Mobile web model on the basis of character building for elementary school students in Jakarta in Indonesia

T Rihatno1,*, A Marini2, D Safitri3, S Nuraini1, U Umash4, H Herlina2, S Sutrisno4 and ZE F F Putra4

1 Faculty of Sport Science, Universitas Negeri Jakarta Jalan Rawamangun Muka No: 1 Jakarta Timur, DKI Jakarta, Indonesia
2 Faculty of Education, Universitas Negeri Jakarta Jalan Rawamangun Muka No: 1 Jakarta Timur, DKI Jakarta, Indonesia
3 Faculty of Social Science, Universitas Negeri Jakarta Jalan Rawamangun Muka No: 1 Jakarta Timur, DKI Jakarta, Indonesia
4 Faculty of Engineering, Universitas Negeri Jakarta Jalan Rawamangun Muka No: 1 Jakarta Timur, DKI Jakarta, Indonesia

*trihatno@unj.ac.id

Abstract. The aim of this research is to develop mobile web model on the basis of character building in the classroom for elementary school students in Jakarta in Indonesia. The method of this research is Research and Development. The research product of mobile web model on the basis of character building in the classroom for elementary school students in Jakarta in Indonesia was developed using 8b website builder with URL http://8b.com. The result of validation of expert, limited, and extensive field test related to content utility, navigation, simplicity, loading speed, security, interactive, efficiency, and learnability reached 3.69, 3.75, and 3.73 from maximum score 4 showing that this product has already been valid, practical, and effective. The conclusion of this research is that mobile web model on the basis of character building in the classroom developed in this research is practical and effective to be implemented for elementary school students in Jakarta in Indonesia.

1. Introduction
The function of national education in Indonesia is to develop competences and form people character and civilization with the purpose of developing student potencies to have faith, fear of God, noble morals, health, knowledge, capability, creativity, independence, democracy, and responsibility [1]. Character education strengthening is education movement below school responsibility to strengthen the student character involving religious, honest, tolerant, discipline, working hard, creative, independent, democratic, curious, nationalism spirit, loving motherland, achievement appreciation, communicative, loving peace, loving to read, caring for the environment, social care, responsible values [2].

Student activities in theatre can encourage student positive characters consisting of obeying rule practicing, being independent, being patriotic, feeling concerned about environment, and willingness to read [3]. Character building can be conducted in teaching learning process in shaping student discipline [4]. Integration of character values in class can be implemented in preparation, core, and closing of teaching learning process activities [5]. Students with positive student character have also high academic
performance [6]. Character education in class can be carried out by the students praying at the beginning and at the end of the class, wearing uniform neatly, bravely asking the teacher, maintaining good attitude in class, and not dominating in group assignment [7]. Obedience in conducting the teachings of one’s religion as one dimension of student religious characters is predicted by students fasting during Ramadhan, praying five times a day, congregational praying, and regularly doing infaq activities [8-11]. Teaching method conducted in class can be used to develop student positive character [12-17]. Character value integration in teaching learning process can be encouraged by the teaching providing same chances to the students to participate in class and requesting the students to be responsible in finishing assignments completely [18,19]. Mobile learning contributes to student academic performance and motivates students to have fun learning activities [20-24]. Interactive Physics Mobile Learning media can enhance student Higher Order Thinking Skills [25]. Utilization of mobile learning makes the teacher and the students expressing socio-cultural support [26]. Mobile learning can assist to change the learning pattern into learning facilitator by giving appropriate learning resources suitable with the student needs [27]. However, these studies haven’t integrated the character building for the students by combining with Information and Communication Technology specifically on mobile web.

2. Methods
The method of this research conducted was Research and Development to develop mobile web model on the basis of character building in the classroom from the beginning until the end of the class for elementary school students in Jakarta in Indonesia with 8b platform known as a user-friendly new website builder. Data was collected in this research related to content utility, navigation, simplicity, loading speed, security, interactive, efficiency, and learnability. Data was analyzed using technique of descriptive quantitative.

3. Results and discussion
Need analysis about the effectiveness of character building in the classroom done at 145 public elementary schools in Jakarta in Indonesia attained 56.6 %. It means that implementation of character building in the classroom hasn’t been effective. Therefore, this research was done to develop mobile web model on the basis of character building in the classroom from the beginning until the end of the class for elementary school students in Jakarta in Indonesia in order to improve the effectiveness.

In this research, developing mobile web model on the basis of character building in the classroom was done using 8b as a web based on Google Accelerated Mobile Pages including HTML framework which is open source and is able to load pages on mobile web faster when opening them via smartphones. Creating mobile web using this 8b website builder was started with typing URL http://8b.com continued by pressing ‘enter’. Entering the desired mobile web name was done by pressing the ‘Create Site’ button leading to the next page where the main page and other additional pages can be edited and add sections for the entire mobile web page.

