The Design of Legal Advisory Office Website of Samsul-Fatkhul-Serangkai (SFS) by Using Laravel Framework

Dewi Agushinta R.
Gunadarma University
Depok, West Java, Indonesia
Email: dewiar [AT] staff.gunadarma.ac.id

Anita
Gunadarma University
Depok, West Java, Indonesia

Sugiharti Binastuti
Gunadarma University
Depok, West Java, Indonesia

Prasastia Aryani Saliha
Gunadarma University
Depok, West Java, Indonesia

Abstract—**The SFS Law Office is one of the legal advisory offices located in Depok, West Java. As an advisory service, the data processing and management in the SFS Law office served manually so that errors and data loss often occurred. The purpose of this research is to build a website for this legal advisory office so that it can be a tool for the client to schedule meetings with lawyers. It can facilitate lawyers in managing their files and schedules so that it can help clients personally. This website is using Hypertext Preprocessor (PHP), JavaScript, and Cascading Style Sheets (CSS) with Laravel framework, Sublime Text as a text editor, and MySQL database. The method used in the research is Rapid Application Development (RAD). This website has three types of users, namely admin, member, and visitor. The black-box testing method results showed that all options and the web pages able to function as expected. We can access The SFS Law Office website at URL http://www.kantorkonsultanhukumsfs.com available in Bahasa. The assessment calculations from 37 respondents gave the percentage result of 86.76 %, which means that this website is in the "very good" category.**

Keywords-Design, Laravel, Legal Advisory Office, SFS Law Office, Website

I. INTRODUCTION

Internet is an interactive technology that allows users to access information and communicate through the World Wide Web (i.e. web browsers, File Transfer Protocol (FTP), email, associated hardware, Internet Service Providers, and so on).

Information System is the collection of technical and human resources that provide storage, computing, distribution, and communication of the information required by all or part of an enterprise [1].

Applications in the information system allow all consultation and communication between providers and users. The process of processing and managing data requires security, convenience, and effectiveness in handling all existing activities to get maximum results. Data insecurity and errors are problems that often occur in companies, agencies, and

foundations due to manual processing in data management. Therefore, it is necessary to have a tool or technology that can provide a solution.

The official website of advocate and legal lawyer Ernawati S.H., M.H. is one type of legal office website created to assist clients in making agreements with lawyers. The website of Advocates, Legal Lawyers, Legal Consultant, Ernawati S.H., M.H. contains an office information page, an article page, a download page, and a photo gallery page. In its implementation, this website still did not have an online consultation feature to make it easier for clients to contact lawyers when they want to reserve for consultations. With this website, the public had already informed and knowledgeable about applicable laws and regulations. This website also made the office easier to promote and introduce its office to the public [2].

The legal advisory SFS Law Office is an office that still implements data processing and management manually. SFS Law Office was established in 2012 and has several lawyers, including Samsul Bahri S. H., Fatkhul Huda S. H., and Serangkai. Daily business processes are carried out manually, without the help of using technology, only a telephone or smartphone, and a laptop. Communication with clients completed by telephone, recorded in a book or sheet of paper that can be lost. If there are many clients, wrong schedules or scheduling conflicts often occur. Data or documents from clients are written and stored in folders. These notes and documents can be slipped in everywhere. Data management is also carried out on a laptop. There is also a chance it could be stolen. The existence of the SFS legal consulting office is also not widely known, so it needs to be promoted. Because of these conditions, an application needs to create to handle all of them and can be access easily by its clients.

The legal advisory advocate office would like to form a web-like Ernawati's as one solution. The law firm SFS requires an application like this to handle its daily business process activities. Through the development of a web-based application or a website, it is expected can help clients in managing their

schedules with lawyers and can assist lawyers in managing client's data so that data loss does not occur. The website will consist of a client scheduling application, including database creation and online promotion of the SFS law-consulting firm in overcoming its business process activities.

Through this website, that SFS's clients can make an appointment easily and the public can get more information to increase their knowledge by the existence of legal articles, laws, and regulations, questions about the law, and others.

II. RESEARCH METHOD

A. Requirement Plan

The method to build this website is Rapid Application Development (RAD). RAD consists of three stages, requirements plan, design process, and implementation. The requirements plan is to identify the requirements needed to create the application. The next is the design process of the application. This stage is performed to meet the needs of creating a website design. The implementation is the stage in coding and testing the website and interfaces [3], [4].

