

## Implementation of Zone-Based Student Admission (PPDB) Through Website in Purwakarta: Challenges and Benefits

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**Abstract:** This study investigates the implementation of the Zone-Based Student Admission (PPDB) System through a website in Purwakarta, Indonesia, highlighting the challenges and benefits of this educational transformation. Amid demographic changes, economic shifts, and evolving educational priorities, reforming the student admission process has become an urgent necessity. The challenges in its implementation include adaptation to change, capacity building, and technical infrastructure. Conversely, the web-based PPDB system offers multiple advantages. It promotes equity and fairness by providing equal opportunities, especially for marginalized communities, enhances transparency through easily accessible admission rules, real-time updates, and consistent procedures, simplifies student enrollment with automated processes, and reduces administrative costs through streamlined procedures. This study utilizes a literature review approach, drawing from various sources such as reports and articles that focus on the challenges and benefits associated with the PPDB system in Purwakarta and in Indonesia in general. In conclusion, despite the challenges, the implementation of the web-based PPDB system in Purwakarta represents a significant step towards a more equitable and efficient educational system. Carefully navigating the challenges and leveraging the system's advantages promises a more inclusive, transparent, and efficient educational landscape in Purwakarta.

**Keywords:** Zone-Based Admission, Website Implementation, Purwakarta Education.

### INTRODUCTION

The admission of new learners (PPDB) is one of the important elements in realizing inclusive and equitable education (Smith, 2020). Inequality in access to quality education in Indonesia is still a significant problem, caused by various factors such as geographical conditions, family environment and the socioeconomic status of the community (Supendi & Ali, 2021). Previous research shows that the main barriers to quality education include difficult access to schools, lack of education facilities, low teacher quality, family economic burden and community perspectives on the importance of education (Johnson, 2019). In addition, economic changes and unequal distribution of resources also exacerbate inequalities in the education system (Patel, 2018). To address these inequalities, some suggested solutions include optimizing the education budget, improving school infrastructure and training programs for educators to improve their professionalism (White, 2017). By understanding the factors that cause these inequalities, strategic efforts can be made to realize a more inclusive and

equitable education system for all.

In Purwakarta, West Java, Indonesia, this issue is attracting serious attention among the community, which, like many other education enrollment systems, faces many challenges. One of the most important issues is the rapid and growing demographic changes in the region. As the population in Purwakarta fluctuates, schools must adapt to accommodate varying numbers of students, creating enrollment challenges. This can lead to overcrowding in some schools and underutilization of resources in others, impacting on the quality of education (Smith, 2020).

Another significant challenge is the shifting economy in the region. Purwakarta's economy is dynamic, and as economic opportunities fluctuate, so does the demand for quality education. This has led to an uneven distribution of educational resources, with some schools facing resource shortages and struggling to meet the needs of their students (Jhonson, 2019). Changing educational priorities also contribute to the challenges of the PPDB system. As educational goals and curricula evolve, schools must adjust their admission criteria and procedures to align with these priorities. This process can be complex and time-consuming, often leading to inconsistencies in the admission process (Patel, 2018).

In terms of implementation, capacity building is a challenge that needs attention. Schools and education authorities must ensure that they have the necessary infrastructure and staff capabilities to handle the demands of a web-based PPDB system. This includes training school staff, administrative personnel and stakeholders in the use of digital devices and online platforms. Without adequate capacity building, the successful implementation of the PPDB system may be hampered (Brown, 2017).

Technical infrastructure is another important issue. Effective implementation of the PPDB system relies on reliable online registration, data processing, and results dissemination. Lack of robust technical infrastructure can lead to system failures, slow processing times, and inconsistencies in the dissemination of results, ultimately affecting the quality and fairness of the admission process (White, 2016). Regarding some of the problems related to Zoning-Based New Student Admission, it is believed that the best way to overcome them is to involve websites in the administration process. Traditional admission processes are often marred by inequality, to the detriment of marginalized communities. The transition to a web-based PPDB system brings several key advantages that help promote equity in education.

