



Website Development to Support the Implementation of Hangtuh 7 Elementary School Promotion

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Abstract. Covid-19 has been a wake-up call for many people. The internet as the easiest source of information has become a necessity. This does not only apply to governments and corporations, but also to schools. SD Hang Tuah 7 Surabaya is one of the educational institutions that never uses the internet. Therefore, SD Hang Tuah 7 Surabaya currently provides information by using a printed pamphlet filled with school profile, activities, achievements, enrolment details etc. Then distribute them manually to local communities in the hope of new registrants. Submission of this information has many shortcomings, and the school realized that the perceived benefits of the internet are big, for sharing information, giving great impression and school professionalism to the wider community. The implementation method started by identifying partner problems in adapting the technology, finding solutions to it, problem-solving by creating the website, mentoring and evaluation. The website will include several details of the school including: 1) school profile; 2) history; 3) educators' profiles; 4) education staff profiles; 5) school activities; 6) school achievements; 7) school enrolment; 8) school contact details; and 9) school online library. The existence of the Website for SD Hang Tuah 7 Surabaya will provide convenience to the public in the search for information, especially about the school profile and school admission details.

Keywords: Website · Media Technology · Elementary School

1 Introduction

The populace in this century is very dependent on the internet. They used the internet to do many things, from socializing, playing games, finding news, and even when trying to find education for their children. This is because people regard information and data from the internet as credible as conventional media such as television and radio [1].

This dependence on the internet doesn't come out of nowhere. The obvious reason stems from the fact that industrial revolution 4.0 (IR 4.0) has come for Indonesia, the convenient communication at any time via the internet that facilitates the exchange of information between computer-to-computer and human-to-computer [2]. This indirectly

raises a behavior in society that when society has specific purpose, they will try to find information on the internet, then combine it with their previously owned knowledge [3].

Association of Indonesian Internet Service Providers [Asosiasi Penyelenggara Jasa Internet Indonesia] (APJII) in 2020 brought out a survey result [4] that stated that the internet users in Indonesia in 2020 was 73.7% (196.7 million users), which is 8.9 percent increase from 64.8% (171 million users) in 2019. This also indicates that currently the most effective information dissemination is via the internet. Information dissemination via the internet is very cheap and efficient, not to mention it could be accessed by everyone within the globe and provides clear information.

A website is the main component of the internet. It is a promotion media which is very efficient in delivering information to the wider community. The best way to promote is a website, because it is connected to the internet by nature which means it will accelerate information dissemination to the wider community [5, 6].

In the world of education, website is widely used by school or educational institution as a media to introduce school into the wider community [7]. As of the most efficient media currently, website could contain information in the form of text, images, videos, sounds, and various other features. Having a website not only help in sharing information, but also for giving great impression of school professionalism and improving the school's image in the eyes of the wider community [8].

School website is a website that provide details of school implementation over a period of years and builds a narrative of progress and conveys success in school performance for both educators and students [9]. This means the school website needs to have at least a school profile, school history, educators' profile, school activities and school achievements. This school website will provide an easier way for teachers and students to get and archive the school information [10].

This tremendous value is one of the reasons why in the world of education, website is the most popular method for advertising and dissemination of school information which has been used extensively. This were concluded in several research conducted [6] at SMK Kartini, [11] created a school website for SD Muhammadiyah 1 PADAS as a trusted promotional media and [12] developed school website for PAUD Al Lathifiyah IV as an advertising media. This is largely because internet is a vital part of communication infrastructure within these several years of technology advancement [13]. Providing access to school via the internet also serve as public relations and marketing tool, providing a forum for communication and information sharing [14, 15]. In some instances, school websites provide a way for student parents to discuss with staffs and teachers [16].

In conclusion, every educational institution definitely should consider having a website that provides school information to everyone within the globe. However, there is not many primary schools in Surabaya that has a website, SD Hang Tuah 7 Surabaya is one of them. Based on interviews with the school principal, information dissemination and promotion related media by the school have only restricted to oral communication and a simple pamphlet. This pamphlet contains SD Hang Tuah 7 Surabaya's school address, profile, curriculum, extracurricular, events, achievements, and admission details. Pamphlet is not as optimal as website as a media of promotion, but it is the only method the school capable of to maintain the number of enrolled students.

SD Hang Tuah 7 Surabaya only distributes pamphlet once a year when admission seasons started. They could not sustain this promotion expenditure all year long due to limited budget. Not only that, but they are also unable to promote every school achievement that were won by SD Hang Tuah 7 Surabaya. Therefore, this school achievements were only known by the parents of the student that partake the competition in the first place. It is financially challenging to make and spread pamphlet for every single achievement to the wider community.

For all the reasons above, this study aims to develop a promotional and informative website for SD Hang Tuah 7 Surabaya to facilitate all these problems once and for all.