B. General Description

The website is built to meet the client's needs in booking a schedule with a lawyer, to make it easier for lawyers in managing their files, and to help clients personally. This website developed using the Laravel framework. Laravel is an open source PHP-based web application framework, using the Model-View-Controller concept. Laravel is licensed under MIT, using GitHub as a code sharing platform. Laravel supported the Hypertext Preprocessor (PHP) programming language and MySQL database [5], [6], [7].

The homepage contains the services provided by law offices and lawyers who are members of the office. There are nine menus on the main page, divided into the profile, services, legal articles, schedules, contacts, site map, login, and register. The profile menu contains a description of the law office. The service menu accommodates a description of the services provided by the office. The legal articles menu contains a list of all articles on the website. The schedule menu contains the lawyer's schedule at the office. The contact menu contains the office's telephone number and address. The site map menu contains a list of all menus on the website main page as well. The login and register menu are useful for users to enter the user's homepage for those who already have an account or register.

C. Analysis

1) In developing this application, some software and hardware are needed. Use Case Diagram. There are three use cases:

Admin can access the admin dashboard page by entering the username and password on the admin login page.

The Software required is the Operating System Windows 10 Home Single Language 64-bit, Sublime Text 3 editor, Firefox Quantum Browser Version 66.0.3, XAMPP v.3.2.3,

Microsoft Visio 2016, and StarUML. XAMPP is a stand-alone server (localhost) that stands for X (any four operating systems), Apache, MySQL, PHP, and Perl.

The hardware used for developing this website is the HP 14-1m015TU Laptop, Intel Celeron Dual Core N3060 1.6GHz, 4GB RAM, and 512GB HDD.

D. Design Process

The website is modeled with UML design [8]. The website front end and back end interfaces are also designed. The UML diagram design used Use Case Diagrams and Class Diagrams as the Business Process Model and Notation (BPMN) diagram design [9]. This BPMN diagram is an activity diagram in UML that presents a more complete and more detailed diagram [10], [11].

1) Use Case Diagram. There are three use cases:

a) Admin. Admin can access the admin dashboard page by entering the username and password on the admin login page. On the admin dashboard page, there are several menus, profiles, articles, users, schedules, documents, inbox, sent messages, and logout. The admin can view, add, and delete article data on the profile menu. The admin can view and delete user data on the user menu. The admin can view the schedule on the Schedule menu. The admin can view, add, and delete documents on the document menu. In the inbox menu, the admin can view, reply, and delete incoming messages. In the sent message menu, the admin can view and delete messages that the admin has sent to the user. The logout button functions as an exit button so that the admin can leave the page. Fig. 1 shows the Admin Use Case Diagram.
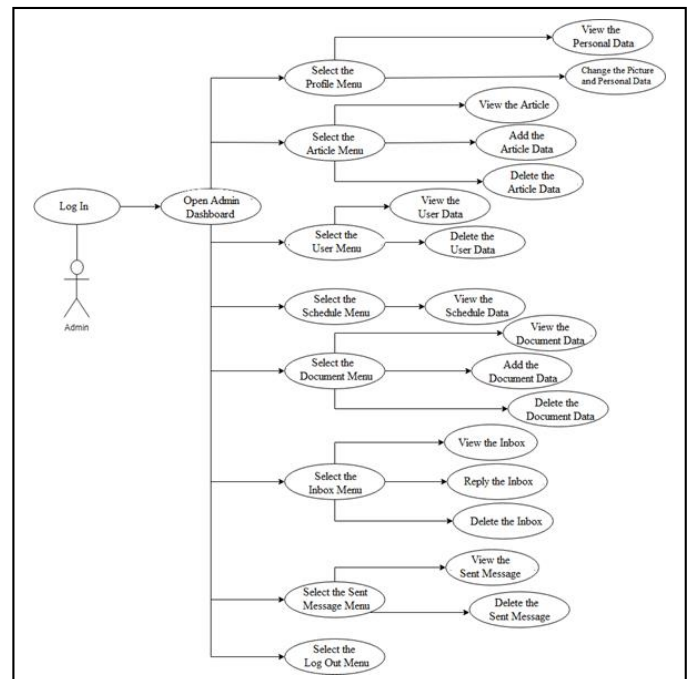

