



SWOT Analysis on Implementing Project Management Tool for Digitalization Media of Education Management

Rizqiya Windy Saputra

Education and Curriculum Development Division
Secondary School of Integrated Modern Dayah of Teungku Chik Pante Kulu
Aceh Besar, Indonesia

*Correspondence Email: rizqiya@pantekulu.ac.id

ABSTRACT

School administration assignments is an important part of an education management system in school and a common complicated work in every start of education year especially for boarding-type schools. A School committee have to prepare many things related to students and teachers' necessity, teachings materials, dormitories equipment and others in limitation of time. The lack of preparation time makes some assignment cannot fulfilled or delivered on determination time. In this research, not only many cases will be identified from teachers and schools committee related to effectiveness in maximizing their time to finish their assignments, but also SWOT analysis as a strategic planning and management technique usually used to help a person or organization identify Strengths, Weaknesses, Opportunities, and Threats will be conducted in this area. SWOT analysis will be combined with project management tool to organize the teachers and school committee assignments. This paper supposed to explore many advantages from project management tool that can generate new perspective in managing complicated administration works. The exploration is carried out using the SWOT analysis method to school administrative management. And finally, these papers can propose a new assignment model and framework in boarding school type to increase their work effectiveness and reduce wasted time.

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1. INTRODUCTION

School administration is an prominent section of an education management system in school although it not directly involves in the process. Administration generates many foundations for pointing the successful system in education (Badarna & Heib, 2016; Aldiab *et al.*, 2019; Saputra, 2022; Zain & Martins *et al.*, 2019; Saputra & Siregar, 2022). The condition is related with School system in Indonesian which is immense and diverse. Recognized as the third largest education system in the Asia region and the fourth largest in the world (behind only China, India and the United States), with over 50 million students and 2.6 million teachers in more than 250,000 schools (Hasbullah *et al.*, 2010). Its existence can be one of the supporting pillars of each learning activity. For example, setting learning activities that involve teachers and students requires a regular schedule. To regulate this condition, an appropriate administration system is needed so that the person in charge of the school can direct it appropriately and on target for teachers and students. Scheduling learning activities that are not appropriate will result in many bad things that will interfere with the learning activities themselves (Saputra, 2022).

MTs Teungku Chik Pante Kulu boarding school is part of Integrated Modern Dayah of Teungku Chik Pante Kulu which is an Islamic educational institution founded by the Teungku Chik Pante Kulu Foundation and starting its activities in 2021 (see www.pantekulu.ac.id). Currently, This Dayah also known as Pesantren (islamic Boarding School) integrates national education and islamic curriculum already has an Institution at the Madrasah Tsanawiyah level (secondary school) which has also has been operating since 2021. The Integrated Modern Dayah is located in Darussalam sub-district, Aceh Besar. This school combines the curriculum of the Ministry of Religion and the Dayah Education Curriculum with a science-based learning approach, technology and students' talents. Its education system which takes the concept of boarding schools makes it one of the secondary level educational institutions that has a complex education system (Saputra, 2022). This is of course due to the teaching and learning activities which last longer than other formal schools. This difference also affects educational administration activities which in turn demand more attention from teachers and caretakers in the dormitories. At the beginning of each school year, teachers will be preoccupied with preparing for student admission and preparations for the dormitories, both of which are still done manually. The preparation process is often constrained by time management and activity determination. These constraints ultimately result in a buildup of activities that become obligations that must be completed in a very limited time.

The process of manually monitoring administrative and non-administrative activities has had many negative impacts on school activities. Various problems that can arise which are triggered by various sources of conditions. These problems can be caused by common human errors such as forgetfulness and negligence, or problems that arise due to aspects of environmental influences such as sudden work or lack of required resources. Based on the emerging problems, the school administrators tried to implement a mobile device-based project management application. There are many applications that can be used as applications, but this research focuses on Trello Applications. This application is commonly used in an organization or company to work on a project. The application used is a tool that can manage school-related activities, implementation time, deadlines and other things that are considered important (Kelly *et al.*, 2022). Therefore, this study aims to assess the level of usefulness of using this application in monitoring activities in a boarding-based school. With the use of this application, it is hoped that it will make it easier to identify each job and responsibility assigned to certain individuals or groups in accordance with work directions and

guidelines. The condition is in line with the function of the project management tool application itself (Mazumder, 2018).