First and foremost, the PPDB system promotes fairness and equality by providing equal opportunities for all students, especially those from marginalized communities. Digital platforms ensure that every eligible student has access to the admission process, regardless of their geographical location or socioeconomic background. This balances competition and reduces the inherent biases that often arise in traditional admission systems (Kumar, 2015).

Transparency is another important aspect of concern for web-based PPDB systems (Thomas, 2014). By providing easily accessible admission rules, requirements, and results online, the system

ensures that students and their families can understand the admission process thoroughly. Live updates and notifications keep all stakeholders informed, reducing the possibility of misinformation or ambiguity in the process. This transparency not only fosters trust, but also empowers families to be actively involved in their children's education.

Efficiency is an important component of the solution. A streamlined enrollment process simplifies the steps that students and their families need to take to enroll. Automation of data management and faster processing of student enrollment means that students can be placed faster in the appropriate schools. This increases the overall efficiency of the enrollment process, reduces delays, and ensures that students are not stranded during the transition to their new school (Rodriguez, 2012).

In addition, web-based PPDB systems offer strong data analysis and reporting capabilities. This analytical power allows education authorities to identify trends, gaps, and areas for improvement in the admission process. By utilizing this data, educational institutions can make informed decisions to further improve equity and ensure fair distribution of educational resources (Garcia, 2011). Furthermore, the system contributes to the reduction of administrative costs. By streamlining application processes, automating data management and offering data analysis and reporting capabilities through a web-based system, schools can operate more efficiently, leading to cost savings. These reduced costs can be reinvested to improve the quality of education and provide additional support for students, further promoting equity. This research will investigate the extent of the influence of website implementation in the New Student Admission process.

## **METHOD**

This research uses an in-depth literature study approach to analyze the implementation of a web-based New Student Admission (PPDB) system in Purwakarta, Indonesia. This approach was chosen to obtain a comprehensive picture of the challenges, benefits, and impacts of implementing a web-based PPDB system, both in Purwakarta and in Indonesia in general. Through a literature review, this research examined various academic sources, government policy reports and relevant articles related to the PPDB system, with the aim of identifying the elements that influence the successful implementation of a web-based system in the education sector.

The data collection process was conducted by analyzing existing literature, including previous studies that discuss the successes and challenges of implementing a web-based PPDB system, such as difficulties in developing technological infrastructure, challenges in developing human resource capacity, and community acceptance of system changes (Johnson, 2019). In this analysis, the main focus is on the technical constraints that can arise from the lack of facilities and training for school staff, as well as the role of the community in understanding and adapting to the new system. The study also investigated the mitigation measures that have been taken to overcome these barriers, such as

improving the technology infrastructure, developing training programs for educators and administrators, and a more inclusive approach to educating the community about the benefits of a web-based system (Patel, 2018).

The study also included an analysis of the benefits of implementing a web-based PPDB system, such as increased transparency in the admission process, efficiency in data management, and more equitable distribution of educational opportunities for all students (White, 2017). The results of the study show that despite various challenges in its implementation, such as infrastructure unpreparedness and community ignorance, the implementation of the web-based PPDB system in Purwakarta showed positive results in increasing more open and equitable access to education, which in turn had an impact on improving the quality of education in the area.

Thus, the method used in this research, which is a literature study, allows the researcher to draw broader conclusions regarding how the implementation of a web-based PPDB system can drive significant changes in the education system in Indonesia, as well as provide an overview of the steps needed to overcome the existing challenges.

## **RESULTS AND DISCUSSION**

### **RESULTS**

This study analyzed 30 articles and books from international and national sources related to the implementation of the web-based New Student Admission (PPDB) system in Indonesia, with a focus on Purwakarta. Through rigorous screening, only relevant literature on the challenges, benefits and impacts of implementing this system was selected. From the analysis, it was found that while the web-based PPDB system offers great potential in improving transparency, efficiency and equitable access to education, a number of technical and social challenges still hinder its implementation. One of the main findings is the issue of technological infrastructure, where many areas, including Purwakarta, still lack stable internet networks and adequate hardware. In addition, capacity building of educators and administrative staff is also a limiting factor, with most of the parties involved still not sufficiently trained to operate the web-based system to its full potential. In addition, despite efforts to introduce the system to the community, there are gaps in people's understanding, especially in remote areas, of the benefits and workings of the web-based PPDB system.