Figure 1. Admin Use Case Diagram.

b) Member. Member can access the admin dashboard page by entering the username and password on the login page. There are profiles, schedules, documents, inbox, sent messages, and logout on the member dashboard page. A member can view and change their data and photos on the profile menu. A member can view, create, and delete schedule data on the schedule menu. A member can view, add, and delete document data on the document menu. In the inbox menu, a member can view and delete incoming messages. On the sent message menu, a member can view, dispatch, and delete sent messages. The logout button function as an exit button so that members can leave the member page. Fig. 2 shows the Member Use Case Diagram.
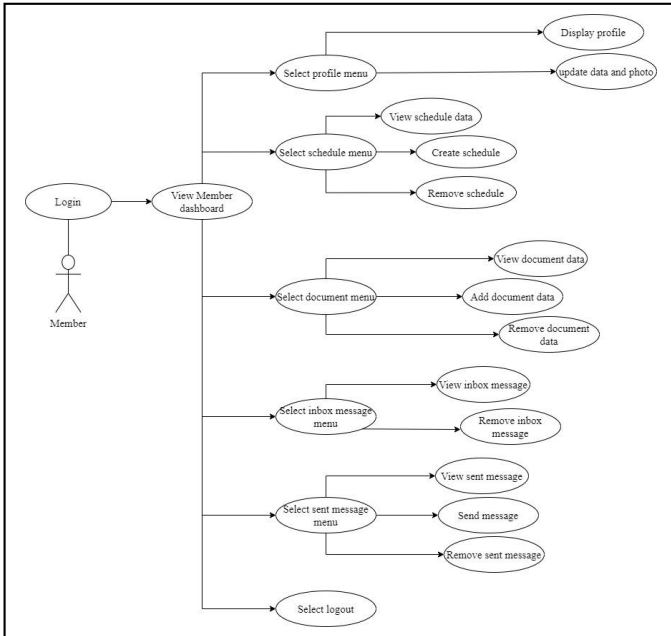

Figure 2.   Member Use Case Diagram.

c) Visitor. The visitor is a user who is not a member. When a visitor accesses the website, it will go to the homepage.
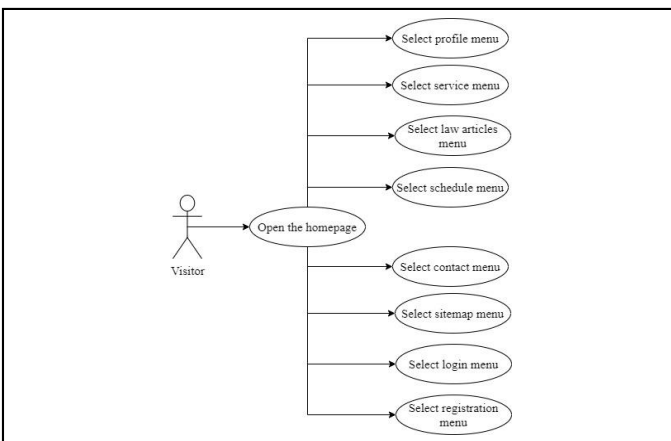

Figure 3.   Visitor Use Case Diagram.

The menus on this website include the profile, competencies, legal articles, schedules, contact, login, and register. The profile, competency, and legal article pages are the same as for the members. The schedule page provides service schedules for general consultation. The contact page contains the company address and its phone number. A visitor who is not a member can press the register button to go to the list page. Fig. 3 shows the Visitor Use Case Diagram.

2) Class Diagram. This class diagram is a description of the database design on this website. The tables needed on this website consist of nine tables, namely the admin table, the article table, the files table, the files_admin table, the inbox table, the schedule table, the outbox table, the member table, and the visitor table. Fig. 4 shows the Website Class Diagram.
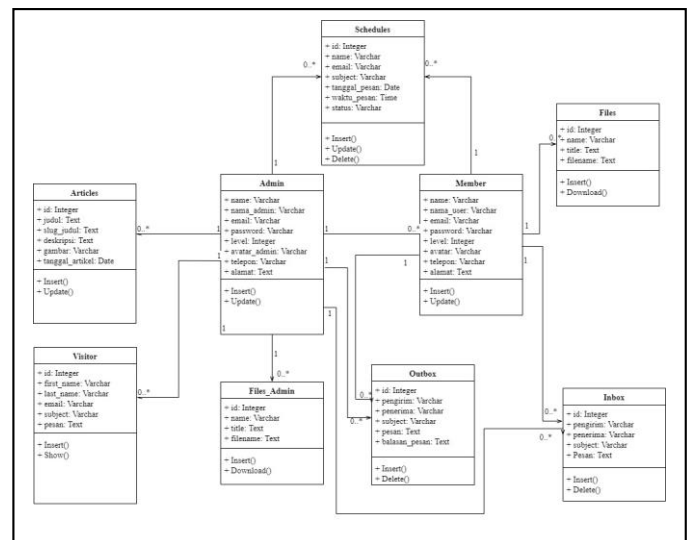

