

Implementation of a Web-Based e-Discipline System at Madrasah Aliyah

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ABSTRACT

Schools play a pivotal role in fostering good character; however, issues concerning student discipline persistently challenge this educational objective. Traditional methods, such as physical logbooks for recording disciplinary infractions, have proven inefficient and ineffective. In response, this study examines a newly implemented web-based application designed to manage and disseminate information regarding disciplinary violations. Employing a descriptive qualitative research methodology, this investigation explores the functionality and impact of the web-based disciplinary system. Preliminary findings indicate that the application utilizes a points-based system to monitor and regulate student behavior, categorizing infractions and accumulating points which may result in sanctions. Additionally, the study highlights efforts by educational institutions to promote rule compliance through comprehensive engagement strategies involving students, parents, and the wider community. These strategies include extensive rule socialization and targeted individual counseling for students demonstrating challenging behaviors. This approach not only streamlines the disciplinary process but also enhances the overall educational environment by reinforcing behavioral standards and accountability.

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1. INTRODUCTION

Education is a character-building effort, to create a civilized nation by strengthening religious values, honesty, tolerance, discipline, hard work, creativity, independence, democracy, curiosity, national spirit, love for the motherland, love for peace, care for the environment, care socially, and be responsible (Peraturan Presiden, 2017). Ministry of National Education in 2003 article 12 that every student is obliged to maintain educational norms to ensure the continuity of the process and success of education (Depdiknas, 2003). However, there are still gaps in schools regarding the application and formation of good norms, this problem is related to student discipline violations. Facts from previous studies revealed violations committed by students, namely pulling out, not wearing appropriate uniforms, not wearing school symbols, wearing colored shoes, and littering. In addition, students also often play with gadgets during the learning process, interrupt friends who are studying, smoke at school, speak harshly, and fight the teacher's words (Muslida, Firman, & Riska, 2020).

Factors causing student indiscipline can be divided into two parts, namely, internal factors and external factors. The student causes internal factors that cause indiscipline, family disharmony, lack of control from the family, an unsupportive economy, and being forced to go to school. External factors are caused by a lack of firmness in giving sanctions for violations of the rules so that students do not hesitate to break the rules (Utari & Ulfah, 2017). Many researchers have conducted research on discipline in schools, according to Mukhamad Ilyasin's previous research showing the importance of student discipline management and the role of various parties in schools. They also explain the importance of controlling student behavior (Ilyasin, 2019). Faizah's research also revealed that the formation of student character through discipline can make students obey school or teacher rules, introspect and not break rules, and maintain school order (Faizah, 2019). In addition, similar results were also found in Anggi Permatasari's research that school culture affected shaping student discipline (Sari, Pratiwi, & Martiana, 2020). Then research belonging to Farida Nurreni, Nurhadi, and Okta Hadi Nurcahyono also analyzed student discipline in high school and that it was important for schools to apply a point system in implementing school rules, this was felt to be effective for disciplining students (Nurreni Farida, Nurhadi, 2021).

School conduct rules serve as critical benchmarks guiding student behavior both within and outside the educational environment. It is essential that these rules, designed to shape student characteristics, are consistently applied across school settings (Tajudin, 2020). Generally, students adhere to school rules as basic obligations—acts of compliance with the directives established by the school, under teacher guidance, and involving all school components (Mardawani, 2015). To fortify character education and enhance discipline, the Madrasah Aliyah (MA) Matholi'ul Anwar has initiated a movement aimed at revitalizing the teaching and learning process. This initiative incorporates strict adherence to madrasah rules to promote orderly conduct, thereby enabling students to excel in both academic and extracurricular activities. In today's digital age, a dedicated application has become indispensable for facilitating swift communication between the school and parents regarding student discipline. Such tools enable parents to collaborate effectively with the school in addressing student delinquency and misconduct.

The MA Matholi'ul Anwar has adopted a web-based system, Matholi'ul Anwar's Rules, to enforce e-discipline effectively. The rapid evolution of information and communication technology has transformed it from merely a source of information to a comprehensive service platform facilitating new modes of communication and interaction (Ishaq, Abna, & Wahab, 2021). The implementation of this web application system at MA Matholi'ul Anwar primarily aims to enhance the follow-up of student violations using a systematic point-based approach. Traditional manual recording methods have led to issues such as data loss or damage, which significantly hinders the enforcement of discipline. The absence of an integrated information system exacerbates these challenges, often leading to duplication and unreliable data concerning student disciplinary actions. Given these considerations, this research aims to critically evaluate the effectiveness of the web-based e-discipline system in improving student discipline at MA Matholi'ul Anwar. This study seeks to provide a detailed analysis of the application's impact on managing student discipline, exploring the underlying causes of indiscipline, and assessing the overall efficacy of the digital approach in fostering a disciplined academic environment.