There are many ways to measure the level of success of implementing a system or technology within the scope of our activities. This measurement can also be assessed from several assessment points of view which will provide an overview of which important points are strengths and important points are weaknesses. One of them is a SWOT Analysis (Benzaghta *et al.*, 2021; Zheng *et al.*, 2021; Saputra & Siregar, 2022; Granić & Marangunić, 2019; Orban *et al.*, 2021). A SWOT analysis evaluates the internal strengths and weaknesses, and the external opportunities and threats in an organization's environment (**Figure 1**). The internal analysis is used to identify resources, capabilities, core competencies, and competitive advantages inherent to the organization. The external analysis identifies market opportunities and threats by looking at competitors' resources, the industry environment, and the general environment. The objective of a SWOT analysis is to use the knowledge an organization has about its internal and external environments and to formulate its strategy accordingly.

Therefore, this study aims to take an approach using SWOT analysis to measure the level of effectiveness of using project management tools application in educational administration activities. This research is also expected to be able to describe recommendations for the application used so that it can be a reference for other schools in its application. This research itself is divided into several parts where the first part contains an introduction that tells the background of this research. In the second part, several related works and limitations of this research will be explained. Furthermore, in the third part will be explained about the research methodology used in taking data samples. The fourth part tells about the results of this study and the last part contains the conclusions of the research.

2. LITERATUR STUDY AND RELATED RESEARCH

Managing projects and teams can sometimes seem overwhelming. Fortunately, there are several free project management solutions to assist project leaders in managing their workflow. One of those solutions is Trello, a cloud-based tool that uses the Kanban method of project management (Johnson, 2017). Under the Kanban method, all project-related activities are displayed in a single landscape that is viewable to all members of the project team. With Trello, users can visually organize projects into boards, divide projects into groups, and subdivide groups into tasks. Trello's user-friendly interface makes it ideal for a wide variety of users, from individuals managing personal projects such as home renovations to organizations managing multiple large projects and teams. To meet users' needs, Trello offers various levels of service at different price points (Johnson, 2017; Kim, 2019). This research focuses on the free version.

Summarized from the Team Administration topic on the Trello official website, there are few ways users can do to have a better administration with their team, which are:

1. Team Visibility. Users can be setting the team to be public to people outside the team or be private and indexed by the search engine. This setting can be useful for users if the project either dedicated to customers or just privately for the team members.
2. Add another Admin. Users can add some members from the team to be granted as admin status. Admin is the only member that is allowed to add or remove members from the team and manage the settings. That is important to have other admin to be available to make necessary changes or action in case the team creator is out for a day off.

3. Get on Brand. Users can be easily given a personality to the team, such as giving logo, customizing team profile, and giving team descriptions. Brand of the team can be useful for instance, identify boards for a company overview, employee manual, all-hands meeting, or even high-level department boards.
4. Member Management. Users are allowed to managing members of the team and there is no limit for the number of members in a team. Adding members of the team in one work board of Trello, is useful to make the collaboration easier for everyone and keeps everything organized in one place.

A SWOT analysis defined usually to evaluate the internal strengths and weaknesses, and the external opportunities and threats in a company's or organization environment (Benzaghta, *et al.*, 2021; Saputra & Siregar, 2022). The internal analysis is used to locate resources, capabilities, core competencies, and competitive advantages attached to it. The external analysis locates market opportunities and threats by looking at competitors' resources, the industry environment, and the general environment. The objective of a SWOT analysis is to use the knowledge an organization has about its internal and external environments and to formulate its strategy accordingly (Benzaghta, *et al.*, 2021; Saputra & Siregar, 2022).

