DESIGN AND BUILD OMOTENASHI (JAPANESE-STYLE HOSPITALITY) APPLICATIONS THROUGH CHANOYU BASED ON GRAPHICAL USERS INTERFACES (GUI)

Teti Indriati Kastuti *, a, b, Sri Wulandari b, c, Christine Dian Permata Sarı c, d

a, b, c Universitas Teknologi Yogyakarta, Indonesia
d tetiindriati@uty.ac.id, 2 sri.wulandari@staff.uty.ac.id, 3 christine.dian@uty.ac.id

Abstract
Along with answering the challenges of the tourism industry, which is increasingly intensifying with information technology, this study seeks to convey omotenashi knowledge using information technology in the form of digital applications. This application was developed using the R&D method and the ADDIE learning model, combining thinking skills, ethics, and activities. This type of digital application approach uses a Graphical User Interface (GUI). The purpose of this study is to create an application that provides information about 1) Knowledge of the philosophical values contained in chanoyu; 2) Knowledge of the equipment used; 3) Knowledge of the process of serving tea; 4) Knowledge of cha kaiseki (Japanese table manners); 5) Knowledge of how to deal with guests in good Japanese style. Through the interfaces of the omotenashi application, Japanese and tourism learners will more easily understand the chanoyu philosophy and the stages of the procedure that usually require a teacher in every move. With this application, the problem can be solved by following these standards, students can practice independently to get omotenashi scores and apply them in life.

Keywords: Chakaiseki, Chanoyu, GUI, Hospitality, Omotenashi, Tourism.

I. INTRODUCTION
It is common knowledge that the fierce competition in tourism has made stakeholders develop various strategies to maintain their existence. This became even more difficult when Covid-19, declared a global pandemic on March 11, 2020, hit the tourism industry and ravaged the well-ordered order and pattern in tourism. Covid-19 has caused tourists to become stuck because tourism activities worldwide are limited and even stopped. Along with the reopening of tourist areas, the loosening of restrictions, and the discovery of vaccines, there are also opportunities for the hotel accommodation aspect of tourism to get back into the industry. Tourists (consumers) flocked to channel their latent tourism desires due to the Covid-19 pandemic. This is a momentum that the world of tourism, especially hospitality, needs to realize to provide the best tourism services to welcome these potential tourists. Providers of tourism accommodation services and products must design strategic steps to channel the benefits of re-creation in various tourism activities and services. This tour service, of course, must be based on Hospitality. By examining empirical phenomena, the researcher considers a need for breakthroughs in improving and adding aspects of hospitality in tourism accommodation in Indonesia. This is an effort to enhance the competitiveness and quality of Indonesia’s human resources tourism. The quality and quantity of tourism people must continue to be improved by meeting standards at least based on the criteria of the ASEAN Economic Community. Thus, Indonesian tourism people have a comparative advantage compared to workers from other countries. Along with responding to the challenges of the tourism industry, which is increasingly intensive with information technology, this research seeks to convey knowledge about the hospitality aspect through information technology in the form of software applications. This is because hospitality is the breath of tourism and has a very important role in the course of tourism and the use of technology is a fast way of conveying important knowledge to targeted technology users.

This study gives an understanding through information technology in the form of a Japanese-style hospitality-concept, namely omotenashi. Omotenashi is a traditional norm embedded in Japanese-style services and implicitly has translations of “hospitality,” “entertainment,” and “service” [1]. The most common feature that distinguishes omotenashi from Western-style hospitality is that hospitality provides service with the expectation of something (tips, salary, etc.). In contrast, omotenashi does not [2] and provides service ‘all out’ as if it was the last chance. This study responds to previous research, namely the Comparative Study of Chanoyu Tea and Tea Serving in Yogyakarta [3] which explains the philosophy of omotenashi on chanoyu (a typical Japanese tea ceremony). The response in question is to present an understanding of omotenashi through information technology. In addition, the previous research was also used as a guide in this study.