2 Method

There are several stages needed to develop a school website. From the preparation stage that includes collecting information and requirement for the website directly from SD Hang Tuah 7 Surabaya. Then designing the website according to the school's wishes. After the design is approved by the school, then start making the website using a management system that is simple to understand and use for entry user admin, in this case is cms wordpress. Until finally in the implementation stage registering it unto a paid domain.

2.1 Preparation Stage

The establishment of a website for SD Hang Tuah 7 Surabaya stems from the result of solving the problem of the school's lack of capability for technology adaptation. The preparation stage meant to collect all the relevant data for the website and to define the ideal website based on the users. There are several data collection methods that were used in this research, which is:

- a) Observation method is made intentionally and systematically to be recorded at research site, including the process of delivering school information and school promotion.
- b) Literature method were conducted by reading several literature, documentation, books, and old pamphlet that could be used to define the promotion and information dissemination needs.
- c) Interview method were carried out by the research team by interviewing several teachers and staffs. But most of the info is provided by the school principal. He said that the website is a vital aspect for the school's continuity.

From the data collection stage, there are several features/web pages that the teachers and principal needs:

- a) School Profile, the school website needs to provide an accurate and detailed profile about the school, starting from the history, educator profiles, staff profiles, curriculum, and contact details.

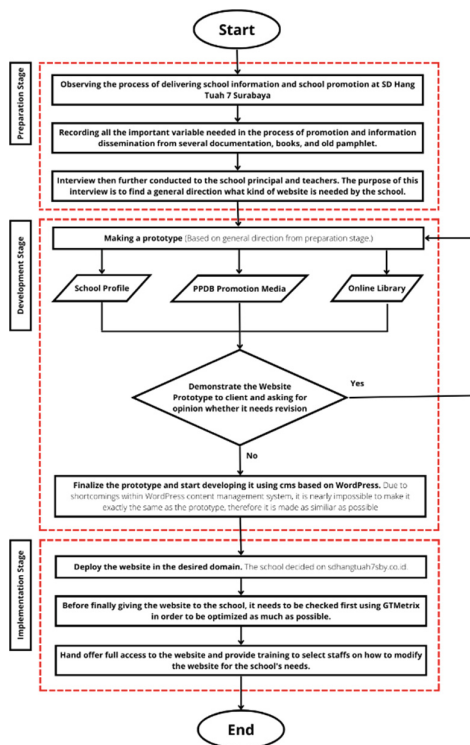


Fig. 1. The stages required in the school website development process.

- b) Promotion media for PPDB (Penerimaan Peserta Didik baru) [new student acceptance]. The school website needs to provide a better way of promoting the school curriculum, achievements, and events in hope of increasing the number of students application.
- c) Online Library. The school website needs to provide alternative way of learning for its students. The principal says it'll be great if the website could store several textbook pdfs to download, therefore the students could learn from anywhere

2.2 Development Stage

This development stage only contains two steps but the one that took the longest. The first step is designing the prototype website took only a short period of time, but the school requests several revisions in order to make an ideal website. The website was designed to facilitate the needs of the teachers and principal from the preparation stage. This means the website needs to have a school profile, PPDB promotion, and online library. The second step is to develop the approved website prototype using WordPress Content Management System (CMS). WordPress cms were used because it's famed for it's beginner friendliness.

After the design stage, the next step was to build the website. The website was built as close as possible to the design. There were several difficulties on trying to limit the

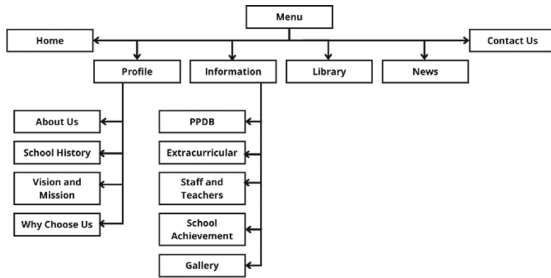


Fig. 2. Menu hierarchy diagram of SD Hang Tuah 7 Surabaya website.

image size under a certain size to keep the website relatively fast to operate on Indonesia’s averagely low internet speed.

2.3 Implementation Stage

The sole purpose of this stage is to put the website on the internet by hosting the school website into a domain desired by the school. Prior to hosting the website into a domain, testing the website’s performance is needed to find out the website’s shortcoming. GTMetrix tool were used in order to find out performance score. The performance score was determined by several aspect including: 1) loading performance; 2) interactivity; 3) visual stability. The GTMetrix tools also able to detect flaws within the website and provide recommendation on optimizing the website.

After the optimization were done, we will handover full access to the website and provide a training to several staffs and teachers on how to modify the website using WordPress content management system according to the school’s needs.