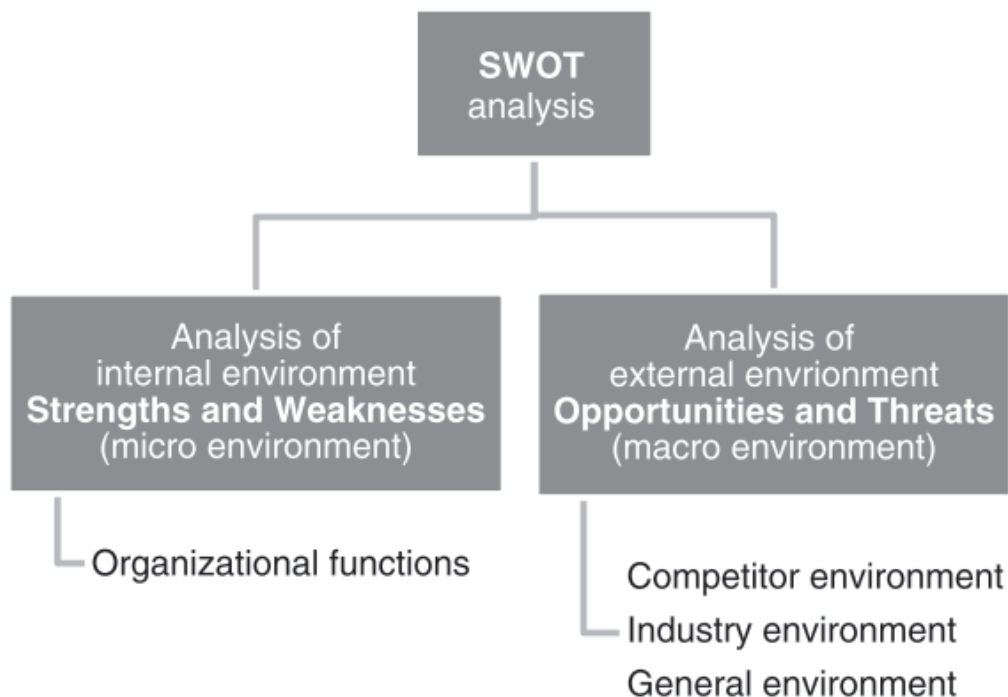


Figure 1. Main part of SWOT analysis related to company or organization environment.

The use of SWOT analysis in education, especially in terms of administration is not a new approach. One of them is the swot analysis approach used to assess the use and implementation of the e-learning model in student learning activities (Zheng *et al.*, 2021). The research had a significant impact on changes and improvements to the educational model provided as well as improvements to e-learning that are implemented based on input from the respondents. There is also a similar approach used to get School administration and effective teaching (Gloria & Ogunode, 2020). However, what these studies have in common is that the final target to be achieved lies in the level of effective and efficient education services and delivery of education.

3. RESEARCH METHODOLOGY

This study uses a quantitative and qualitative research methodology approach. This mixed method is considered as the best way to get maximum results and observe many potential issues related to this research. The first phase begins with the identification process to explore the needs and problems appear in every segments of school. The action also expected that the research will get strong literature to raise the value of good and targeted research results. Important informations collected from every teachers by direct communication and discussion. The Next following stage is extracting or generating data processing to deliver right questionnaire and it triggered the research to first interview phase. In this first phase of interview, the research focuses on getting their experience from direct testing of using Trello. In this step, the respondents are not asked to manage their activities using the application, but are only asked to use and try to use it. From the first phase interviewed data obtained, the result will be processed for improvement and the second phase of the interview process until the results are obtained to be examined into the final results (See Figure 2).