II. LITERATURE REVIEW
Given that the consumer-oriented hospitality industry is highly competitive and booming in its development [4], a strong foundation is needed to face the world of work in the industry. This is important because human
resources significantly impact the industry's distribution of services and products, and the tourism industry is labor-intensive [5]. This is very important because the products sold by the hotel consist of two main products, tangible products; hotel rooms, restaurants, spas, and various other hotel facilities, and intangible products; comfort, service, atmosphere, and so on [6]. In hospitality in the world of education, using industry expertise standards as curriculum or learning designs can facilitate alignment between educational institutions and industry [7]. Of course, this needs to be accompanied by the renewal of different strategies and approaches along with the era's development, especially the service and hospitality in tourism.

The explanation of omotenashi should start from where it comes. Omotenashi is the breath/spirit/soul for the course of an action related to service and Hospitality [8]. Omotenashi has become the soul of Japanese-style service and hospitality and is the driving force for every service and hospitality act in Japan [9]. The origin of this omotenashi can be described in chanoyu. If explained in one breath, chanoyu (茶の湯) is a form of Japanese culture from ancient times in the form of a tea ceremony that has its own philosophical and artistic value, which is carried out with a series of procedures and procedures for serving tea and serving guests [10]. If dissected, cha (茶) means "tea," no (の), which is a conjunction, and yu (湯), which means "warm," "warm water," can also be "hot water." Chanoyu is also known as Chadou, which means "The way of tea" or "way for (consumming/serving) tea" [11].

Previously, the tea habit had a long history and had Chinese roots [12]. It was only in the Heian era (794-1185 AD) when tea entered Japan [13]; tea was not only consumed to quench thirst but became a lifestyle in the spectrum of Japanese culture. Until then, it was further developed by Sen no Ryuku [10], a master who manages an Ursanke, a tea school/school that teaches how to serve tea in a tea ceremony. Chanoyu is driven by Zen in Japanese, Chan in Chinese, and Dhyana in Sanskrit; all these words have the same meaning, namely "meditation" [14]. This is not without reason, but rather that in the 12th century, tea spread among Zen monks as a daily drink used to fight drowsiness during meditation [10], which is why the development of the tradition was heavily influenced by Zen Buddhism [11]. From this, the procedures and behavior carried out by a tea maker in chanoyu can be seen.

The previous research [3] was intended to lead to the similarities and differences between the two tea-drinking procedures, namely chanoyu from Japan and Patehan from Yogyakarta. The similarity lies in the procedure of the presentation process, while the difference is very significant. Namely, the Japanese tea ceremony is full of philosophical values and integrates cognitive, affective, and psychomotor learning. These values are the basis for Japanese omotenashi, higher than hospitality. Chanoyu can indeed be said to be an example of Japanese social life. This is due to its balanced blend of elements from the oldest Eastern cultures. This is why many Japanese people consider the tea ceremony uniquely Japanese and not found anywhere else. All movements in the drinking ceremony are intended to create harmony, purity, self-respect, and peace. It is the ability and wisdom acquired through in-depth training of body and mind through the practice of chanoyu. From this description and the background in the previous section, the researcher wants to spread the values of omotenashi to stakeholders and learners of tourism and Japanese in Indonesia.

A Graphical User Interface (GUI) is an important part of any software application for today's users. In its implementation, the GUI has several characteristics: using asynchronous mode in operation, using standard input and output, and having an easy structure to interact with users so that it produces significantly different and more difficult tests than traditional software testing. GUI must also meet the following criteria: significant design, development, and testing activities [15]. We are presenting things that are easier to use in application functions, namely by organizing them into choices and only presenting things that are easy to understand.

III. RESEARCH METHODS

This study uses the Research and Development (R&D) method. Sugiyono [16] explained, "Research and Development is a method used to plan, create, produce certain products, and test the effectiveness of these products." This method is used because this research aims to produce a product in the form of a digital application that contains information about omotenashi knowledge. The application referred to in this study is a product of research and development in the tourism sector as a learning medium [16].