2. METHODS

This study uses a descriptive qualitative research approach. Creswell defines a qualitative approach as a process of inquiry and understanding based on a methodology that investigates social phenomena and human problems (Creswell, 2013). Qualitative research is a type of research that produces results that cannot be achieved through statistical methods or other quantification methods (Eko Murdiyanto, 2020). Gathering information through this method allows gathering information from various sources with the aim of understanding the meaning of the problem through the respondents or audience involved.

This qualitative research data collection method uses 1) interviews 2) observation 3) collection of documented materials such as photographs and so on (Hancock, 2006). The research location is located at MA Matholi'ul Anwar, a private high school located in Lamongan Regency, East Java Province, Indonesia. The sources of this research were 1 vice principal, 1 teacher who was trusted as the head of the discipline department, and 3 students. Qualitative data analysis in this study uses the Miles and Huberman model where there are three types of activities in qualitative data analysis (Moleong, 2013). In this study, checking the validity of the findings used time triangulation and data source triangulation to test the credibility of the data by checking the data that had been obtained through several sources (Eko Murdiyanto, 2020).

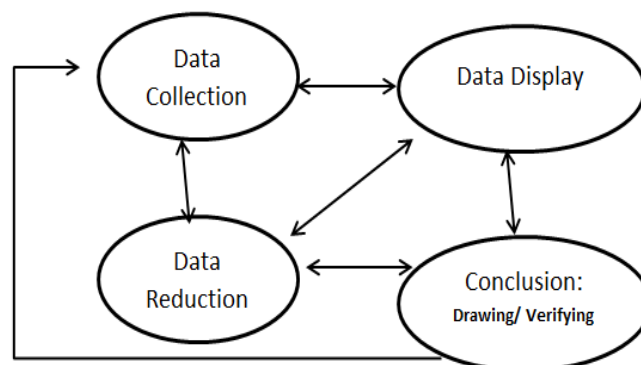


Figure 1. Interactive data analysis model

3. FINDINGS AND DISCUSSION

3.1 Implementation of Web-Based e-discipline Applications at MA Matholi'ul Anwar

This web-based application system was developed based on a suitability analysis of the needs of the Aliyah MA Matholi'ul Anwar madrasah. School regulations and this application are socialized during the madrasah period of student ta'aruf (MATSAMA). Matsama activities are an orientation or introduction to the Madrasah environment for new students. The madrasah provides books containing school regulations and culture. The implementation of this information system is also carried out by carrying out continuous outreach to students both individually and in groups so that it is more effective (Heryanda, Mayasari, & Telagawati, 2019). Providing outreach regarding this disciplinary web-based application was chosen during matsama because this event has a direct impact on new students so that they are aware of the importance of maintaining the good name of the madrasa. This Matsama can be a forum for cultivating a culture and spirit of pride in new students to learn together and love and maintain the good name of their alma mater as well as instilling and strengthening the values of religious moderation and Indonesian character in new students. Through Matsama activities, it is hoped that new students can be introduced to the learning system, characteristics, character, and culture that exist in the madrasa environment. School culture or culture is a school culture that can have an influence on the lives of school residents, both positive and negative influences as a characteristic of that culture. School culture consists of positive culture, negative culture, and neutral (Vitaria, 2017).

The use of this application certainly replaces discipline books which are very susceptible to damage such as getting wet or being lost. Another phenomenon found in the field is that the teacher initially wrote down the information about the violation in a notebook when the violation occurred. However, gradually this becomes less effective and becomes an obstacle for teachers because it is inefficient in finding information about students who violate it quickly and easily. Because they have to turn the pages in their notebooks. Based on these problems, the school created an application to help handle information in an orderly manner at MA Matholi'ul Anwar. This online application uses a

website as a media administrator access point. An administrator is one of the teachers or administrators assigned to manage the system. The use of this technology was chosen because it does not require installation on any device, such as a smartphone or computer. Just open the website and provide a login account that can be used at any time. Users are parents and teachers. From the results of observations and interviews conducted at MA Matholi'ul Anwar Lamongan, this website also contains student and teacher data. Results of interviews with the deputy principal for curriculum.