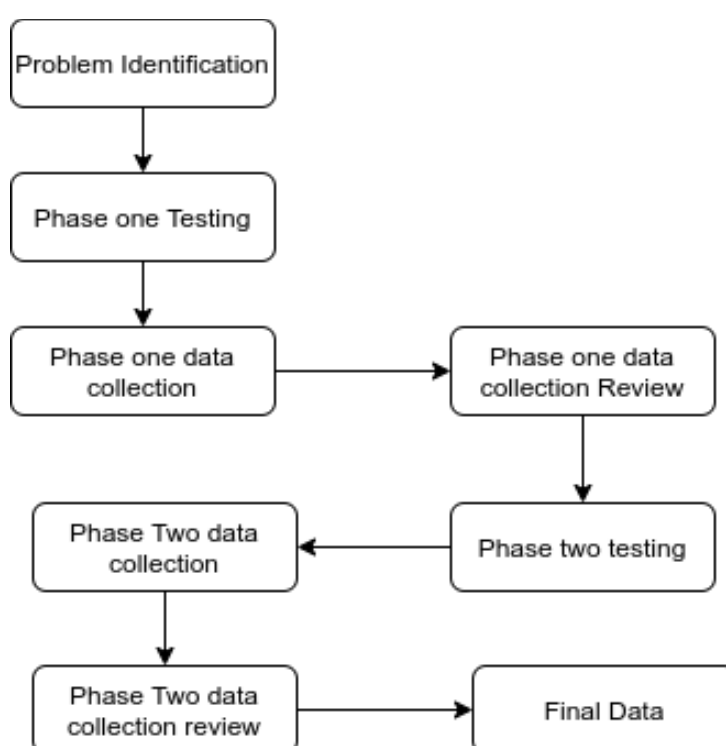


Figure 2. Research process flowchart.

Based on the description and flowchart above, this study attempts to analyze the opportunity of using project management tools in school administration and non-administration activities. One of the big challenges in this research method is in the early stages of the literature study compiling process and determining the problems that arise. This happened because the study tried to remain focused on educational administration and non-administration activities without mixing with models of administrative assignments that occur in company or community.

4. RESULTS AND DISCUSSION

Research in implementing SWOT analysis is not a new approach as mentioned before. Most of the research are studied in area of organization or company. In some of these studies, important points are emphasized that involve every external and internal factor faced by each of these companies. From the conclusions obtained, the research provides new recommendations that can increase the profitability and effectiveness of the company. The increase obtained has an impact on the employee performance sector, target market achievements, income targets and other positive things. Furthermore, research on school management in the administrative management aspect has conducted by various parties, especially in an effort to increase work effectiveness and time efficiency. The approaches taken are also different, including the Community-based Facility Management (CbFM) approach, the Smart Boarding School-based approach (Saputra, 2022), etc.

1. The research in the field of school administration can be very overspread in scope, therefore this research limits the study to some following questions:
2. What are the conditions for the implementation of educational administration in boarding schools
3. What is the process of implementing project management tools in the teacher and dormitory supervisor environment
4. Why use SWOT Analysis in this case
5. What is the final result of the SWOT analysis in this case and what the impact appeared?

In perspective of social and psychological, every people do what they have to do, what they can do, and what they want to do. They have opportunities to act, to remain silent, to maximize their pleasure or to forswear it, to prevail upon others or to submit to them. Concrete, specific action is the stuff organizations are made of. In both their doing and they're not doing, people make themselves and they make the social realities we call organizations. These ideas, linking life and organization, are existential realities beyond expression in purely logical forms, but tough in daily life existence (Griffith, 1995).

As mentioned before, beginning of school year education is commonly one of the busiest periods for school staff included teachers (Admiraal, 2021). Each individual staff and teacher will share their respective responsibilities and roles in welcoming the new academic year. There are many assignments and tasks have to be fulfilled such as, admitting new students, preparing class lesson plans, arranging learning activity schedules, composing teaching timetable, organizing dormitories and classroom classrooms, etc. All of these activities can be found in every boarding school as well as MTs Teungku Chik Pante Kulu boarding school. Not unlike modern dayah in general, the material taught to students is in accordance with the curriculum and syllabus of the ministry of religion. The science-based approach, technology and the talents of students' interests are the difference (Makransky, 2021). Here, students will carry out a lot of practical activities based on science and technology which will cause them to like the material. as well as talent and interest activities which include various sports, arts and creativity activities.

In its position as a boarding school, there are lots of activities that must be prepared by the teaching staff and boarding staff. These preparations include accepting new prospective students, preparing equipment in the dormitory to preparing for the new academic year (See Figure 3).

