

4. Results and Discussion

4.1 Activities in Exploration Stage

In the teaching-learning process, the researchers directly observed to gain the necessary data. They used observation guideline to make a note and analyze the teacher's performance and the students' activities at school. There were found many problems, the teacher was reluctant to apply technology in teaching fairy tales such as 1) It needs a lot of time to design it, 2) It is not easy to identify the story that fits the student's character, 3) It requires creativity in creating questions based on the character education. Therefore, to solve the teachers' problems, it is necessary to develop a cognitive engagement media.

In conducting the interview, the researchers conducted into two fields. First, the researchers interviewed the eighth graders and the teachers of junior high schools to know the learning and target needs. The results were described as follows: 1) from learning needs side: the students wanted to read and create fairy tales by using an interesting media using the provided template in individual or group tasks and activities. The students also wanted the teachers to them detailed explanations for either media, materials, or feedback on their assignment when the students got difficulties directly. 2) Next, from the students' wants, necessities, and lack side: The students' aim of learning fairy tale was to read and write fairy tales. Second, the researchers interviewed the community, they found kinds of fairy tales that developing in the Special Region of Yogyakarta and Central Java provinces of Indonesia. As a result, there were found 26 fairy tales from those provinces.

Then, researchers did documentation. They found that all of the schools used K-13 curriculum and the fairy tales are taught for the eighth graders of junior high schools. The texts of fairy tales are usually taken from famous fairy tales. To improve students' understanding, it is better to develop an application to learn kinds of local fairy tales with character education provided so that the students can identify, imitate, and modify their fairy tales easily. The researchers concluded that the students have to know not only the famous fairy tales but also local fairy tales from their lives. See table 1 below.

Table 1: *Kinds of Fairy Tales from DIY & Jateng Provinces*

DIY Province			Jateng Province		
Bantul	**Kulon Progo**	**Gunungkidul**	**Magelang**	**Klaten**	**Kebumen**
Syekh Belabelu	Waduk Sermo	Gumbregan	Watu Tumpang, Kaliangkrik	Watu Prahu Bayat	Cerita di balik Goa Jatijajar
Ki Ageng Paker Cikal	Stupa Glagah	Cupu Panjolo	Air Terjun Kayangan	Giri Purna	Joko Gudig
Ki Mangir Wanabaya	Kulwaru	Telaga Pemandian Kuda Milik Bidadari	Karisedenan Kedu	-	Gending Lukonoto
Begawan Selohening	Makam Girigondo	Upacara Adat Watu Manten Kali Jirak	-	-	Goa Barat
Ki Ageng Suryomentaram	Bimo Kunting	Melongok Kembang Lampir	-	-	-

Sunan Geseng	-	Nyamuk Berdengung	-	-	-
6 Fairy Tales	5 Fairy Tales	6 Fairy Tales	3 Fairy Tales	2 Fairy Tales	4 Fairy Tales
TOTAL= 26 Fairy Tales					

4.2 Developing the Prototype

The researchers proceeded to develop the prototype called "SoON (*Story on Odyssey Naturally*)". It is a cognitive engagement media application that can be used in smartphone to learn kinds of fairy tales to the eighth graders of the junior high school consisting of two parts: *Story, on Odyssey, and Naturally*. Basically, "SoON" has three main parts. First, *Story* is a part for the students to recognize the stories from their lives by reading kinds of fairy tales from DIY & Jateng provinces. Second, *on Odyssey,* the students work in a group to identify what character education appears in the story through the games. Finally, *Naturally* is a creative design to trigger students to create a story with a different ending to stimulate students' creativity in accordance with the provided template by adding character education.
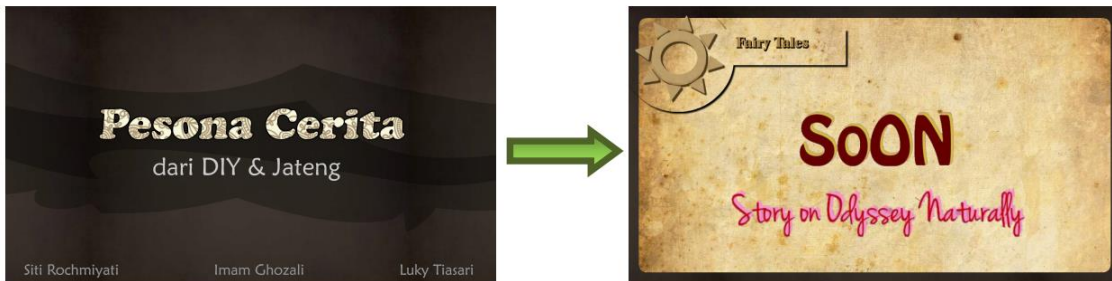