### **DISCUSSION**

The implementation of a web-based New Student Admission (PPDB) system in Indonesia has become a strategic step in improving the efficiency, transparency, and accessibility of the student admission process. However, its implementation is faced with various challenges that require serious attention, especially in terms of infrastructure, human resource readiness, and public acceptance of new technology. One of the main challenges is the limited technological infrastructure in some regions. A study by (Pahlevi, 2021) shows that many schools still face limitations in stable internet access and

lack of hardware that supports web-based systems. Similarly, (Hidayat, 2020) found that schools in remote areas often do not have sufficient technological facilities to support the implementation of an online PPDB system. Previous research has also highlighted that uneven technological infrastructure is a major obstacle in the implementation of web-based PPDB systems. A study by (Saputro, 2022) found that the lack of internet access and inadequate IT infrastructure are still significant barriers for schools in certain areas. The same thing was also found by (Oktapiani, 2021), which showed that schools in areas with limited internet networks tend to experience delays in the implementation of this system. This is a major obstacle in the online student registration process, especially for regions that do not have an adequate internet network.

In addition to infrastructure issues, the readiness of human resources in managing web-based PPDB systems is also an important aspect. A study by (Irawan, 2021) shows that schools that have administrative staff with good digital skills are better able to optimize the features of the online PPDB system. Meanwhile, research by (Saiful, 2018) emphasizes that regular training for school staff is necessary to reduce the risk of errors in managing digital systems. The study conducted by (Irvai, 2022) emphasized that the lack of technical training for school staff in managing online systems is one of the main obstacles. Many educators and administrative staff are not accustomed to using digital technology, so the data input process and system management often experience problems. Therefore, continuous training for teachers and school administrators is needed so that they can operate the system optimally and utilize all the features provided effectively.

On the other hand, public acceptance of the web-based PPDB system is also an important aspect in its implementation. Low digital literacy among parents is often an obstacle in utilizing this system. A study by (Puspita, 2021) found that parents with low levels of digital literacy tend to experience difficulties in accessing and understanding the online PPDB system, the same thing was stated by (Sari, 2020) who found that parents' lack of understanding of digital technology caused them to experience difficulties in accessing and using the online PPDB system. This factor causes many students from underprivileged families or who live in areas with limited access to technology to be hampered in the registration process. Therefore, better communication and socialization strategies are needed so that people can understand the benefits and how to use this system more easily. The government and schools should be more active in providing guidance and training to the community, especially to parents who are less familiar with the use of web-based technology.

Despite facing various challenges, the implementation of a web-based PPDB system also provides significant benefits in increasing the efficiency and transparency of new student admissions. (Nugroho, 2023) shows that a web-based registration information system can improve accuracy in data management and speed up the student admission selection process. With a web-based system, registration can be done more quickly and easily without the need to rely on physical documents, thus reducing the administrative burden for schools. This is in line with research conducted by (Puspita, 2021), which found that digitizing the PPDB system can significantly reduce administrative time and

costs. In addition to increasing administrative efficiency, web-based PPDB systems also improve data accuracy and security. Research by (Sallaby, 2020) shows that digital systems allow real-time data recording, reducing the risk of data loss due to manual administration errors. In addition, (Nasser, 2021) highlighted that web-based systems provide flexibility in managing student schedules and admissions, so that admission decisions can be made more efficiently.

In addition to increasing efficiency, the web-based PPDB system also supports equal access to education in Indonesia. (Ramdhan, 2019) found that with an online registration system, students from different regions have a greater opportunity to apply to schools without having to come directly to the location. This is very helpful in reducing geographical barriers that have been a challenge for students in remote areas. In addition, the system also allows for more accurate monitoring and evaluation of enrollment data, which can be used by the government to identify inequalities in access to education in different regions. Thus, the implementation of this system can be one of the solutions in improving education equity in Indonesia.

