EDUCATIONAL DIGITAL MEDIA FOR TRADITIONAL FOOD OF *KAMPUNG ADAT* CIREUNDEU: AN ETHNOPEDAGOGY PERSPECTIVE

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Abstract

This study was aimed at designing educational digital media for traditional food in *Kampung Adat* Cireundeu, Indonesia. Cirendeu, one of Indonesia's traditional villages, was chosen since one of its uniqueness is its people's staple food namely *rasi,* a type of food made of cassava. The digital medium that is designed is an application about Cireundeu's traditional food. The media designing process employed System/Software Development Life Cycle (SDLC) waterfall model, used node.js and electron.js framework, and HTML, CSS, javascript programming language. Database of this application was created by using SQLite. The application is then converted to get an offline application or desktop-based application. The results showed that the application unveils the history of Cireundeu traditional village, detailed information about *rasi* focusing on local wisdom values aspect, various products from *rasi*, and its marketing process. The application was tested by using notebook with Windows 10 and Windows 7 Operating System (OS) and it ran well. This application design is an attempt to transform local culture along with its important cultural values into a more interactive, interesting, and entertaining edutainment.

Keywords: Cireundeu traditional village, Educational digital media, Ethnopedagogy, *Rasi* (traditional food).

1. Introduction

Kampung Adat or often called a traditional village is a part of a region that is usually a tourism site [1-3]. A traditional village is interesting and well known for its scenic panorama, culture, buildings, arts, indigenous people, and its cuisine. Nowadays, traditional village is included in a sustainable development program [4, 5]. This traditional village becomes a part of the natural and cultural conservation district that needs to be preserved since it will be a heritage for the next generation [6, 7]. Preserving and developing traditional village is also a part of traditional and ecological knowledge [8], community-based rural development concept [9], and further, it becomes a part of world cultural heritage [10].

Therefore, a traditional village with its diverse local wisdom aspects that are full of educational values needs to be made as media for society's education (Ethnopedagogy). There are various ways to make the dreams come true, one of which, is through a transformative sustainability pedagogy process. Burns [11] mentioned that this transformation process could be conducted through a content aspect, perspective, process, and contextual aspects. Students may learn about their neighbourhood, their traditional village that has been integrated into their learning process. According to Rahman et al. [7], students may also learn directly from their environment or what is called the "living museum". Although the aforementioned ways seem to be strategic ways, another alternative needs to be taken into consideration that is by creating an educational digital medium about the traditional village.

The design of educational digital media is expected to have a wider scope, to have longer storability, and to be a source of information that can be updated adjusting their needs by inserting more various and informative contents [12, 13]. This educational digital media design is as an attempt to make a digital transformation that has a socio-communication principle [13, 14], and to strengthen identity and pride of young generation towards where they come from [15]. Educational digital media have a multi-voiced perspective and are able to enrich the subject of educational content [16]. However, the development of this educational digital media design needs to consider pedagogical guidelines [17] and pedagogical and technological content knowledge [18]. Nowadays, the design of this kind of application is regarded as a more strategic and effective way due to its easy access, multiple modes, and its high reader-interaction [19].

This educational digital media design was created by focusing on Cireundeu traditional village's cuisines from ethno pedagogy perspective. Through this application, many people are expected to get local wisdom value-based education. Ethnopedagogy may derive from a community that has unique cultural values [20]. Cireundeu traditional village is a traditional community in a society that is located in Cimahi Jawa Barat, Indonesia. The uniqueness lies on the way they consume "*rasi*" as their staple food. *Rasi* is a kind of staple food that is made from pulps of cassava dregs, instead of having rice for they staple food. *Rasi* is a symbol of their food resilience. For that specification, Cireundeu traditional village is declared as national resilient food village.

Considering the aforementioned facts and reasons, the existence of educational digital media for learning about traditional food is necessary. Therefore, this paper aims to design learning media for one of the traditional foods in Indonesia.

2. Method

The design of educational digital media of traditional food of Cireundeu traditional village was motivated by a will to transform its local wisdom values to wider communities. This educational digital media design is also an attempt to grow cultural identity values for a younger generation [15]. The digital medium was created in the form of application that serves rich information about Cireundeu's traditional foods in digital contents. The information covers the history of Cireundeu traditional village, information about '*rasi*', various products made from '*rasi*', the typical food of Cireundeu, followed by its nutrition analysis, information how to order the products, and contact information. The application was designed in the form of offline application or desktop-based computer software.