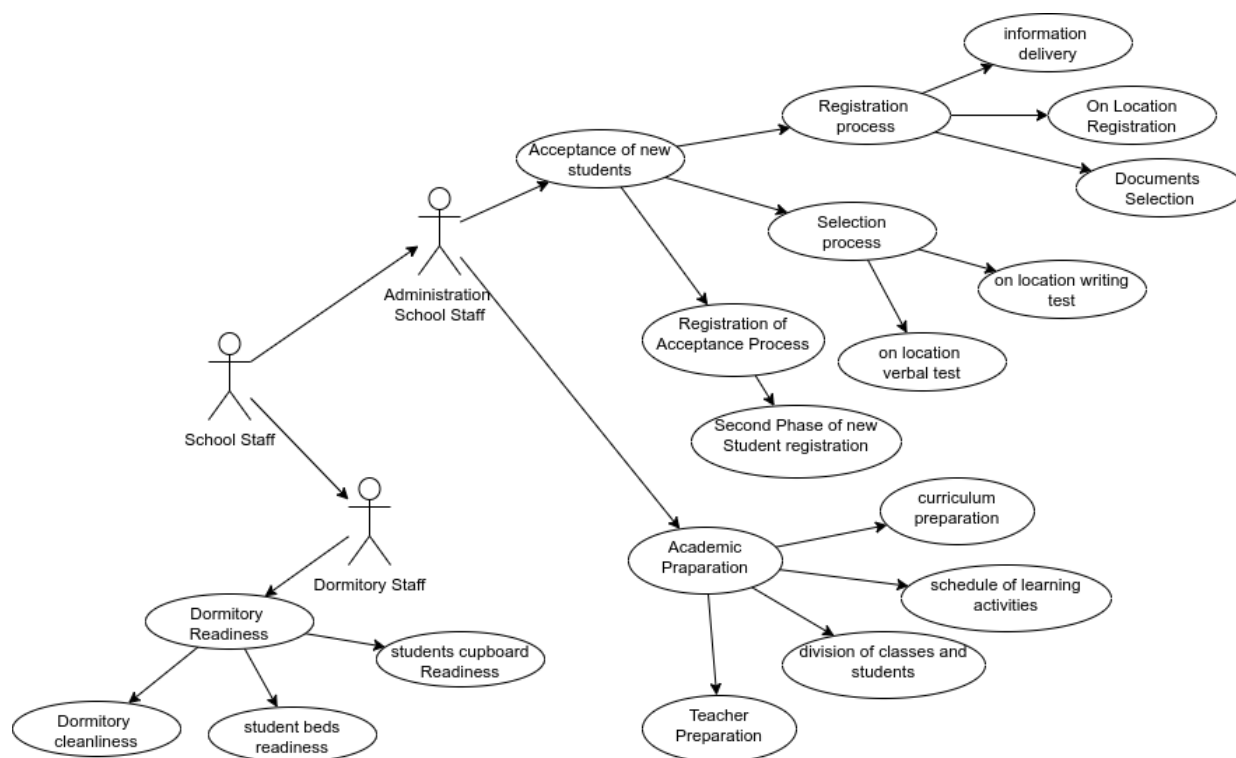


Figure 3. Job lists of school staff during their opening academic year.

This study identifies that administrative activities in boarding schools do not only cover educational administration, but also include non-educational administration (See **Figure 4**). The division of tasks for all executors is assigned to two parts, namely the school staff section and the dormitory staff section (Sahid, 2021). School staff includes the person in charge of student admissions affairs and the person in charge of preparing for the new academic year. While the dormitory staff is responsible for every matter which includes the readiness of the dormitory when new students start to enter the dormitory. School staff who are responsible for the process of recruiting new students carry out many activities whose scope includes disseminating information on the entrance selection schedule, carrying out the entrance selection process in the form of a writing test and verbal test (psychotest), re-registration when it is declared passed the selection process, etc. During that time, the person in charge of preparing for the new academic year must prepare various supporting elements such as a schedule of learning activities, class composition and members, prepare a list of homeroom teachers, prepare class administration rooms, etc. The person in charge of the hostel is no less important, because they have to prepare many things in the hostel which include ensuring the cleanliness of the dormitory, the availability of beds and cupboards for new students, ensuring other supporting facilities are available, etc.