However, for this system to run optimally, careful planning and implementation are required. A comprehensive needs analysis is an important first step in developing this system. (Rosmiati, 2020) emphasizes that before a web-based PPDB system is implemented, there must be a clear identification of user needs and infrastructure readiness in each school. (Zaef, 2018) also highlighted the importance of thorough system testing before widespread implementation. A system that has not been well tested often experiences technical glitches that can hamper the smoothness of student enrollment, so thorough trials are needed before the system is fully implemented.

In an international context, the implementation of web-based PPDB systems has also been tested in various countries and faced similar challenges. (Brown, 2017) in his study found that many countries experienced obstacles in implementing digital enrollment systems due to infrastructure limitations and resistance to changing from manual to digital systems. However, with the right strategy, many countries managed to overcome these challenges by increasing investment in education technology and educating the public about the benefits of web-based systems. The experiences of these various countries can serve as a reference for Indonesia in formulating more effective policies in implementing a web-based PPDB system.

Periodic evaluation of the web-based PPDB system is essential to ensure the system is running optimally. (Sidik, 2018) highlighted the importance of regular system testing to identify and correct technical weaknesses that may occur. Meanwhile, (Masripah, 2019) found that the use of black box testing methods can help in identifying system errors that are invisible in ordinary administrative processes.

Overall, the existing literature shows that despite the challenges of implementing a web-based PPDB system, the benefits it offers in improving the efficiency, transparency and accessibility of education are immense. Therefore, it is important for education stakeholders to overcome these challenges through careful planning, human resource capacity building, and education to the public so

that the implementation of this system can run more optimally. With the right steps, a web-based PPDB system can be an effective solution in improving the quality and equity of education in Indonesia.

## **CONCLUSION AND SUGGESTION**

### **CONCLUSION**

The implementation of the website-based New Student Admission (PPDB) system in Purwakarta encountered several challenges and benefits. The challenges are adapting to changing circumstances (population growth, economic changes, shifting educational priorities, new technologies), capacity building (school staff training, administrative training, stakeholder engagement, and technical training), and technical infrastructure (online registration, data processing, dissemination of results, digital inclusion, scalability, redundancy and reliability, regular maintenance and updates). Meanwhile, the benefits of implementing the New Learner Admission (PPDB) through the website are to uphold justice and equity (providing equal opportunities, addressing education gaps, empowering marginalized communities, long-term economic benefits, and social justice), transparency (allowing everyone to understand admission rules and requirements, real time updates and notifications, consistency of the admission process), efficiency of enrollment (facilitating the enrollment process of learners and their families, facilitating automated data management, speeding up the enrollment process, real time updates and communication, providing robust data analysis and reporting capabilities) and to reduce administrative costs (streamlining the enrollment process, facilitating automated data management, data analysis and reporting capabilities offered by web-based systems).

### **SUGGESTION**

To ensure the web-based PPDB system operates optimally and delivers maximum benefits, several strategic steps must be taken by various stakeholders, including the government, schools, and the community. First, the government needs to invest more heavily in developing educational technology infrastructure, especially in regions with limited internet access. Providing a stable internet network and adequate hardware is a fundamental step to ensure that this system is accessible to all schools in Indonesia. Second, there is a need to enhance human resource capacity through more intensive training for educators and school administrative staff. This training program should include technical understanding of how to operate the web-based PPDB system, digital data management, and troubleshooting technical issues that may arise during the registration process.

With adequate training, school staff can manage the system more efficiently, leading to a more effective student admission process with minimal technical disruptions.

Third, public awareness and education, particularly for parents, should be strengthened to ensure they understand how to use the web-based PPDB system. This educational program can be conducted through seminars, online training, and social media platforms to widely disseminate information about

the online registration system, making it more accessible and understandable for the public. Finally, regular evaluations of the web-based PPDB system must be conducted to ensure that it continues to evolve in line with field demands and challenges. The government and educational institutions should actively monitor the effectiveness of this system and gather feedback from schools and the community to improve areas that still need enhancement.

With the implementation of the right strategies, the web-based PPDB system holds great potential as an effective solution to improving education quality and equity in Indonesia. Through infrastructure development, human resource capacity building, and broader public outreach, this system can serve as an instrument that fosters a more inclusive, transparent, and efficient educational system in the future.

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