The application design was conducted by employing methods using System/Software Development Life Cycle (SDLC) waterfall model, which can be seen in Fig. 1.

Figure 1 shows steps to create the educational digital media of Cireundeu traditional food started with the recruitment of the available tools to design educational digital media, followed by a need analysis of the educational digital media development to promote local wisdom values of Cireundeu traditional village, design process, testing, and maintenance process of the application.
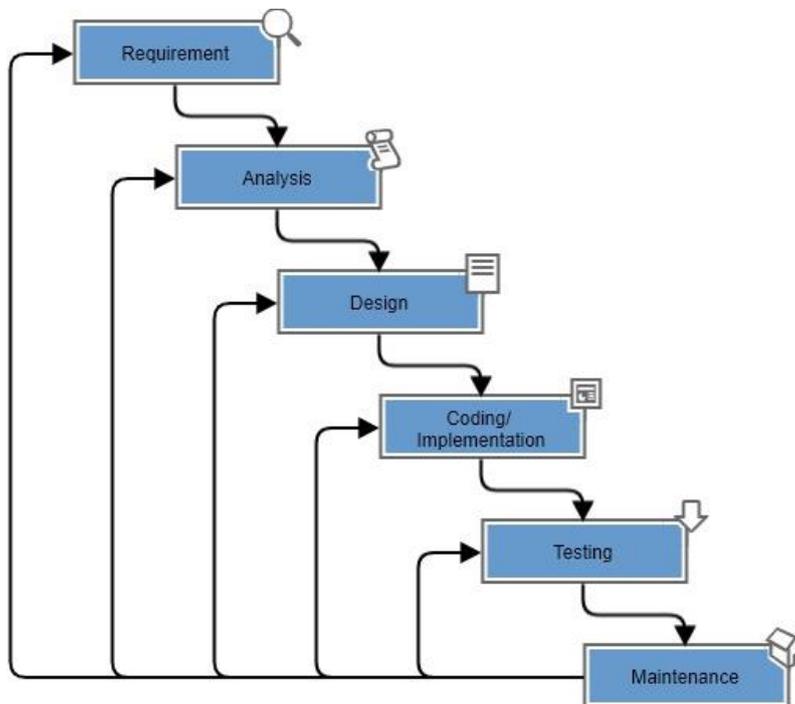
Fig. 1. Software Development Life Cycle (SDLC) waterfall model method.

The application was designed by using node.js and electron.js. Frameworks. Node.js and electron.js are the types of the framework that are usually used to make desktop cross-platform application such as Linux, Windows and MacOS by using

(JavaScript) web technology [21, 22]. Node.js framework is available to download through its official website www.nodejs.org to be then installed (as shown in Fig. 2). The design process employed HTML, CSS, and javascript programming language. After that, the application was then converted until the application is able to be operated from the desktop (offline application). Meanwhile, the application database was made by using SQLite, a database machine that is easy and flexible to handle. SQLite becomes a good alternative for the database in developing software [23].
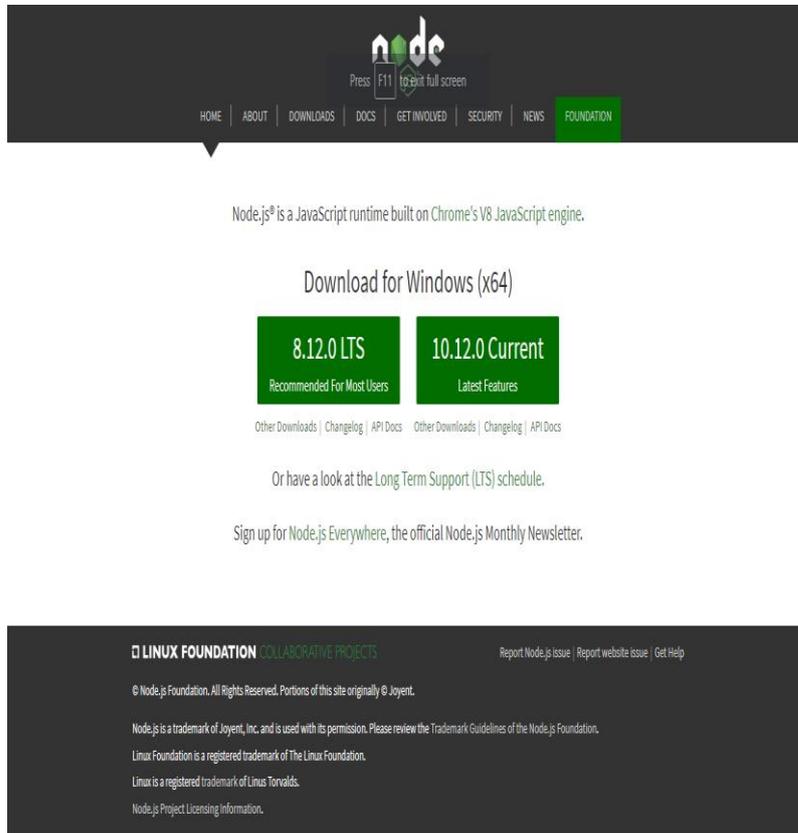
Fig. 2. Node.js official website.