"This application is used to discipline and control violations committed by students. This application is used by teachers, parents of students. Initially, using a violation card or usually for example there is a child who is late, it is recorded at the school gate or usually ordered by teachers and counseling guidance teachers, because we feel it is less effective we replace the card media using this web application which is designed to be used to store student, teacher data and violations committed".

The formation of student character requires time, determination, and commitment from parents and schools or teachers to educate children to become individuals with character through a disciplined life. If this process is carried out well, the impact will not only be on students but also ourselves, such as having the character of being patient, tolerant, able to understand problems from different perspectives, disciplined, and having integrity will always shine from within as parents and teachers (Faizah, 2019). Based on the results of an interview with the Deputy Head of Curriculum MA Matholi'ul Anwar revealed that because of the very large number of students, sometimes giving advice and reprimanding students who violate it is not enough, and sometimes also giving punishments or sanctions to students who violate it. Students who violate alone are not enough. Therefore, the madrasa with this application helps accumulate violations committed by students and of course, the sanctions are adjusted if the violation is serious, the student's guardian is also summoned to the school.

Access to this application is restricted to teachers, student guardians, and administrators. The application includes a comprehensive database of disciplinary rules and assigns points for each student infraction. Key navigational features available to teachers include an input module for logging student violations, specifying the violated articles, and assigning corresponding points for each infraction. Additionally, the application offers a guideline feature detailing the sanctions associated with different point thresholds and the relevant rules. There is also a messaging feature through which teachers can communicate directly with parents, providing detailed updates on any infractions committed by their children. This suite of features ensures a clear, structured, and effective approach to managing student discipline.

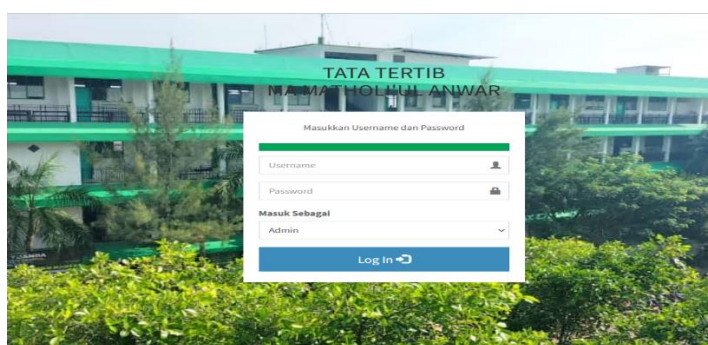
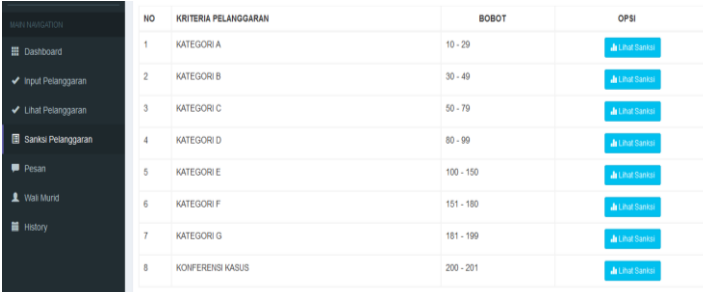


Figure 2. displays the login page for the e-discipline application

These points are then added up as a whole to get sanctions according to the violations that have been committed, with the total score collected by students will be given sanctions according to the accumulated points every two months or at the end of the semester when the exam is to be recapitulated and announced who is the student's violators and what sanctions will be imposed. Usually, the imposition of sanctions is given a maximum time limit on when it can last. Where each

weight point will have various criteria for violations, the category of violations starts from category A, namely light violations of 10-29, the actions that will be taken are handled by the orderly teacher team with the homeroom teacher, recorded in the statute application, verbally warned, written 1000 sholawat times or, writing a Waqiah letter or reading 1 Juz standing up, and each category has a different weight of sanctions.