Figure 4.   Website Class Diagram.

3) BPMN Diagram. The analysis of developing this website uses the (BPMN). The BPMN diagram illustrates the design process of all activities on the website grouped into categories graphically. Fig. 5 shows the BPMN diagram on the website. In the BPMN diagram, three swim lanes represent each user on the website, namely Visitor, Member, and Admin. In a visitor swim lane, when a visitor accesses, it will go to the homepage. The menus on this website include the profile menu, competencies, legal articles, schedules, contacts, login, and register. The profile page contains a description of the company, the competency page provides company services, the legal articles page accommodates information about the law stuff, the schedule page holds a service schedule provided by the company for consultation, and the contact page contains the company address and telephone numbers. A visitor who is already a member can click the login button to go to the entrance page. A visitor who is not members can press the register button to go to the register page. A member

can access their homepage by entering the username and password from the member swim lane. There are profiles, schedules, documents, inbox, sent messages, and log out menus on the member home page. Members can view and change their data and photos on the profile menu, and members can view, create, and delete schedule data on the schedule menu. On the document menu, members can view, add, and delete document data. In the inbox menu, members can view and delete incoming messages, and on the sent message menu, members can view, deliver, and delete a sent message. The logout button functions to exit the member page. In the admin swim lane, the admin can access the admin homepage by entering the username and password on the admin login page. On the admin homepage, there are several menus, profiles, articles, users, schedules, documents, inbox, sent messages, and logout. The menus on the admin page have the same function as the member page. The logout button functions to exit the admin page.

Figure 5.   BPMN Diagram.

III.   DISCUSSION

A.   Installing Laravel Framework 5.4

The first step to do in developing a website by using the front end and back end method is by installing Laravel Framework [12]. In this step, the Laravel Framework version 5.4 adjusted. The steps are:

- Install XAMPP as an intermediary for opening PHP files with the database.

- Install the composer on a folder.

- Open the command prompt by clicking the button on the windows and type "command prompt" in the search column. After the command prompt opened, type the command "composer create-project -prefer-dist laravel/laravel SFSweb "5.4.*"". The researcher makes a project in the drive "C" in the folder htdocs that put in the XAMPP folder with SFSweb as the folder's name contains congenital folders and files from the Laravel framework.

B.   Database Creation

The database created using MySQL on PHPMyAdmin. Nine tables on this website are admin, articles, files, files_admin, inbox, schedule, outbox, members, and visitor. Admin and users table function to store the admin and user data who registered on the website. The article table functions to save the article data. The files and files_admin table function to store the data file uploaded by the user and admin. Schedule table functions to keep the schedule data created by the user. Outbox and Inbox table function to save the message sent by admin and user. Headings, or heads, are organizational devices that guide the reader through your paper. There are two types: (1) component heads and (2) text heads.

C.   Database Configuration on Laravel 5.4

The first step to do in developing a website by using the front end and back end method is by installing Laravel Framework [12]. In this step, the Laravel Framework version 5.4 adjusted. The steps are:

- Open a text editor, then choose the "open folder" and choose the "SFSweb" folder located in the htdocs folder that exists in the XAMPP folder in folder C.

- Open files .env in the Laravel root folder.

- Change DB_DATABASE to SFSweb and enter the database username and password. Install XAMPP as an intermediary for opening PHP files with the database.