The ADDIE model is one of the most appropriate alternatives in choosing the learning model introduced by the omotenashi application design because the ADDIE model is the main teaching design model and is a teaching resource. The ADDIE model goes through five stages, namely, (i) Analysis; (ii) Design; (iii) Development; (iv) Implementation; and (v) Evaluation. This model is chosen because it is proven to be very effective in developing learning. This statement is supported by Molenda [17], who stated satisfaction with using the ADDIE model because it is the only model to describe a systematic approach which is almost the same as the development of the instructional system. Cheung [18] expressed the same opinion that ADDIE is very appropriate to be applied in a curriculum that adopts holistic, cognitive, affective, and psychomotor knowledge. Cheung [18] added that this model is more rational and complete than other models, so it can be implemented in various product developments, including learning methods, teaching materials, and media. Please read these instructions carefully, so all articles organized by IJCAS have the same style.
IV. RESULTS AND DISCUSSION

Learning is familiar in the world of education. Because learning activities are the main activities in the world of education. We strive to develop various learning models and strategies in the hope that our communication in the classroom will produce the expected product. Teachers must always be creative in developing permanent learning models to achieve the ideal learning objectives. The ADDIE model was chosen as one of the solution steps in solving learning. From a training point of view, adequate facilities and infrastructure are very supportive. The reason for choosing the ADDIE model is because the approach is very systematic and appropriate for learning. This model provides an opportunity for users to be interactive and easy to evaluate to the next stage. The cyclical process of the ADDIE framework is continuous over time, from planning to instructional implementation. ADDIE has five stages of work, and each stage has its purpose and function that supports learning design. The results of this study can be explained as follows.

A. Analysis

The analysis phase starts from the process of taking the definition needed by students, namely what is needed, what problems are faced, and the selection of theory. At this stage, it can be divided into three segments: student analysis, learning analysis (including learning objectives), and online delivery analysis. Therefore, the output that will be produced is in the form of characteristics or profiles of prospective study participants, identification of gaps, identification of needs, and detailed task analysis based on needs. Activities at the analysis stage to determine the components needed for the next learning stage are as follows. Analyze the aspects that must be conveyed in the omotenashi application. The output of this stage produces: 1) Knowledge of the philosophical values contained in chanoyu, internalized into the history of chadou, the spirit of chadou, and the meaning behind the seven rules of Rikyuu; 2) Understanding the meaning of chadou through the procedure of serving tea; 3) Knowledgeable attitude towards Japanese guests; 4) Knowledge of chakaiseki. The indicators for each output are explained in Table 1.

<table>
<thead>
<tr>
<th>TABLE I. CONCEPT OF OMOTENASHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept of omotenashi</td>
</tr>
<tr>
<td>A. Knowledge of the philosophical values inherent in chanoyu, internalized into the history of chadou, the spirit of chadou, and the meaning behind the seven rules of Rikyuu.</td>
</tr>
<tr>
<td>1. Able to explain the philosophical values inherent in chanoyu, such as simplicity, humility, balance, mindfulness, and appreciation of nature.</td>
</tr>
<tr>
<td>2. Able to describe the historical development of chadou and its relationship with the philosophical values in Japanese culture.</td>
</tr>
<tr>
<td>3. Demonstrates an understanding of the spirit of chadou, such as dedication, patience, and meticulousness in every step.</td>
</tr>
<tr>
<td>4. Able to explain the meaning behind the seven rules of Rikyuu, such as harmony, sustainability, simplicity, and emphasis on the importance of guests.</td>
</tr>
<tr>
<td>B. Understanding the meaning of chadou through the procedure of serving tea.</td>
</tr>
<tr>
<td>1. Able to explain the steps in the procedure of tea preparation, such as cleaning the utensils, brewing the tea, serving the tea to guests, and cleaning the utensils afterward.</td>
</tr>
<tr>
<td>2. Able to interpret the meaning behind each step in the tea preparation procedure, such as appreciating simplicity and beauty, focusing on the present moment, and building an intimate relationship with guests.</td>
</tr>
<tr>
<td>C. Understanding the meaning of chadou through the procedure of serving tea</td>
</tr>
<tr>
<td>1. Demonstrates knowledge of etiquette and manners in interacting with Japanese guests, such as polite greetings, humility, and respect for their customs and traditions.</td>
</tr>
<tr>
<td>2. Able to appreciate cultural differences and show interest in further understanding Japanese guests.</td>
</tr>
<tr>
<td>D. Knowledge of chakaiseki</td>
</tr>
<tr>
<td>1. Able to explain the concept of chakaiseki, which is a light meal served before tea in the chadou ceremony.</td>
</tr>
<tr>
<td>2. Able to identify the ingredients and typical dishes that are commonly served in chakaiseki.</td>
</tr>
<tr>
<td>3. Demonstrate an understanding of the importance of harmony between food and tea in the context of chadou.</td>
</tr>
</tbody>
</table>
B. Design