NO	KRITERIA PELANGGARAN	BOBOT	OPSI
1	KATEGORI A	10 - 29	Lihat Opsinya
2	KATEGORI B	30 - 49	Lihat Opsinya
3	KATEGORI C	50 - 79	Lihat Opsinya
4	KATEGORI D	80 - 99	Lihat Opsinya
5	KATEGORI E	100 - 150	Lihat Opsinya
6	KATEGORI F	151 - 180	Lihat Opsinya
7	KATEGORI G	181 - 199	Lihat Opsinya
8	KONFERENSI KASUS	200 - 201	Lihat Opsinya

Figure 3. The features available in the e-discipline application

3.2 Effectiveness of information systems in improving student discipline

The implementation of this web-based application offers distinct advantages for various stakeholders within the educational ecosystem. For parents, it simplifies tracking their child's school progress and specific disciplinary infractions. Teachers benefit significantly as the application automates the classification of violations and associated point penalties, which can be conveniently managed via smartphones. For schools, the application enhances the evaluation of discipline and rule adherence, and greatly improves data management. The system organizes data neatly and structurally, supporting the school's efforts to assist students facing challenges. Furthermore, it facilitates the tracking and management of repeated infractions, aiding in the effective enhancement of student discipline.

This aligns with Tajudin's research (2020), which found that such information systems significantly boost student discipline and participation in school activities. Additionally, the system enhances educational services by serving as a communication hub among parents, teachers, and students, thereby increasing public trust in educational institutions. This comprehensive approach underscores the system's role in bridging gaps within the school community and promoting a disciplined learning environment.

3.3 Inhibiting Factors In Implementation Rules of MA Matholi'ul Anwar

Obstacles in the implementation of the MA Matholi'ul Anwar discipline are external and internal factors of the students themselves. Internal factors that cause students to lack discipline come from within the student, namely awareness of following the rules. Violations include the student's desires, other external factors found in the field such as the student's relationship with parents, the child's relationship with the school situation, and the influence of friends. The obstacles in upholding discipline as conveyed by the head of the discipline teacher in the interview, are as follows: "The obstacle is if the behavior continues to be repeated and the person concerned does not feel deterred even though there have been sanctions, another obstacle is when we don't know how to socialize outside of school so that they can commit serious violations".

The deterrent effect of not repeating it for students who have violated it needs to be strengthened. Violations committed at the student's own will are usually minor or moderate types of violations such as cheating, being late for school, littering, falsifying another student's permit, impolite behavior, some girls wearing eyebrow pencil makeup, mascara to blushing lipstick that adorns the face excessively. According to Wilda Fasim Hasibuan's research results, disciplinary violations are caused by several factors, namely 1) being late for school is caused by sleeping late, the conventional phase. 2) parenting

style is caused by busy parents, low level of education, and parents who don't care enough. 3) transfer student. 4) lack of motivation 5) learning methods that are less varied 6) truant behavior is caused by self or non-social environment (Hasibuan & Rahadita, 2017).

Wini (2020) notes that the origins of student violations are often unique, deeply personal, and complex, with underlying issues that may not be immediately apparent, though some common causes include boredom, disappointment, and depression during the identity-seeking phase. Research findings reveal that a significant challenge for teachers at MA Matholi'ul Anwar in enforcing discipline arises when infractions are repeatedly committed without any apparent deterrence from existing sanctions. Another challenge is the lack of visibility into students' external social interactions, which can sometimes lead to serious offenses. Further studies have identified key factors affecting student discipline. Internal factors include habitual laziness and the tendency to wake up late, while external factors comprise peer influence, lifestyle trends, technological advancements, and parental unavailability (Kurniawan & Agustang, 2021; Puput Fitria Dewi, 2021). These findings highlight the multifaceted nature of influences on student behavior and the complexities involved in managing school discipline effectively.

The study reveals that although teachers initially issue warnings and may instruct students to remove makeup before assigning disciplinary points, compliance is not guaranteed. This resistance illustrates a type of intentional violation where students act on desires without specific reasons, demonstrating a basic understanding of but indifference to the repercussions. Such behaviors, both deliberate and accidental, underscore the recognition among students of the necessity for strict disciplinary measures to prevent recurrent offenses. The overall adherence to school rules among students is reasonably satisfactory, yet some students persistently breach these rules. Despite challenges associated with its implementation, the web-based e-discipline application is seen as a potential tool for managing and deterring infractions, fostering an environment where school values and norms are respected and upheld by all school members.

3.4 Strategies carried out by Madrasas to Shape the character of student discipline

The school uses several strategies to improve discipline as stated by the head of the discipline teacher in the interview as follows:

"The school's strategy in disciplining students at MA Matholiul Anwar Various ways are carried out by teachers and madrasas, starting from forming religious attitudes according to the vision and mission of the madrasa, forming time discipline, attitude discipline such as courtesy and so on, we cultivate it in madrasas. For those who have committed violations we also start with a reprimand, a warning too".

