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E-KIDO: The Development of Online Food Ordering System for Primary Schools to Enhance The Quality of Services

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Abstract: The coronavirus disease outbreak rapidity is putting administrators in schools to the test. Schools had to shut down during the outbreak, and virtual classrooms had to be implemented. Educational administrators have had to evaluate the types and levels of change required to help teachers and students adapt to new technology and technical abilities. Because of the continuous pandemic, educators and administrators are concerned about the mental health of their employees and students. Students and teachers are putting to the test in a way they have never been before. Standard Operating Procedures (SOP) for physical education students have been amended due to the coronavirus pandemic. The school used various methods to maintain social distance between students, including Telegram, Google Forms, or WhatsApp to take orders of students' food for recess. As technology has progressed, this way of obtaining food orders has become outdated. Additionally, this can affect the quality of services the school foods prepared there. The project's purpose is to make it easier for teachers to maintain social space between students during school recess while managing student order. Students may now place food orders more quickly and easily due to the system. A waterfall methodology was used to create this system. The system will include adding to the cart, calculating order totals, and summing up orders. A selection of participants tests the project's functionality. We found that the system effort had a beneficial effect on school food purchases at the end of the study. Teachers and students can gain from using technology such as this system, making their lives easier and transforming education to the next level.

Keywords: Coronavirus, Standard Operating Procedure (SOP), Social Distance, Quality of Services, Transforming Education

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1. Introduction

During the coronavirus pandemic, online food ordering has become popular. It is common for users to use the app to avoid physical contact with others and maintain social distance. Because of the rapid changes brought about by the coronavirus pandemic, school administrators are being put to the test. Schools were forced to close, and virtual classes were established due to the outbreak. Administrators at educational institutions have had to re-evaluate the types and amounts of change necessary to assist teachers and students in adjusting to new technologies and technical abilities [1]. Educators and administrators have noticed that the mental well-being of their teachers and students is at risk because of the ongoing pandemic [2]. Administrators in educational institutions are being tested like never before. Educators who are flexible and open to new ideas will be better prepared to deal with the inevitable changes that will come their way in the future [3]

As a result of the coronavirus outbreak, physical education students must adjust to a new Standard Operating Procedure (SOP). Everyone assumed that all students would adhere to the school's Standard Operating Procedures. However, this did not happen because many students were irritated with the online classes. There were just not enough classrooms in the school to accommodate the number of teachers needed to monitor student compliance with the SOP [4]. The school uses a variety of strategies to ensure that children remain social distance. For the duration of the recess period, students at certain schools are only permitted to purchase food from the canteen and eat it in class with the rest of their classmates in the group. Since the school has many classes, this will take some time. Additionally, schools constructed a telegram channel where students could join and place food orders within a specified time frame. To purchase the food, the students must type in their names and the menu they want to be on. Missing data may result, and the student may be unable to eat the next day at school. Parents also have difficulty returning to the orders and calculating each item individually if they are paying for their children's food in this way.

This project aims to address the issues that have occurred and establish a food ordering system. Automating the food ordering process benefits students, parents, and teachers alike. Our food ordering system will be more complex than the typical app. It is possible to reorganize the menu daily by the teacher in charge of using it. Parents can access shopping carts and can select and add items to the cart. As a result, parents can verify their orders for their children one more time before submitting them and making any necessary revisions. The system takes care of everything. Parents can purchase school supplies for their children with cash. This new technology may benefit all parties concerned. Finally, the project hopes to inspire a second school to adopt the same strategy. Teachers can also utilize it to help them improve their work regularly. As the last step, teach teachers how to use the most recent technology to their students' advantage and educate them on how.

2. Literature Review

Several studies were undertaken to acquire the information needed to improve the E-KIDO Food Ordering System before it was developed for primary schools to increase the quality of services during coronavirus. Interviews with school teachers, the majority of whom collect data by placing food orders via Telegram, are one form of data collecting. Primary school students should not rely solely on social media platforms like telegrams and WhatsApp to record food order information. Additionally, there are several disadvantages to using the following platforms to order food. It is difficult for teachers to view information on food orders that students have updated, and teachers have to figure out the number of food orders and payments manually. The quality of the school's services may also suffer due to this. The food ordering process at the school should be improved so that teachers may more efficiently collect data on the food they serve their students. Since students may order food from E-KIDO Food Ordering System, they can customise their food to their preference. Students' potential barriers can be lightened, and teachers' workloads can be reduced.

3. Materials and Methods

As part of its development, the E-KIDO system must adhere to predetermined quality and compliance criteria. Creating a bag system requires extensive planning to ensure that the project is finished on time and to the highest possible standard. A methodology defines each phase of the software development life cycle. Formalizing the implementation of a system development life cycle (SDLC) is possible through the SDLC approach. The specialism of the project determines the strategy to be taken. The Waterfall model is the most frequently employed methodology by system developers [5]. As a result, the waterfall model was selected for the system's development because it allows for food ordering. **Figure 1**, represents the stages of a Waterfall Model.