Figure 1: *Prototype of "SoON" for Teaching Fairy Tales*

The prototype of this media called "SoON" is a part of "Pesona Cerita from DIY & Jateng" android application that only focused on fairy tales (See fig. 1). It is equipped with a) a password: the students can get it after finishing the games, and b) assessment scores: The score can be seen by the students directly. They can neither continue the next part nor get the password if they do not get the minimum score. c) song: The students can sing lovely songs. The researchers composed 6 songs related to the culture of DIY & Jateng provinces provided in this prototype. The three parts in "SoON" were explained as follows:
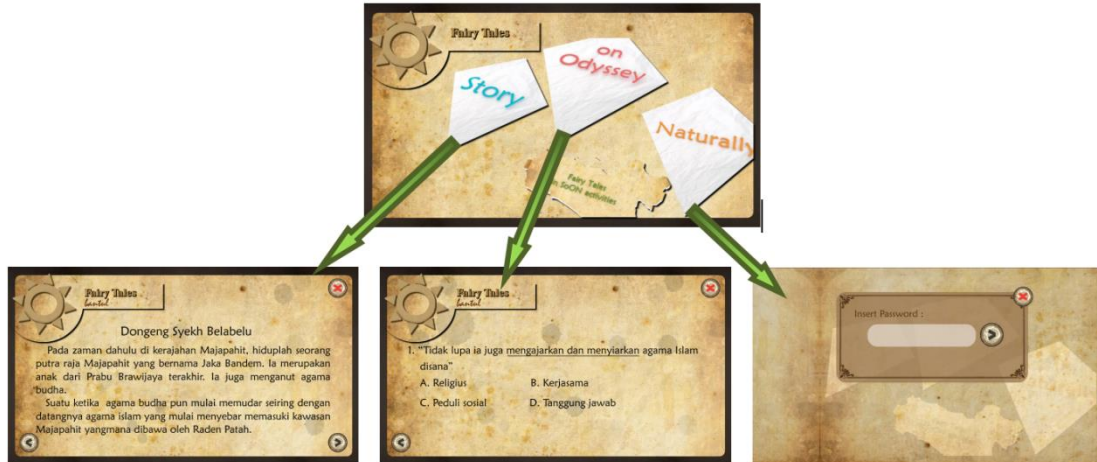
Figure 2: *The Main Parts of "SoON" Prototype*

First, *Story* is a part of psychology learning to make classroom work light, enjoyable and carried rather than learning outcomes (Littlejohn, 2015). The function of this step is the students can recognize the stories from their lives by reading kinds of fairy tales from DIY & Jateng provinces. The students can read kinds of fairy tales through the songs. It can help the students imagine the story and trigger their critical thinking. See fig. 2: **S**tory is one of the examples of fairy tales from Bantul, DIY provinces.

Second, *on Odyssey,* the students work in a group to identify what character education appears in the story through the games. There are games related to character education based on the story given. After the students read the story from the story part, they can continue to look for character education. See fig. 2: **o**n **O**dyssey, there are several questions for students to identify and guess what kinds of character education by clicking the best answer. If the answer is correct, there is an explanation related to that character education.

Finally, *Naturally* is a creative design to trigger students to create a story with a different ending to stimulate students' creativity by adding character education in the provided template. *Naturally* part has an "admin" platform for the teacher to check the students' assignment quickly. It is a special facility for the teacher to assist them in giving feedback to students' assignment by identifying, reading, and writing something using the prototype directly.

The activities begin with reading and knowing the new story then, the students can modify the story by adding the ending story. It is for improving the students' creativity in creating fairy tales. Insert the password first to enjoy the provided template (See fig. 2: *Naturally*). This media provides a "save and edit" button for editing time to help the students to write, edit, and save their writing. Here

is an example of the *Naturally* activity: a) Choose the fairy tales story. b) Write the story by using the provided template. c) Click the "save or edit" button. d) Finally, click the "send" button.

4.3 Evaluation by FGD

The first draft of the media called "SoON" has been validated by two expert judgments through Forum Group Discussion (FGD) in the evaluation stage, by filling out a questionnaire about the developed media. They filled in four componential questions of the aptness of content (basic competence, and kinds of fairy tales), the character education (based on 18 characters education), the language (language used in task and activities), and the graphic (- font, line, and colour, - pictures and illustration - materials). The prototype of media needed further revisions based on experts' feedback and suggestions such as (1) revisions of the aptness language: In the *Story* section, for example, the prototype was not written in simple word. Then, the researchers revised and changed using the proper language. (2) The aptness of the graphic: In the *on Odyssey* section, for example, the illustration of texts was not balanced. Then, the researchers revised it to make the slide readable and eye-catching for the reader. See the following fig 3.

Figure 3: *The Revision of Story*

After revising the prototype, the researchers tried out the prototype. From limited tryout, it can be inferred that the students' displayed greater motivation in doing the task using "SoON" because it is challenging. They enjoyed exploring the last assignment to exercise their creativity. Their high enthusiasm was observed in the last activity in which they got space/freedom to express themselves/their dreams. From students' worksheet, it could be inferred that the resulting materials were also effective in exercising students' creativity, and were effective as a means of character education.

5. Conclusion

The "SoON" prototype as a digital media for the eighth graders of junior high schools serve their functions in developing students' linguistic competence through local fairy tales consisting of three parts: *Story, on Odyssey, and Naturally*. This application focus on fairy tales. In the "*Naturally*" part, it is a special way for teachers to develop quality teacher-student interaction. As it is interesting, the learning outcome would be their character education. The students can recognize the stories, identify what character education appears in the story through the games, and create a story with a different ending deal with 18 characters education from the fairy tales.

Based on the findings, the researchers found 26 fairy tales from the Special Region of Yogyakarta and Central Java. They contended that more folklore materials need to be converted into more innovative and interactive digital materials which are effective model not only for their preservation but for richer educational values. For the next research, the researchers continue to develop digital application: kinds of legends from the Special Region of Yogyakarta and Central Java to preserve local wisdom and culture. This research represents the digital atmosphere: Industrial Revolution 4.0 to community 5.0.

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