The making of educational digital media application of "*Makanan Khas Kampung Adat Cireundeu*" can be seen in Fig. 3.

Figure 3 describes the flowchart of application development where users can run the application through a certain procedure. Before using this application, the users are required to log in using an account that has been registered before. After the login process is successful, the users are shown some options of the primary menu that has some sub-menus, such as *Rasi* menu, which has some sub-menus that cover what *rasi* is, ingredients of *rasi* and procedure to make *rasi*.
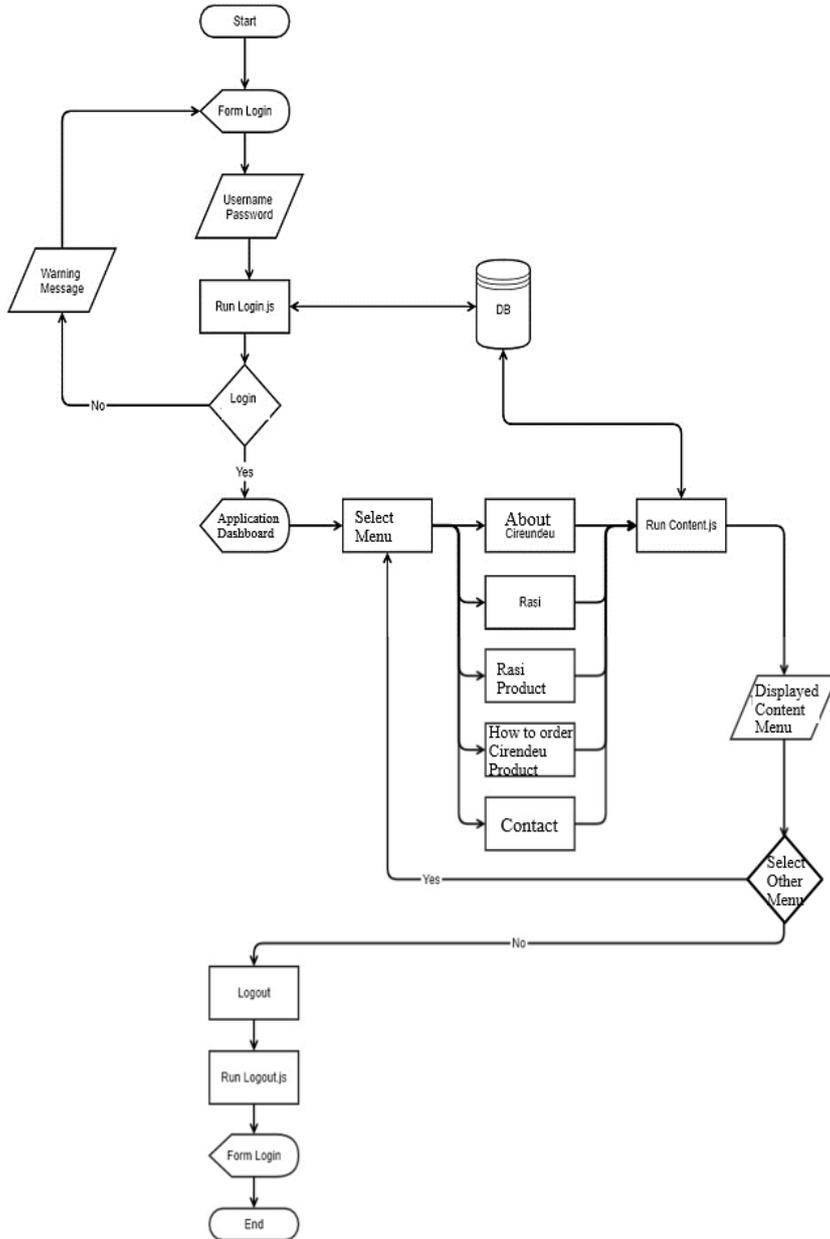
Fig. 3. Application development flowchart.