This stage is provided in making the design (blueprint). The steps that need to be passed in the design process are: 1) Formulate SMAR learning objectives (Specific, Measurable, Applicable, and Realistic), 2) Determine the right learning strategy to achieve the goal (the right combination of media and methods), 3) Determine other supporting sources (learning resources, learning environment and others). The product at this stage is the omotenashi application interface. With this guide, it is targeted that students can practice omotenashi. The outline of omotenashi knowledge is presented hierarchically and arranged into instruments. UI UX design is used in constructing omotenashi knowledge. In this stage, product prototypes are produced in the form of writing, images, and videos.

![GUI Diagram](image-url)

FIGURE 1. GRAPHICAL USER INTERFACE (GUI) FOR OMOTENASHI

C. Development

Development is the process of realizing blueprints or designs into reality in learning activities. At this stage, e-learning can be developed with certain platforms for learning. The first thing to do in product development is to analyze the users of the system and what things users can do in the system. System users are teachers, administrators, and students. Because the media developed uses application interfaces so that everyone can access it. This stage is programming, product design, prototypes, and product contents that are further developed into digital applications. The output of this stage is a digital application ready to be tested. Knowledge of chanoyu philosophical values is presented through descriptions and pictures. The history and spirit of chadou are very important to understand for someone who wants to enter the world of chadou. The Way of Drinking Tea is related to activities that are part of daily life, but mastering it requires great cultivation. In this sense, the way of drinking tea is best described as the Art of Living. The philosophical value taught by Rikyu is a breath and spirit that can lead one into the world of chadou.

Understanding the meaning of Chado begins with introducing the tools used when serving tea. The tools presented are very basic, and some can be found in Indonesia. The function of the tool is explained in Indonesian. After understanding what tools to prepare, the next warigeiko practice. Warigeiko is the stage of someone who is just learning chanoyu. This stage is very easy to learn and helps the learner practice chanoyu more easily. However, because some terms are difficult to translate into Indonesian, it is necessary to explain them with pictures or motion. In this application, things that are difficult to explain verbally are shown through pictures or videos. For example the stages: 1) preparation in the kitchen (chakin no tatami, natsume ni ocha o haku, chawan o shikumu), 2) preparation in the tea room (kakejiku, chabana), 3) warigeiko (fukusanotatamikata, fukusanotsukekata, fukusasabaki, natsumenofukikata, chashakunofukikata, haikemidasuokifukikata, chasentouoshi, chawanmofukikata), 4) guest preparation (fusumanoakekata, fusumanoshimekata, suwarikata, tachikata, ojigi, sekihairi), 5) guest at chashitsu (usucha, okashinoitadakikata, natsume, chashakuro).