D.   Website Page Creation

After the Laravel had installation process and database have configured, the next step is to create a website page. Creating this page involves a model, view, and controller. In making this website page, there are three main pages: (1) main page, (2) user (member and visitor) page, and (3) admin page.
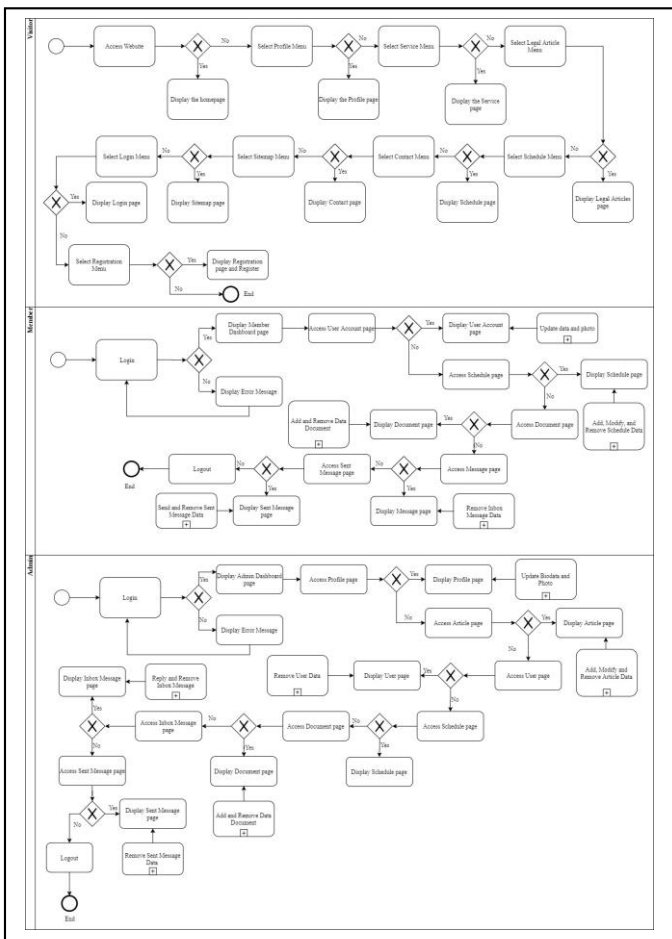
E. Website Interface Testing

The first step to do in developing a website by using the front end and back end method is by installing Laravel Framework [12]. In this step, the Laravel Framework version 5.4 adjusted. Samsul-Fatkhul-Serangkai (SFS) Law office website testing is performed by opening every page that is on the websites and checked whether these pages would show or not. The testing was conducted on an HP 14-am015TU Laptop browser with the Windows 10 Home Single Language 64-bit Operating System. The Website testing consists of three views, namely the visitor, the member, and the admin using the black-box method. Fig. 6, Fig. 7, and Fig. 8 are the interfaces of the SFS Law Office website tested.

This website developed using front-end and back-end methods. The front-end of the website is the main page of the website when you first access the website that is useful for providing information to the public about the SFS Law Office. If users access this website, they will go to the main home page. This page contains general information about this website. A schedule button is also on this page to create a schedule. Users who are already member of this website can access this button, shown in Fig. 6.

Figure 6. Homepage View.

Figure 7. Service Page View.

Fig. 7 illustrates the details of services contains the competencies possessed by the office. The client's schedule page contains the schedule of services provided by this SFS Law Office for general consultation to makes a schedule to meet with a lawyer. This page is also useful for confirming to the user if she/ he wants to request the appointment, and request for changing the schedule, shown in Fig. 8.
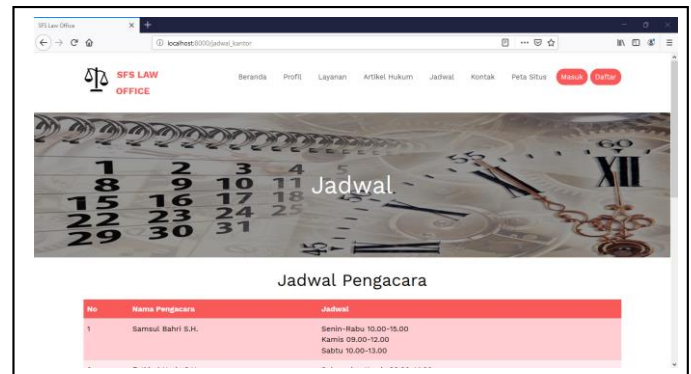

Figure 8. Schedule View.