3. Results and Discussion

The digital medium of Cireundeu traditional food was created as an effort to provide an educational medium for society, especially for the younger generation to learn about local wisdom values of Cireundeu traditional village. The contents of this educational digital media consist of various important information about Cireundeu, such as *rasi* as their traditional or staple food made from cassava, a raw

material needed and procedure to make *rasi*, products made from *rasi*, and also *rasi* products' marketing aspect.

The making process of the application was conducted by primarily installing electron.js. This tool was installed by using the command prompt by previously creating a folder to save the programming file. The command that is used to install electron.js can be witnessed in Fig. 4. Meanwhile, the making of application database of this educational digital media application namely *"Makanan Khas Kampung Adat Cireundeu"* can be seen in Fig. 5.

```
# Clone the Quick Start repository
$ git clone https://github.com/electron/electron-quick-start

# Go into the repository
$ cd electron-quick-start

# Install the dependencies and run
$ npm install && npm start
```

Fig. 4. Command for installing electron.js.
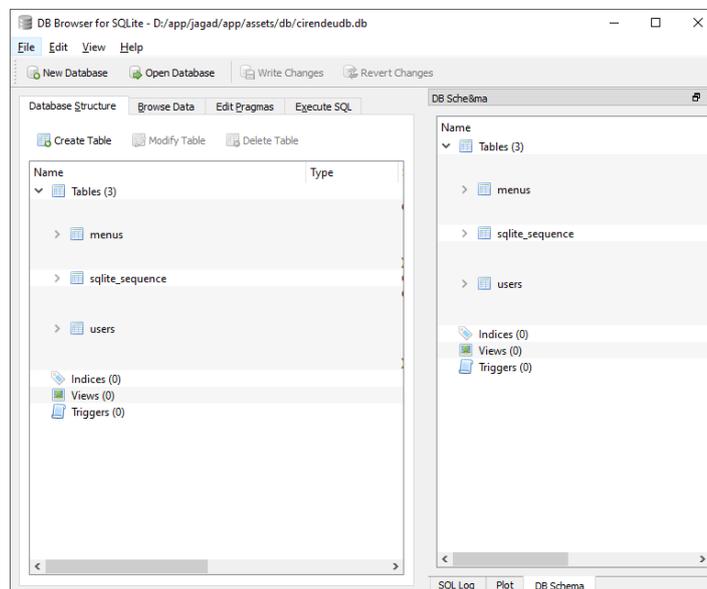
Fig. 5. Database of "*Makanan Khas Kampung Adat Cireundeu*"educational digital media.

The use interface making was conducted by employing HTML, CSS, Jquery and other plug-ins and Sublime Text 3 text editor. In Fig. 6, it is shown the codes that were needed to make the user interface of this educational digital media application *"Makanan Khas Kampung Adat Cireundeu"*. This is a portable application that makes it is easy to be run. The testing step was conducted by using a laptop with Windows 10 and Windows 7 operating systems and the application run well using these two operating systems.

Fig. 6. "*Makanan Khas Kampung Adat Cireundeu*" educational digital media codes.

Figure 7 shows the menu display from *"Makanan Khas Kampung Adat Cireundeu"* educational digital media application, meanwhile in Fig. 8, it can be seen displays of the running application.