The activities that must be carried out by the school staff mentioned in the previous paragraph require the school director to make an appropriate work plan and an effective monitoring process. It often becomes a problem when it is monitored manually because of the missed work possibility. The condition is what the school director wants to avoid so that the process of activities at the beginning of the academic year can run smoothly without any problems. In the case of MTs Pante Kulu, the activity preparation and monitoring process is illustrated in the following flowchart,

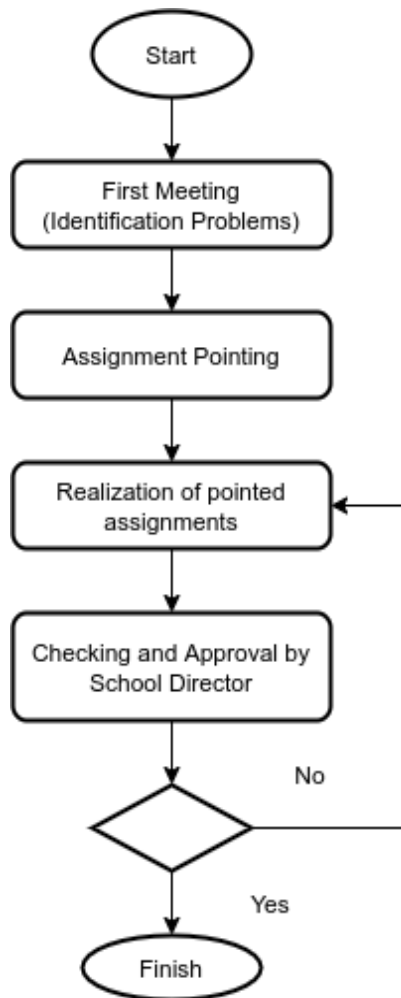


Figure 4. Appointments and jobs list monitoring flowchart.

Trello application using card as to deliver information. In the card view, user can access information related to name of card, description, file attachment, viewing and writing comments, and more. To describe the relevant assignment in MTs Pante Kulu, this study spells out Trello model to five lists, they are:

1. Main Info. This section contains important information that does not need to be changed and is always used as a reference throughout the activity.
2. Assignment Listed. This section contains information on tasks that are obligatory to be carried out by the person in charge appointed by the school director in accordance with the meeting.
3. To Do. This section also contains information on tasks that are obligatory to be carried out by the person in charge who is appointed by the school director but transferred by the person in charge. This section is the first to be monitored by the school director.
4. Doing. This section contains tasks whose status is already in process.
5. Done. This section contains tasks whose status has been completed.

From the exploration of the needs above and correspondents interviewed, the card can be separated to five lists. Separation into the five lists above needs to be done to make it easier for users to describe activities and monitor the progress of activities being carried out. This separation is also seen according to the needs of the information to be conveyed, stored and deleted in accordance with the implementation. The main info card is the most important part obtained in this study because it is considered a card that must always be in a given

scheme. Information changes can be made, but it is not allowed to delete or replace this card (See Figure 5).

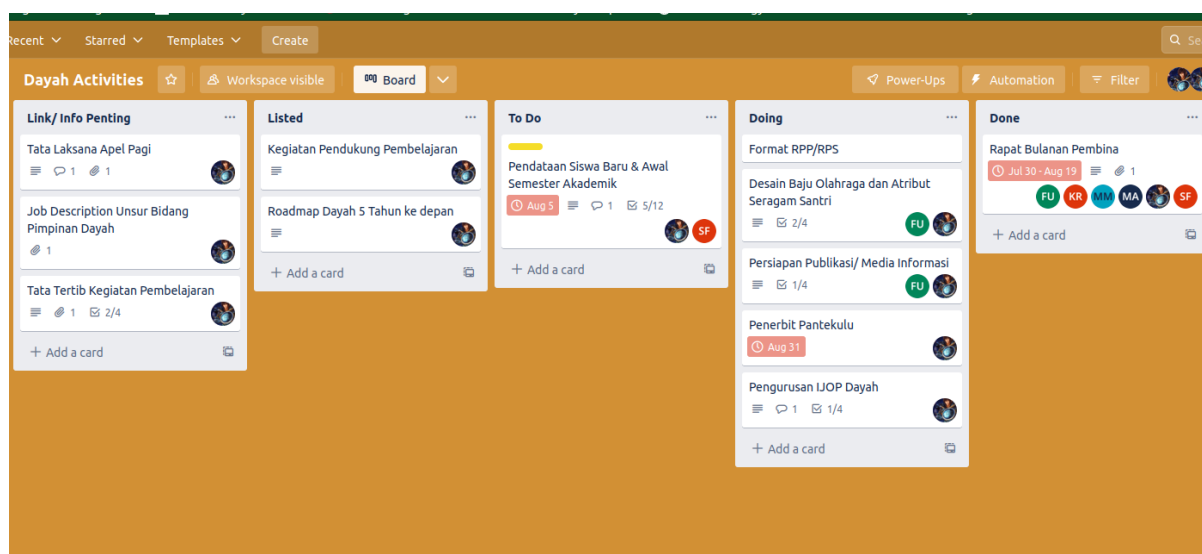


Figure 5. Display of the main page of the Trello application for activities at MTs Pante Kulu.