3 Results

In this section we show the result of the website development stages. The process of web development was done within supervision of SD Hang Tuah 7 Surabaya to have an accurate representation.

3.1 Menu Hierarchy Diagram

Figure 1 is the website menu hierarchy diagram that illustrates all the content of SD Hang Tuah 7 Surabaya school website. As shown, this website has several main menus which is: Home, profil (school profiles), informasi (school information), perpustakaan (school library), berita (school news) and kontak (school contacts) (Fig. 2).



Fig. 3. Homepage of SD Hang Tuah 7 Surabaya Website.

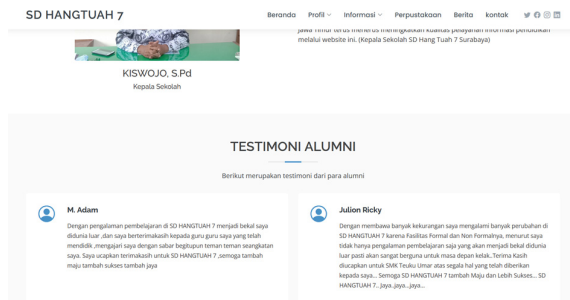


Fig. 4. Alumni testimonials section of SD Hang Tuah 7 Surabaya website.

3.2 Website Implementation

Since the target audience for SD Hang Tuah 7 Surabaya is Indonesian children aged 6–12 years and their parents, the school principal expresses his opinion on that the website would not facilitate overseas audience and will only be available on Bahasa Indonesia. Furthermore, the principal expresses his concern on the target user of the website, he requested that the website is as simple as possible (Fig. 3).

Homepage is the most important page on most website, and usually gets more page views than every other page combined. Of course, not every user come from homepage. A website is like a house in which every window is also a door. But in the context of school website and promotion media purposes, almost every new viewer comes through the homepage.

The homepage of the SD Hang Tuah 7 Surabaya website consists of 3 main parts, which is headmaster's welcome, alumni testimonials, and parents' testimonials (Fig. 4).

Other than homepage, every other page is filled with information, pictures and documents provided by SD Hang Tuah 7 Surabaya. There is an admin from SD Hang Tuah 7 Surabaya that supervised every webpage to be designed to their satisfaction (Fig. 5).

The finished website will be managed by the school admin. After the website creation, assistance and counseling is given by the researcher team on how to modify and operate the website to several SD Hang Tuah 7 Surabaya staffs and/or teachers.

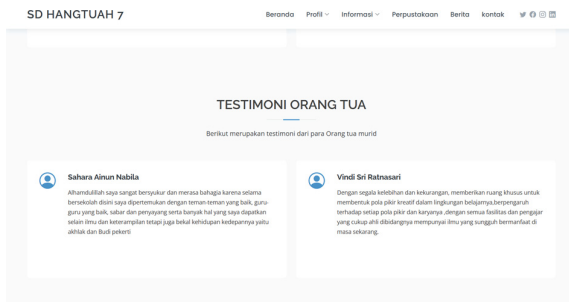


Fig. 5. Parents testimonials section of SD Hang Tuah 7 Surabaya website.

4 Conclusion

School website that already exists for several years are widely known as Web-Based Learning (WBL). The purpose of this school website is to provide a pedagogical response to the needs of the school and to establish an efficient and organized online learning environment. Website is one of the respond effects to fulfill customer needs in terms of trust. In practice, however, websites are not incorporated into the pedagogical-organizational system in most of the school and are not an integral part of school procedure. Especially in grade school in which the students are age 6–12 years. Therefore, this school website's main purpose is not to be pedagogical system, instead for information dissemination and promotional media. Every website has a strong point and a weak point. Web designer or programmer needs to choose evaluation method that meets several factors. These factors include design stage, user interface, novelty, number of expected users, allocated time and allocated funds. The development of this SD Hang Tuah 7 Surabaya already considered these factors and successfully met all the requirement submitted by SD Hang Tuah 7 Surabaya.

SD Hang Tuah 7 Surabaya acknowledge that website is one of the vital parts of communication infrastructure in these technology advancement society. Using the school website, it is now easier to distribute news and information. Whenever there's a new event from the school or an achievement by the students, they could easily create a new post into the website with relevant photos. This feature not only help in sharing information, but also for giving great impression of school professionalism and improving the school's image in the eyes of the wider community. There are still shortcomings in this website that still needs to be improved. Therefore, the researcher intends to follow-up within several years to understand which part of the website is useful to keep, and which part of the website needs to be renovated or removed.

Authors' Contributions. Dodik Arwin Dermawan conceived of and designed the study. Salamun Rohman Nudin analyzed and interpreted the data. I Gde Agung Sri Sidhimantra drafted the paper and Hafizhuddin Zul Fahmi and Septian Rahman Hakim critically revised it for important intellectual content. All authors gave final approval of the version to be published.