The aforementioned discussion highlights that the strategy for instilling discipline at Madrasah Matholi'ul Anwar extends beyond the use of a web-based e-discipline application. The madrasah actively engages in fostering compliance with school regulations through widespread socialization efforts aimed at students, parents, and the wider community. This includes the involvement of teacher and student organizations such as OSIS (Student Organization), scout movements, and various student associations. Madrasah Matholi'ul Anwar views these collaborative efforts between parents and the school as crucial for establishing a framework to prevent deviant behavior within the school environment. Additionally, when confrontations with problematic behaviors occur, the madrasah adopts corrective measures, including individual counseling provided by guidance counselors. These actions are taken in recognition of the complex challenges students face, which often involve their peers, classroom learning, and their broader social interactions.

The goal of guidance and counseling within educational settings is to enhance support services for students, both individually and in groups, enabling them to achieve optimal personal and social development. As part of its strategic approach to fostering discipline and ingraining positive cultural practices, the madrasah implements various services that adhere to established standards. According

to Wini (2020), there are several methods or techniques that teachers can utilize to manage student discipline at school. These include the Inner Control Technique, which cultivates a sensitivity towards self-discipline among students. The External Control Technique involves direct guidance and counseling to reinforce student self-control. Lastly, the Cooperative Control Technique promotes discipline through a collaborative effort, wherein teachers and students jointly monitor and address any breaches of school discipline.

4. CONCLUSION

The effectiveness of the web-based e-discipline system at MA Matholi'ul Anwar in enhancing student discipline is notable. The application proves both efficient and effective, facilitating easier interaction between teachers, parents, and students facing disciplinary issues. Its user-friendly interface, which incorporates a points system and features that streamline the imposition of sanctions based on specific violations, further enhances its utility. The integration of modern technology in education allows for the effective connection of various components that collect, process, store, and disseminate information, thus supporting decision-making and discipline monitoring in schools. This system not only advances educational practices by incorporating technology into the teaching and learning process but also fosters the development of awareness, confidence, and moral character in students. Additionally, it serves as a reminder to parents to collaborate in upholding social values, discipline, and humanity.

However, this research faced several limitations, including a lack of resources, which prevented interviews with the guardians of students at MA Matholi'ul Anwar, limiting a fuller understanding of the application's impact from the users' perspective due to constrained research funds and time. Future research should aim to conduct more comprehensive and in-depth evaluations of the implementation of web-based e-discipline applications in educational settings, potentially exploring broader user feedback and its long-term effects on student behavior and institutional culture.

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REFERENCES

- Albar, A. M., & Hoque, M. R. (2015). Development of Web-Based e-Discipline System: A Case Study for the Kingdom of Saudi Arabia. *Journal of Advances in Computer Networks*, 3(3), 243–246. <https://doi.org/10.7763/jacn.2015.v3.175>
- Creswell, J. W. . (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Sage. Retrieved from <https://us.sagepub.com/en-us/nam/qualitative-inquiry-and-research-design/book246896>
- Depdiknas. (2003). *Undang-Undang Sistem Pendidikan Nasional*. Jakarta: Departemen Pendidikan Nasional.
- Eko Murdiyanto. (2020). Penelitian Kualitatif (Teori dan Aplikasi disertai contoh proposal). In *UPN Veteran Yogyakarta Press* (1st ed.). Yogyakarta: UPN Veteran Yogyakarta Press. Retrieved from http://www.academia.edu/download/35360663/METODE_PENELITIAN_KUALITATIF.docx
- Faizah, N. (2019). Pembentukan Karakter Siswa Melalui Disiplin Tata Tertib Sekolah Di SMA Negeri 2 Klaten. *Prosiding Seminar Nasional PEP 2019*, 1(1), 108–115.
- Hancock, B. (2006). An Introduction to Qualitative Research Au t hors. *Qualitative Research*, 4th, 504. <https://doi.org/10.1109/TVCG.2007.70541>
- Hasibuan, W. F., & Rahadita, D. (2017). Faktor Penyebab Pelanggaran Disiplin Sekolah Pada Siswa Kelas Xii Di Sma 'X' Batam Factors of Violation of School Discipline on Student Class Xii in Sma "X" Batam. *Cahaya Pendidikan*, 3(1), 119–129. <https://doi.org/10.33373/chypend.v3i1.876>
- Heryanda, K. K., Mayasari, N. M. D. A., & Telagawathi, N. W. S. (2019). *Implementation of Students'*