The next phase of the research is formulating the right question for identification SWOT Analysis. There is different aspects with several research processes using SWOT analysis which takes research objects in companies, this research does not emphasize and differentiate internal and external factors. This analysis is devoted to finding the strengths, weaknesses, opportunities, and threads of the Trello application implementation. The questions along with the percentage of the results of the answers submitted in this analysis (See Table 1).

Table 1. SWOT analysis on Implementation Trello Application.

No.	SWOT Analysis	Questions	Percentage (%)
1	Strengths	mobile device usage time is more than 8 hours per day	60%
		Accustomed to organizing work in a systematic and structured manner	60%
2	Weaknesses	not familiar with Trello	60%
		tend to be lazy to update activities	40%
3	Opportunities	Have used a Trello-like project management app before	40%
		the Trello app is easy to use once mentored	80%
4	Threads	Internet Connectivity	40%
		still do not understand the benefits of using project management applications	20%

The results of the exploratory SWOT analysis that appear in the table above are important questions which are the main points of the four aspects studied. Some research results that have insignificant percentage values are not included in this paper. Even so, the value of the results shown can already describe concrete results. Based on the research results above, the use of a project management tool application or similar is highly recommended. This can be seen from the questions that touch on the aspects of strength and opportunity giving a high score reaching 60% and having a lowest score of only 40%. This is also supported by the percentage value on the aspect thread and weakness which shows the highest value of 60% and the lowest value of 40%. On the weakness aspect, this 60% score was obtained from

questions regarding how familiar they were with using the Trello application and only a few correspondents were familiar with this application.

In the last section, this research also identifies five correspondents on how users want to continue using Trello applications or similar project management tools. The result is that, there are 40% of users who want to continue using this application because the features provided are free and easy to use and another 40% of users want to try another similar application. The important point of the Trello application which is an added value is the many features provided, there are no user limits and no fees are the main reasons **(See Figure 6)**.

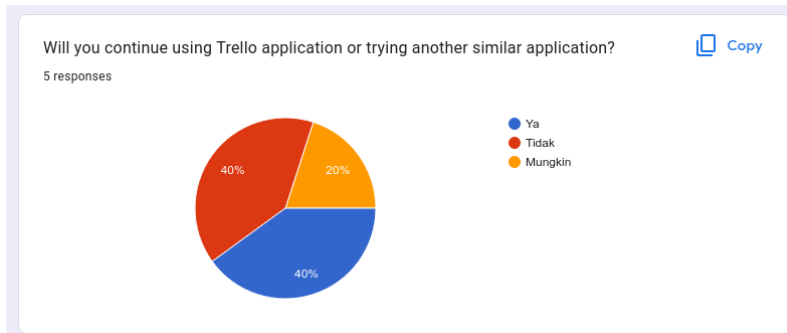


Figure 6. Percentage of user acquisition on Trello application.

From the picture above, it is also found that the tendency of users not to use the activity monitoring application is due to their habit of manual processes. They have a tendency to be lazy to use applications because they are digital based. We commonly find this among respondents who are over 35 years old. However, for this point, of course, further research is needed, because this may be found differently in other schools.

5. CONCLUSION

In this study, it was concluded that the Trello Application or other similar project management tools are suitable for use in administrative and non-administrative activities in an educational institution such as a school. At MTs Teungku Chik Pante Kulu, the sequencing model is suitable for further application and no other framework models are needed. The results of this study also show that the sustainability of the activity monitoring model or school administration using this application needs to be continued.

In the end, this research is also far from perfect. There are many other things that can be followed from this research. To get maximum results, this research needs to be continued by involving more correspondents and involving many other stakeholders outside the school environment such as parents of students and school owners. Follow-up research can also be carried out by targeting student aspects, for example at the level of student organizations.

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