References

1. Y. Wang, M. McKee, A. Torbica, and D. Stuckler, "Systematic Literature Review on the Spread of Health-related Misinformation on Social Media." *Soc Sci Med*, vol. 240, p. 112552, Nov. 2019, doi: <https://doi.org/10.1016/J.SOCSCIMED.2019.112552>.
2. J. Cooper and A. James, "Challenges for database management in the internet of things," *IETE Technical Review (Institution of Electronics and Telecommunication Engineers, India)*, vol. 26, no. 5, pp. 320–329, Sep. 2009, doi: <https://doi.org/10.4103/0256-4602.55275>.
3. F. Ilyasir, "Pendidikan demokratis di era revolusi industri 4.0," *Jurnal Pembangunan Pendidikan: Fondasi dan Aplikasi*, vol. 7, no. 1, pp. 60–69, Feb. 2019, doi: <https://doi.org/10.21831/JPPFA.V7I1.25998>.
4. "Kementerian Komunikasi dan Informatika." https://www.kominfo.go.id/content/detail/30653/dirjen-ppi-survei-penetrasi%2520pengguna-internet-di-indonesia-bagian-penting-dari-transformasi%2520digital/0/berita_satker (accessed Jun. 23, 2022).
5. J. J. C. Y. Prawira and T. I. Wardani, "Aplikasi CMS WordPress Untuk Pembuatan Website Sebagai Media Promosi Di Wisata Keramik Dinoyo Kota Malang," *Jurnal Aplikasi Bisnis*, vol. 3, no. 2, pp. 485–489, 2018.
6. A. Rochman, M. I. Hanafri, and A. Wandira, "Implementasi Website Profil SMK Kartini Sebagai Media Promosi dan Informasi Berbasis Open Source," *Academic Journal of Computer Science Research*, vol. 2, no. 1, 2020.
7. F. Anwar, M. Yunianto, A. Purnomo, and R. Hartono, "UPAYA PENINGKATAN KUALITAS SEKOLAH MELALUI PEMBUATAN DAN PENGELOLAAN WEBSITE SEKOLAH Studi Kasus di Sekolah Muhammadiyah se Kecamatan Polokarto Kabupaten Sukoharjo," *WASANA NYATA*, vol. 1, no. 3, pp. 75–80, Oct. 2017, doi: <https://doi.org/10.36587/WASANANYATA.VII3.223>.
8. W. Andriyan, S. S. Septiawan, and A. Aulya, "Perancangan Website sebagai Media Informasi dan Peningkatan Citra Pada SMK Dewi Sartika Tangerang," *Jurnal Teknologi Terpadu*, vol. 6, no. 2, pp. 79–88, Dec. 2020, doi: <https://doi.org/10.54914/JTT.V6I2.289>.
9. S. Gannon, "My school redux: re-storying schooling with the My School website," vol. 34, no. 1, pp. 17–30, Feb. 2012, doi: <https://doi.org/10.1080/01596306.2012.698861>.
10. R. Afriansyah *et al.*, "PEMBUATAN PORTAL WEBSITE SEKOLAH SMA NEGERI 1 SUNGAILIAT SEBAGAI MEDIA INFORMASI," *Dinamisia : Jurnal Pengabdian Kepada Masyarakat*, vol. 5, no. 1, pp. 154–160, Nov. 2021, doi: <https://doi.org/10.31849/DINAMISIA.V5I1.4413>.
11. R. N. Anwar, A. R. Husna, A. Nurjanah, N. K. Setyars, M. Wingsari, and D. S. Rahmasiwi, "Pembuatan Website Sebagai Media Promosi Terpercaya SD Muhammadiyah 1 Padas," *Jurnal Pendidikan Tambusai*, vol. 5, no. 2, pp. 7–12, 2021.
12. S. Nurfauziah, "Development of Information Website for PAUD Al Lathifiyah IV as Promotion Media and School Profiles".
13. R. L. Wakefield, K. L. Wakefield, J. Baker, and L. C. Wang, "How website socialness leads to website use," <https://doi.org/10.1057/ejis.2010.47>, vol. 20, no. 1, pp. 118–132, 2017, doi: <https://doi.org/10.1057/EJIS.2010.47>.
14. R. Padgett, "Better Public Relations on Websites.," *Education Digest: Essential Readings Condensed for Quick Review*, vol. 71, no. 5, pp. 54–55, Jan. 2006.
15. D. Tubin and S. Klein, "Designing a School Website: Contents, Structure, and Responsiveness.," *Planning and Changing*, vol. 38, pp. 191–207, 2007.
16. T. Piper, "Using School Websites to Support Parent Engagement.," *Leadership*, vol. 42, no. 2, pp. 36–38, 2012.

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