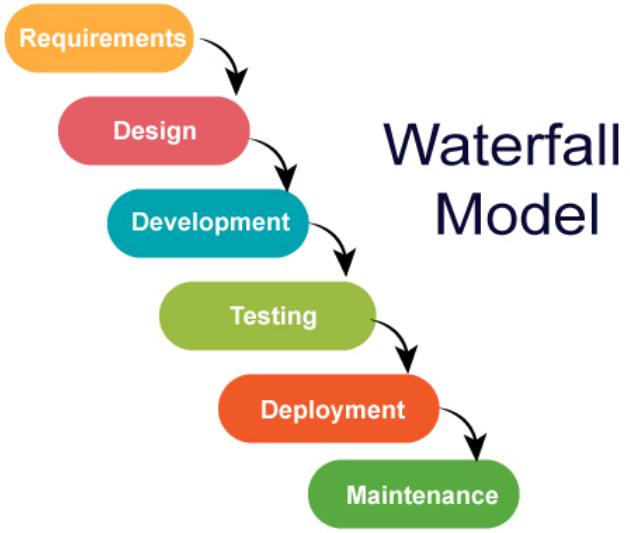

Figure 1: Waterfall Model

3.1 Requirements

Initial requirement tasks include selecting a team and submitting proposals to the project's supervisor. After the supervisor has approved the project proposal, the system developer will establish the project's objectives, problem analysis, statement problems, and importance to the school. The next step is to collect the data needed to build the system under consideration. In addition, the developers of the food ordering system must identify and understand how it will work. The system must extensively examine the most important goals and their significance and scope. Due to the importance of this phase, extensive study is necessary. Ultimately, the decision will significantly impact the project as a whole.

3.2 Design

E-KIDO will discuss all aspects of the structure, design media, and application technologies in this phase. In addition, while working on this project, we've built storyboards for our guidelines and interfaces with which our users may interact directly in **Figure 2**.

Figure 2: Mockup Design for E-KIDO Food Ordering System

3.3 Development

In the development phase of our project, our system is developed using the information obtained through interviews with teacher at SMK Taman Molek**.** We used the Hypertext Preprocessor (PHP), Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), and JavaScript in the development of our system. In addition, MySQL is used as a database storage system, and the system utilizes the bootstrap framework.

3.4 Testing

The testing and evaluation phase is the final step in developing a system. Teachers will thoroughly test the effort to establish it's environmental and user benefits, especially for students who will utilize this method to purchase food. Project participants will have access to a fully functional operating system to run their tests on.

In this testing phase, the E-KIDO Food Ordering System will be evaluated by the user. This testing includes everything from data entry and output to interfaces and databases. After it has been uploaded to a server, the newly constructed system can be accessed by users.

4. Results and Discussion

The results and discussion section presents data and analysis of the E-KIDO Food Ordering System. Based on the study and implementation of this system we developed, we have conducted several surveys on the use of telegrams in ordering food by school children during the coronavirus pandemic.

4.1 Results

Table 1: Users' Response

Question	Response (%)				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Is it easy to login to the system?			12.5	37.5	50.0
2. Is the system successfully displaying your purchase options?			12.5	50.0	37.5
3. Is the system correctly calculating your payment?			12.5	25.0	62.5
4. In general, how user friendly is E-KIDO Food Ordering System?			25.0	12.5	62.5

Table 1 are the responses received based on a set of Likert scale questions. 50% of the respondent answered strongly agree for question 1 and 50% of respondent answered agree for question 2. 62.5% of the respondent answered strongly agree for that question.

For the conclusion of all the questions that have been answered by the respondent in the Google Form that has been provided, we provide a question that is "In general, how user friendly is E-KIDO Food Ordering System?" which must be answered by the respondent for the results for the entire function of the system E-KIDO Food Ordering System.

4.2 Discussion

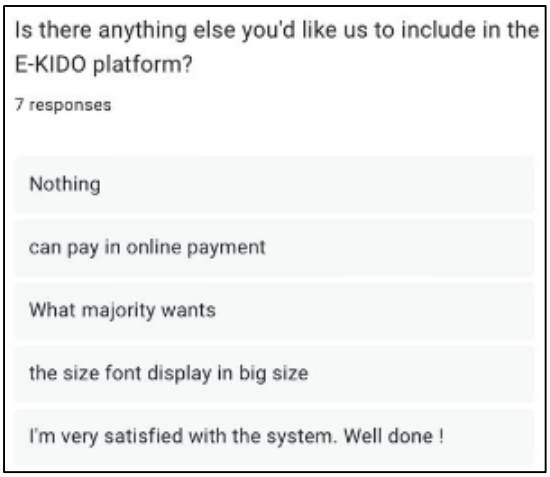

Figure 3: Answer from Respondents

In the studies Thomas M Annesley, The debate is on the significance and applicability of your findings. This should concentrate on describing and analysing what you discover [6], demonstrating how it pertains to your questions regarding the literature review and the analysis, and providing arguments in support of your conclusions. In a system, the main feature must be user-friendly. User-friendly is the ability of users to learn and understand the use of a system. Its features include the ability of a system to make it easier for users to read its content, search and learn how to use it. Among its features is easy to read. The design should identify the category and type of system user. With this, the designer must be smart in determining the appropriate font size and colour as well as ingenious in arranging the content of the website neatly and not confusing. Therefore, E-KIDO Food Ordering System will use this proposal to improve the system design.

In a studies by Shahril et al, payment management through conventional methods like physical counters has now been replaced through an innovation developed by payment collection agencies especially banks by introducing electronic payments (e-payment) as an online counter medium [7]. Therefore, implementing the online payment feature in the E-KIDO Food Ordering System is very desirable and will be considered due to this era of fast-paced technology. With this, it can make it easier for users in the payment process because they do not have to give money to their children to pay it to the teacher.

5. Conclusion

In conclusion, the objective of building a food ordering system for students has been successfully achieved. In terms of performance and efficiency, this project has provided a food ordering method that can be used by teachers and students as compared to the manual food ordering method. By using a database, more data is arranged. This system is also a user-friendly system because the collection of data collected can be viewed more easily and efficiently. Therefore, it can be used by any educational institution in Malaysia. However, some further improvements can be made to this system to improve usability and effectiveness. Finally, this food ordering system can be improved by adding features where this food ordering system can be paid for by students through an online payment.

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