Glossary attachments are very helpful for learners in reading kanji and its meanings. The video display will explain the steps above, but the procedure shown in the video has a different name. It uses tana (shelf), so the
procedure is called *tanatemae*. At this stage, application users, especially Japanese language learners, can practice from preparation to serving tea. Knowledge of dealing with Japanese guests is a stage where students can examine several methods used to achieve the company’s *omotenashi* standards. 1) A mechanism that facilitates employees to facilitate the sharing of information to provide services tailored to each guest. *Omotenashi* service needs to be tailored to each guest. For this reason, it is important to introduce a mechanism that makes it easy to share customer information on tablets and PCs. 2) Diligently listen to employees to create an environment where employees can work with a smile on their faces. When employees serve guests, does the company force them to behave in *omotenashi*? *Omotenashi* can also be a mental burden for employees/staff. 3) Organize useless work, improve efficiency, and realize fast and smooth responses. If there is a lot of useless work, it will make customers wait a long time, leading to customer complaints. 4) Introducing IT tools, etc. to reach the augmentation above a certain level.

To improve the image of a brand or company through *omotenashi*, all employees must be able to provide the same high-quality response, not just one person. Employees/staff can learn how senior employees interact in an environment closer to real situations so that other employees will quickly improve their skills. In addition, employees who are busy with work do not have to take the time to guide their subordinates. However, most companies have problems preventing them from educating employees/staff even if they want to due to a lack of employee skills and time to mentor employees, etc. With the IT equipment, it will be easier for anyone to serve with a certain level of quality, so the level of *omotenashi* will also increase. Using IT tools, customer information is also easily accessible, and communication errors can also be avoided. 5) We are introducing IT tools to reach the augmentation above a certain level. So far, we have said that there are three ways to improve *omotenashi*: Share customer information, eliminate useless work and increase efficiency, and strengthen human resource development. With the IT equipment, it will be easier for anyone to serve with a certain level of quality, so the level of *omotenashi* will also increase. Using IT tools, customer information is also easily accessible, and communication errors can also be avoided. 6) Create rules for evaluating business performance to provide better services. When evaluating business performance, it will be easier to see the effect if the targets and results before and after the implementation of a policy are indicated by numbers such as the number of users, number of customers served, Service time, and Customer retention/royalty rate. However, collecting data manually for evaluation takes effort and time. With IT tools, you can easily analyze with a tablet or computer, making evaluating performance easier. 7) Set benchmarks for serving potential customers based on company strengths and weaknesses.

To improve *omotenashi*, it is necessary to understand the company's strengths and weaknesses and consider how to serve customers. The following three questions are often asked when thinking about *omotenashi* to customers. What is the *omotenashi* method of communicating with customers? What is the *omotenashi* method over the phone? What are some examples of systems that lead to *omotenashi*. [Question 1] What is the *omotenashi* method of communicating with customers? Be prepared in advance so you can respond first, understand past interactions with repeat customers, Delivered much better *omotenashi* than customer expectations. Preparation is very important for *omotenashi*. You can serve if you check what you have talked to customers in the past. [Question 2] What is the method of "Omotenashi" over the phone? Automation is done when a customer calls. It will increase customer satisfaction and return rates. When serving by telephone, let's do it based on the following points.: Knowing accurate customer information before answering calls; Say thanks to repeating customers; Respond according to the previous conversation; Implement mechanisms to reduce telephone service time; We not only get accurate customer information but also thank you in advance. [Question 3] What is an obvious example of a system that leads to "Omotenashi"? If you would like to introduce a tool to increase your *Omotenashi*, we recommend the following three things: Automatic recording, which can convert voice to text.; Show customer information at the time of the incoming call. (Call to all): No application or equipment is required; It Can be introduced cheaply. Explanation of the meaning of *omotenashi*, manners, service, and hospitality are often used or compared with the same meaning as "omotenashi," and the difference from *omotenashi*.