In mobile web edit page, there are fields like Domain, Google Index, Site Analytics, Site Export, Progressive Web App, Remove Unused Css (seen in Figure 1). Each of these fields has a different function. The mobile web built in this research used webpanduan.8b.io domain which is free domain provided by 8b.com for users in order to create addresses or URLs of mobile web professionally. After the desired domain name was created with http://webpanduan.8b.io, ‘OK’ button was pressed as in the lower right (seen in Figure 2).
The editor page appeared and immediately showed the template having chosen before. On the editor page, there are three main buttons assisting to add, delete, and edit sections (seen in Figure 3). Button 1 is a setting button to customize the section, button 2 is the add section to page button, and button 3 is the main menu button to add pages, publish pages, account settings, and mobile web style settings. These three buttons have their respective functions depending on the needs of the display that we will apply to the mobile web made.

The product of mobile web in this research can be seen in Figure 4 showing how to add links taking the user to open a new page displaying the full page of the beginning learning activity by clicking on the chain image as in the red circle. Separate page views from each page having already been created in this research can be seen in Figure 5.

Validation of expert, limited, and extensive field test of mobile web model on the basis of character building in the classroom produced in this research related to content utility, navigation, simplicity, loading speed, security, interactive, efficiency, and learnability reached 3.69, 3.75, and 3.73 from maximum score 4 showing that this product has already been valid, practical, and effective.
Figure 3. Three main buttons on the page editor.

Figure 4. Entering a link to another page.
Figure 5. Pages of mobile web model on the basis of character building in the classroom.

4. Conclusion
The conclusion of this research is that mobile web model on the basis of character building in the classroom developed in this research is practical and effective to be implemented for elementary school students in Jakarta in Indonesia.

Acknowledgements
This research was funded by Directorate General Higher Education, Ministry of Education and Culture Republic Indonesia.

References
[1] Indonesia Republic President 2003 Indonesia Republic Constitution No. 30 about National Education System
[2] Indonesia Republic President 2017 Indonesia Republic President Regulation No. 87 about Character Education Strengthening
[3] Anggraini P 2016 Journal of Education and Practice 7(1) 26
[4] Fahmy R, Bachtari N, Rahim R and Malik M 2015 Procedia – Social and Behavioral Sciences 211 851
[5] Marini A 2019 Journal of Physics: Conference Series 1402(2) 1
[6] Benninga J, Berkowitz M W, Kuehn P and Smith K 2003 Journal of Research in Character Education 1(1) 19
[7] Marini A 2019 Universal Journal of Educational Research 7(10) 2089
[8] Marini A, Safitri D and Muda I 2018 Journal of Social Studies Education Research 9(4) 274
[9] Wibowo U B, Marini A, Safitri D and Wahyudi A 2020 International Journal of Advanced Science and Technology 29(6) 1161
[10] Hartati S, Safitri D, Nuraimi S, Rihatno T, Marini A and Wahyudi A 2020 International Journal of Advanced Science and Technology 29(6) 1129
[11] Nafiah M, Riyadi, Sampurna P D, Marini A and Wahyudi A 2020 *International Journal of Advanced Science and Technology* 29(6) 1458
[12] Silanoi L 2012 *Procedia – Social and Behavioral Sciences* 69 1812
[13] Rihatno T, Safitri D, Nuraini S, Marini A, Putra Z E F F and Wahyudi A 2020 *International Journal of Advanced Science and Technology* 29(8s) 103
[14] Nuraini A, Safitri D, Rihatno T, Marini A, Putra Z E F F and Wahyudi A 2020 *International Journal of Advanced Science and Technology* 29(8s) 97
[15] Ibrahim N, Safitri D, Umasih, Marini A and Wahyudi A 2020 *International Journal of Advanced Science and Technology* 29(6) 1471
[16] Marini A, Safitri D, Nuraini S, Rihatno T, Satibi O and Wahyudi A 2020 *International Journal of Advanced Science and Technology* 29(6) 1121
[17] Umasih, Safitri D, Nuraini S, Rihatno T, Maksum A, Marini A and Wahyudi A 2020 *International Journal of Advanced Science and Technology* 29(6) 1136
[18] Marini A 2019 *International Journal of Control and Automation* 12(4) 1
[19] Ruiter J A D, Poorthuis A M G and Koomen H M Y 2019 *Teaching and Teacher Education* 86 1
[20] Lestari I, Maksum A and Kustandi C 2019 *International Journal of Interactive Mobile Technologies* 13(9) 152
[21] Santosa E B, Degeng I N S, Sultan and Kuswandi D 2020 *Journal for the Education of Gifted Young Scientists* 8(1) 325
[22] Musahrain 2016 *Proceeding The 2nd International Conference on Teacher Training and Education Sebels Maret University* 2(1) 307
[23] Lestari Y G 2017 *Proceeding the 1st International Conference on Education Innovation* 1(1) 399
[24] Rusmono R, Winarsih M and Hardiansyah H 2019 *Journal of Physics: Conference Series* 1402 1
[25] Eveline E, Suparno S, Ardiyati T K and Dasilva B E 2019 *Journal Penelitian dan Pengembangan Pendidikan Fisika* 5(2) 123
[26] Mahande R D, Susanto A and Surjono H D 2017 *The Turkish Online Journal of Educational Technology* 16(4) 65
[27] Chrisdian V, Masitoh S and Arianto F 2019 *International Journal of Educational and Vocational Studies* 1(8)