

Parents-Teacher Assisting Monitoring Application (PTAMA) System

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Abstract—Education is an essential element in our life in order to build a better nation and future for young generation. A school must have a better platform of communication between teachers and parents to ensure effective collaboration in monitoring the children's education. Due to time confinement and restrictive schedule, parents nowadays are not able to monitor their children's progress accordingly in terms of school activities and student's performance. Furthermore, information or instruction from the teachers toward the parents were not relay properly. These are cause by multiple factors such as the inability to relay messages correctly due to young age. Therefore, this paper proposes online Parents-Teacher Assisting Monitoring Application (PTAMA) system. The PTAMA system will be built in web based and mobile application system. There are five features in PTAMA system involve attendance, announcement, homework, feedback and letter. In this system, the attendance of the student will be recorded using Quick Response (QR) Code that printed into student matric card. Besides, teacher can write the announcement, set the homework and view the feedback from the parents. Then, through this system, parents also can monitor and assist their children performance. A parent can view the attendance of their child, make a feedback, view homework and upload medical certification as proven if their child absent for the class. The PTAMA systems will involve admin, teacher and parents. The admin is the one who manage all the activities and control if any errors happened in this system. Admin can manage student information, teacher information, announcement and assigned class and subject to respective teacher. This system is designed specifically for primary school students. Rapid Application Development (RAD) cycle is chosen as a methodology to develop this PTAMA system. By having this PTAMA system, Parents and Teacher can collaborate to monitor the students' performance.

Keywords—Monitoring, QR Code, homework, attendance, feedback, announcement

I. INTRODUCTION

With the current advancement of technology, the responsibilities of a teacher are increasing. Teachers nowadays have huge challenges and plenty of works such as large number of understudies, an excessive amount of desk work and restrictive time management due to other interferences and catching up on due dates. Teachers complete a great deal of administrative work in schools than real classroom instructing. Teachers ought not to be made to

do administrative and desk work that has no importance to educating provided [1]. The formatter will need to create these components, incorporating the applicable criteria that follow.

Starting from taking attendance of the student one by one until the student leave the school area, within this period, the student is under teacher and school responsibility. According to the notice published on 14th January 2019 by Ministry of Education (MOE), all students' attendances must be recorded online using Sistem Kehadiran Murid (SKM) [2]. In this system, the teacher will tick the attendance of the student into the system one by one. It is replicating the traditional way of using a log book for taking an attendance. Moreover, this system was designed specifically for the school and can be access by the teachers only. Parents who need to know their child's performance or anything regarding their child's education should contact the school or respective teacher directly. This could be difficult for parents who are busy with their working lives and hectic schedule and had difficulties to monitor their children performance in the school [3]. However, few parents do not care about the children attendance and school performance at all.

Many parents nowadays are busy working in order to earn more money. Due to the rising cost of living, they must work hard to make ends meet [4]. Some teachers made an initiative to create WhatsApp group as a platform to deliver important information to the parents. However, this platform is not reliable anymore because some parents keep asking unrelated and ridiculous question in the group interrupting other members and teacher. There are also some parents arguing with each other in the group and keep complaining about unnecessary things. To overcome this problem, the WhatsApp Application added new features that allow only admin to send the message to the group [5]. However, by implementing this setting, the communication between teacher and parents becomes a one-way communication only. Some parents do not have suitable platform to give any feedbacks related to a child's performance, teacher's capability or complaining about school activity. The only time they could communicate on this is during the report school report card days.

The overcome aforementioned problem for teacher and parents, this paper proposed Parents-Teacher Assisting Monitoring Application (PTAMA) system. Five main

to other level of school such as kindergarten and secondary school. Furthermore, other features such as student result and any comments from teacher regarding on the student behavior and performance can be added in this application.

Schools must make a successful organization by giving information required by the parents and an open communicative environment forming a link between the classroom with home and teachers with parents.

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REFERENCES

- [1] Online, T. S. (2018, December 2). Teachers doing more clerical work. *The Star Online*, pp. 1–2. Retrieved from <https://www.thestar.com.my/opinion/letters/2014/12/02/teachers-doing-more-clerical-work/>
- [2] SPI BIL 1 2019 - SISTEM KEHADIRAN MURID.pdf. (n.d.).
- [3] The Telegraph. (2010, January 10). Parents admit being too busy for their children. *The Telegraph*, p. 1. Retrieved from <https://www.telegraph.co.uk/finance/personalfinance/6963497/Parent-s-admit-being-too-busy-for-their-children.html>
- [4] NCK. (2014, July 28). Children neglected because parents are too busy. *The Star Online*, p. 1. Retrieved from <https://www.thestar.com.my/opinion/letters/2014/07/28/children-neglected-because-parents-are-too-busy/>
- [5] Forbes.com. (2019). *WhatsApp Adds A New Setting Allowing Only Admins To Send Group Messages*. [online] Available at: <https://www.forbes.com/sites/amitchowdhry/2018/06/30/whatsapp-adds-a-new-setting-where-only-admins-can-send-group-messages/#4997710f5577> [Accessed 1 Aug. 2019].
- [6] Star. (2018, October 12). Teachers: Teaching no longer a passion but a burden today. *The Star Online*, p. 1. Retrieved from <https://www.thestar.com.my/news/nation/2018/10/12/teachers-teaching-no-longer-a-passion-but-a-burden-today/>
- [7] Masalha, F., & Hirzallah, N. (2014). A Students Attendance System Using QR Code. *International Journal of Advanced Computer Science and Application (IJACSA)*, 5(3), 75–79. <https://doi.org/10.1109/CyberC.2017.23>
- [8] Hendry, R., Rahman, M. N. A., & Seyal, A. H. (2017). Smart Attendance System Applying QR Code. *International Conference on Latest Trends in Engineering and Technology*, 1–5. <https://doi.org/10.15242/ije.e0517002>
- [9] Kurnaz, S., Adnan, S., & Mohammed, M. (2017). TPS : Developing A Web Based Homework Monitoring System (Teacher , Parents , Student) For Iraqi Schools, 1(2), 121–134.
- [10] Abdul Razak, S. F., Abdurahim, B., & Mashhod, F. (2016). Keeping Parents Involved Using 360-Class Monitoring Application. *International Journal of Modern Education and Computer Science*, 8(12), 10–16. <https://doi.org/10.5815/ijmecs.2016.12.02>
- [11] Lucidchart Content Team. (2018). 4 Phases of Rapid Application Development Methodology. Retrieved from <https://www.lucidchart.com/blog/rapid-application-development-methodology>
- [12] Quora. (n.d.). What is context diagram? Retrieved from <https://www.quora.com/What-is-context-diagram>
- [13] Margaret Rouse. (2015). UML use case diagram. Retrieved from <https://whatis.techtarget.com/definition/use-case-diagram/>
- [14] techopedia. (n.d.-b). Entity-Relationship Diagram (ERD). Retrieved from <https://www.techopedia.com/definition/1200/entity-relationship-diagram-erd>