*Omotenashi* in Japanese is attention through the eyes, mind, and heart. This sentence means that *omotenashi* is done in a low-key and unobtrusive way with the "WABI SABI heart." It is also shown in the tea ceremony. To welcome guests, attention that is not visible is expressed by things visible, such as preparing a warm welcome while thinking about people who are not there yet. However, the effort and hard work behind the scenes for that purpose need not be shown and accentuated so that the *omotenashi* person does not have to feel burdened. That is the essence of *omotenashi*. With this application, we will be able to learn *omotenashi* soul, "building relationships between humans", "caring", "caring heart for others", "quick response", "companion heart", "flexible response", and "sincere heart" respectively. Let's master how to express *omotenashi* by learning how to express *omotenashi* heart with words. *omotenashi* and Hospitality. *Omotenashi* and "Hospitality" are the same in the sense of doing something for someone else for no money in return. But *omotenashi* is not only done when the guest is in front of us, but we still think about it when the guest is not in front of us as well. Then in "Hospitality", we are more friendly and close to others, but in "omotenashi" we keep our distance from others based on courtesy and manners.
The *omotenashi* application interface at the cha kaiseki knowledge stage explains *kaiseki*, the origin of kaiseki appears to change its name to *chakaiseki*, which is somewhat foreign to the Western world and only recently known in the West. However, it is not yet known in Asia, especially in Indonesia. *Kaiseki* is cooked based on the seven basic pillars. This is very important because the average Japanese eats about 100 different dishes compared to the average of 30 Western dishes. The Japanese also rely on seven different basic cooking methods to bring out the best in their cooking. The basic meal usually consists of three small portions, each cooked differently, accompanied by rice and miso soup, which is called the *"ichiju sansai"* principle. It can be divided into three main areas based on the dishes offered, cooking with one meal.

**D. Implementation**

Implementation is one the real evidence in actualizing the developed learning system. This means that the roles and functions in this stage are installed and arranged so that they can be implemented. This application is tested directly through learning, starting from concepts, pictures, and videos, and whether it can be absorbed and actualized by students. The trial was carried out in two stages, namely, the content validity test of the first stage by subject content experts, learning media experts, and learning design experts. Japanese language students and lecturers conducted the second phase of the practicality test. The results of this trial are used as a basis for conducting evaluation activities The testing stage aims to test the interfaces of the *omotenashi* application by applying the application to Japanese language study students. This *omotenashi* application is easy to use, the language features are clear, and it is very useful in understanding and implementing *omotenashi*. In the testing phase, it is divided into functionality, database, performance, security, interface, and usability. Hosting is a place to store all files and data so that everyone can access them. Maintenance is used for program maintenance.

**E. Assessment**

In processing data derived from input, suggestions, and criticism from experts, as well as the results of field tests, revisions are carried out in stages to create better media. The results of the revision were then evaluated to get optimal results for this application in terms of content, design, and understanding when using it. This application has been tested to be accessible, understood, and practiced. The user interface serves to input new knowledge into the knowledge base of expert systems (ES) and displays system explanations. It guides using the system as a complete step-by-step so that users understand what will be done on a system. The most important thing in building a user interface is the ease of using/running the system, being interactive and communicative. At the same time, the difficulties in developing/building a program should not be shown too much.

**V. Conclusion**

The *omotenashi* application interface has been successfully developed in understanding *omotenashi* through chanoyu with UI UX design methodology, database, coding, testing, hosting, and maintenance. The *omotenashi* understanding application interfaces are very helpful for students in understanding the history of chanoyu and understanding *chadou* from preparation to serving tea. In optimizing the understanding of *omotenashi*, the interfaces of the *omotenashi* application provide an understanding of *chakaiseki*, and what food can be served so that it can increase the wealth of knowledge of students who are interested in the practice of chanoyu. The interfaces of this *omotenashi* application have been tested, and the results can be accepted and understood by application users. This application is expected to bridge the holistic learning of Japanese culture in which learning builds human beings as a whole and intact by developing all human potential which includes socio-emotional potential, intellectual potential, moral potential (character), creativity, and spirituality. The philosophical values contained in chanoyu can enrich interpersonal and intrapersonal skills, and new vocabulary related to chanoyu will increase the creativity of students.

**REFERENCES**