- Information System to Improve Discipline and Database of The Students. (January 2019). <https://doi.org/10.2991/teams-18.2019.10>
- Ilyasin, M. (2019). Students' Discipline Management in Strengthening Modern Human Resources. *Dinamika Ilmu*, 19(2), 351–361. <https://doi.org/10.21093/di.v19i2.1774>
- Ishaq, M., Abna, N., & Wahab, A. (2021). The Challenge of Industry 4 . 0 in Information System of Management. *Linguistica Antverpiensia*, (3), 8676–8690. Retrieved from https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjI_GRwc_AhUg1DgGHYCIB4IQFnoECBAQAQ&url=http%3A%2F%2Frepository.umi.ac.id%2F1154%2F1%2FTHE%2520CHALLENGE%2520OF%2520INDUSTRY%25204.pdf&usg=AOvVaw1_N9SujNjlawPewwSwvPDF&opi=89978449
- Kurniawan, A., & Agustang, A. (2021). Faktor Penghambat Tingkat Kedisiplinan. *Journal Of Sociology Education Review*, 1(3), 120–126.
- Mardawani. (2015). *Tata Tertib Sekolah (Studi Kasus Pada Siswa SMA Nusantara Indah Sintang)*. 6(1), 36–49.
- Moleong, L. J. (2013). *Metodologi Penelitian Kualitatif Edisi Revisi*. Bandung: Remaja Rosdakarya.
- Muslida, D., Firman, F., & Riska, R. (2020). Disciplinary Behavior and Exemplary Teacher as Influencing Factors. *Jurnal Aplikasi IPTEK Indonesia*, 4(2), 95–100. <https://doi.org/10.24036/4.24361>
- Nurreni Farida, Nurhadi, dan O. H. N. (2021). Analisis Kedisiplinan siswa Berdasarkan Ketaatan Terhadap Tata Tertib Sekolah. *Jurnal Pendidikan Karakter*, 12(2), 209–220. <https://doi.org/10.21831/jpka.v12i2.33042>
- Peraturan Presiden. (2017). Peraturan Presiden No 87 Tahun 2017 Tentang Penguatan Pendidikan Karakter Dengan Rahmat Tuhan Yang Maha Esa. *Journal of Chemical Information and Modeling*, p. 7.
- Puput Fitria Dewi, D. S. M. A. F. (2021). Pelaksanaan Pendidikan Karakter Disiplin Anak Di Lingkungan Keluarga Buruh Konveksi Di Desa Guwosobokerto. *Jurnal Inovasi Penelitian*, 2(4), 1188.
- Sari, A. P., Pratiwi, P. H., & Martiana, A. (2020). Kultur Sekolah Dalam Membentuk Kedisiplinan Siswa di SMA Angkasa Adi Sutjipto Yogyakarta. *DIMENSIA: Jurnal Kajian Sosiologi*, 8(2), 138–148. <https://doi.org/10.21831/dimensia.v8i2.36368>
- Tajudin, H. Y. (2020). Pengaruh tata tertib sekolah terhadap kedisiplinan peserta didik. *Prosiding Seminar Nasional Pendidikan Pancasila Dan Kewarganegaraan Universitas Pamulang*, 1(1), 138.
- Utari, N. D., & Ulfah, M. (2017). Analisis Faktor Penyebab Ketidakterdisiplinan Siswa Di SMA Santun Untan Pontianak. *Universitas Tanjungpura*.
- Uyub, Y. S. (2011). Pengaruh Pemberlakuan Point Pelanggaran Terhadap Kedisiplinan Siswa Dalam Belajar di Madrasah Tsanawiyah Muhammadiyah 02 Pekanbaru (Islam Negeri Sultan Syarif Kasim Riau). *Islam Negeri Sultan Syarif Kasim Riau*. Retrieved from <http://www.ainfo.inia.uy/digital/bitstream/item/7130/1/LUZARDO-BUIATRIA-2017.pdf>
- Vitaria, L. (2017). Budaya Sekolah di Sekolah Menengah Atas 17 Bantul. *Jurnal Kebijakan Pendidikan*, VI(2), 596–597.
- Wini. (2020). Peran Guru, Menangani Pelanggaran, Disiplin siswa. *Asatidza: Jurnal Pendidikan*, 1(1), 1–17.