Figure 7 presents the homepage display of the educational digital media application that has been designed. This application starts giving information about detailed information about Cireundeu traditional village that has been determined by the government as a preserved district. Cireundeu traditional village is then declared as a national prototype area due to its food resilient ability and independence. Alonso et al. [24] reported that the food resilient level of an area is mostly affected by the local culture and one of them is dealing with food taboo. Cireundeu traditional village is regarded as an area that gives an alternative solution towards the rice scarcity problems in Indonesia. *Rasi* that is originated from cassava becomes the most possible alternative for rice since cassava is able to grow well in Indonesia and can be carbohydrate-source food that is most likely be preferred by Indonesian people.

The most distinctive aspect of Cireundeu traditional village is the villagers' habit to make '*rasi*' as their staple food, instead of rice. As we know that staple food of most of the Indonesian people is rice, but in this area, it is a taboo to consume rice as a staple food. Furthermore, *Rasi* also becomes a symbol of the long history of Cireundeu villagers to survive and also to keep their pride as independent citizens. Shariff et al. [25] reported that this is what attractive about traditional food when it is not merely tradition, but it further becomes a symbol of their heritage, trademark, and sustainable cultural values [25].

Figure 8 displays the educational digital media application showing information about raw materials of *rasi* and procedure in making *rasi*. As previously mentioned, *rasi* that is made from cassava, which is a natural resource from that area and it is preserved really well by the villagers. Therefore, cassava fields in Cireundeu traditional village become a preserved area and in fact, it becomes a 'forbidden area'. The cassava garden becomes an area that must be protected by all the villagers since it is where their life begins. On the other hand, the procedure in making *rasi* also has special ways, starting from the making and saving the process of *rasi* that reflects the villagers' respect for *rasi* as a staple food and food resilient symbol in the areas. *Rasi* as a staple food of Cireundeu traditional village is an authentic product that is most likely become one of the attractions of consumer willingness [26].

Fig. 7. Display menu of "*Makanan Khas Kampung Adat Cireundeu*"

(a)

(b)

Fig. 8. Display about (a) raw materials of *rasi*, (b) procedure in making *rasi*.

These various *rasi'* products become a local brand and local symbol that is identical to *Kampung Adat* Cireundeu. Various *rasi'* products cover egg roll and *kecipir* cookies (Fig. 9).

The egg roll is a type of cookies that tastes slightly salty and made from the mix of *rasi* and egg, which resembles a small pipe and made by a thread. Slightly different from egg roll, *kecipir* is made from *rasi,* which looks like *kecipir* fruit with jagged surface and edge.

These kinds of *rasi* products become the most wanted items when they visit Cireundeu traditional village. In this context, traditional food plays an important role to discuss food security and food policy aspects [27].

The use of educational digital media application in the context of introducing local wisdom values in the form of traditional food from Cireundeu traditional village is believed to be able to strengthen the younger generation's identity and pride towards this country. This is very possible since educational digital media have taken part in developing interpersonal and intrapersonal experiences of the users [15].

Painter et al. [28] mentioned that interesting educational digital media and user-friendly platform towards internet technology and social media development have their own attraction in delivering local wisdom values to society. The local wisdom values of Cireundeu traditional village in the context of introducing history, culture, and other local wisdom values can be put in a more interesting storytelling educational digital media, especially for a younger generation [29].

The design of this educational digital media application becomes an effort of etnopedagy, where local wisdom value-based education is practically integrated into the learning process [30]. The local wisdom based-learning that is given in the form of educational digital media 3D application may lead to improve spatial competence and students' learning motivation [31].

(a)

(b)

**Fig. 9. Display of *"Makanan Khas Kampung Adat
Cireundeu"* educational digital media application.**

4. Conclusions

The design of this educational digital media was motivated by the strong will to introduce local wisdom values of Cireundeu traditional village, especially its traditional food namely *rasi* and various *rasi* products in a digital format. The educational digital medium designed is in the form of application providing information about Cireundeu traditional village, *rasi* and procedure how to make it, as well as various *rasi* products. The educational digital medium is still an offline application and the usage is limited only to students of culinary arts. However, this educational digital medium has been set in the context of ethno pedagogy whose content aspects, application interaction model, as well as application display are in the platform to grow the local wisdom values of Cireundeu traditional village. Therefore, the developed educational digital medium is considered effective. This traditional village has so many potentials as a cultural tourism site for the wider society. Based on the findings, it is recommended for future researchers to design an online "*Makanan Khas Kampung Adat Cireundeu*" educational digital medium application under the same topic

Acknowledgement

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