The back-end website extended for members and admin. The back-end website is useful for making users use the features easily. The back-end website member consists of seven menus, which are homepage, user account, schedule, documents, inbox, sent messages, and logout. The back-end website admin is useful for making it easier to provide information on the front-end and managing client schedules. The back-end website admin consists of nine menus, namely dashboard, profile, articles, users, schedules, documents, inbox, sent messages, and logout. This website developed using the Laravel framework with the help of the PHP programming language and the MySQL database.

F. User Acceptance Test (UAT)

There are 37 respondents answered the questionnaires given in UAT. This questionnaire consists of three question criteria with ten questions and uses a Likert scale [13]. The categories question are user interface, usability, and flow control. There are five alternative answers: Very Good (5), Good (4), Fair (3), Bad (2), and Very Bad (1). It processed data obtained by multiplying each answer point by the weight determined. UAT assessment on 37 respondents resulted in a calculation of 86.76% categorized as very good.

IV. CONCLUSION

The Samsul-Fatkhul-Serangkai (SFS) Law Office website development using the Laravel framework was successfully created, implemented, and tested. The development of the Samsul-Fatkhul-Serangkai (SFS) Law Office Website using the Laravel Framework is a way to promote and give more information about the SFS Law Office and a means for clients to schedule meetings with lawyers.

REFERENCES

[1] HM. Jogiyanto, Analisis dan Desain (Sistem Informasi Pendekatan Terstruktur Teori dan Praktek Aplikasi Bisnis), Andi: Yogyakarta, 2017

[2] M. Hadi, "Pembuatan Website Kantor Advokad Penasehat Hukum, Konsultan Hukum Ny. Ernawati SH, MH," Indonesian Journal on Networking and Security, vol. 2, no. 3, 2013, pp. 40-45.

[3] Yurindra, Software Engineering, Deepublish: Yogyakarta, 2017.

[4] F. Fatima, M. Javed, F. Amjad, and U. G. Khan., "An Approach to Enhance Quality of The RAD Model Using Agents," J American Science, vol. 14, no. 9, 2018, pp. 47-55.

[5] R. V. Palit, Y. D. Y. Rindengan, and A. S. M. Lumenta, "Rancangan Sistem Informasi Keuangan Gereja Berbasis Web Di Jemaat GMIM Bukit Moria Malalayang," Jurnal Teknik Elektro dan Komputer, vol. 4, no. 7, 2015, pp. 1-7.

[6] R. H. Sianipar, Pemrograman Database Menggunakan MySQL, Andi: Yogyakarta, 2015.

[7] Anisya and Y. Wandyra, "Rekayasa Perangkat Lunak Pengendalian Inventori Menggunakan Metode SMA (Single Moving Average) Berbasis AJAX (Asynchronous Javascript and XML) (Studi Kasus: PTP Nusantara VI (Persero) Unit Usaha Kayu Aro)," Jurnal TEKNOIF, vol. 4, no. 2, 2016, pp. 11-17.

[8] Yuhandri and R. Winiarti, "Pembuatan Sistem Pakar Berbasis Web untuk Mendiagnosa Penyakit Anak," Jurnal KomTekInfo Fakultas Ilmu Komputer, vol. 1, no. 2, 2014, pp. 70-76.

[9] M. Shalahuddin and A. S. Rosa, Rekayasa Perangkat Lunak Terstruktur dan Berorientasi Objek, Informatika: Bandung, 2013.

[10] S. K. Sari and Asniar, "Analisis dan Pemodelan Proses Bisnis Prosedur Pelaksanaan Proyek Akhir sebagai Alat Bantu Identifikasi Kebutuhan Sistem," Jurnal INFOTEL, vol. 7, no. 2, 2015, pp. 143-152.

[11] R Fitriyani, B Suhurdin, and A Sumaryanto, "Perancangan Sistem Prosedur Skripsi Menggunakan Metode BPMN dan RAD Pada Kampus STMIK Mercusuar," Jurnal TEKNOM, vol. 2, no. 2, 2018, pp. 1-13.

[12] Mukhlasin and M. A. Hafid, Laravel The PHP Framework For Web Artisan, Jakarta, 2018.

[13] T. Nemoto and D. Beglar, "Developing Likert-scale questionnaires," In N. Sonda & A. Krause (Eds.), JALT2013 Conference Proceedings, Tokyo: JALT, 2014.