Evaluation of the Information System (Smart Deer System) at BKPSDMD of Bangka Belitung Islands Province

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Abstract

The management of ASN competency development in regional governments faces challenges related to data accuracy, planning integration, and supervision. In response, the Government of Bangka Belitung Islands developed "Smart Deer System," an information system aimed at managing human resources who are superior, competent, intelligent, and educated. This study evaluates the effectiveness of the system using the Context, Input, Process, and Product (CIPP) model. A qualitative approach was employed through interviews with 10 informants consisting of policy implementers, system users, and technical managers at BKPSDMD. Non-participatory observations and documentation studies were also conducted. Data were analyzed through manual coding and theme clustering to evaluate each dimension of the CIPP model. The results showed that (1) the system is aligned with regional strategic needs (Context), (2) adequate infrastructure and resources support its operation (Input), (3) the implementation process is structured but still faces user training limitations (Process), and (4) the system contributes to more effective ASN development planning (Product). This study implies that optimizing user support and continuous system improvement are key to enhancing digital-based HR governance.

Keywords: BKPSDMD, Evaluation, Information System, Smart Deer System.

1. Introduction

To support the transformation of the human resources of the state apparatus by accelerating the capacity increase in the number of competency-based Civil Servants (PNS), it is necessary to develop civil servants through education that is carried out selectively, objectively, efficiently, accountably, and transparently. Competency development through education aims to reduce the gap between competency standards and position requirements with the competencies needed by civil servants who will fill these positions. This is important to meet the needs of personnel who have special skills and competencies in carrying out duties and functions, developing organizations, improving knowledge, skills, attitudes, and strengthening the professional personality of civil servants as an integral part of their career development. Therefore, the implementation of competency development through education is a must for civil servants. In particular, the Provincial Government of the Bangka Belitung Islands has updated Governor's Regulation Number 20 of 2018 [1] regarding the provision of study assignments for civil servants of the Bangka Belitung Islands Provincial Government, and the Governor of the Bangka Belitung Islands Regulation Number 86 of 2014, [2] about the study permit for civil servants of the Provincial Government. BaBel, becoming Governor Regulation Number 13 of 2022, [3] regarding the provision of study assignments for civil servants within the Bangka Belitung Islands Provincial Government as a regulatory adjustment to the circular letter of the Minister of State Apparatus Empowerment Number 28 of 2021, [4] about improving the competence of civil servants through education. BKPSDMD as a regional apparatus that handles personnel management and human resource development in the Provincial Government. BaBel in formulating strategic policies pays attention to efficiency aspects and must be able to quickly and accurately make decisions to improve services to ASN in order to become a responsive and innovative organization. Therefore, an integrated application was created to handle advanced education management to make it easier for online and paperless services to be faster, easier and more useful for ASN. In this study, the author conducted a direct review of various sources of books and journals related to the title, the discussion in this study can be detailed as follows, the concept of government administration, the use of the application of

advanced education information systems for superior, competent, intelligent, and reeducated human resources. "The Ingenious Lander" in government administration, as for the literature review collected, including authors related to the title, including government administration is a field of study that discusses how to manage and regulate government quickly, easily and usefully, in an effort to realize community welfare. Government administration includes various aspects such as planning, organizing, implementing, evaluating and supervising government policies and programs. According to [5], government administration is one of the social science disciplines that studies the management of the state and government in a professional, rational and effective manner. Government administration also involves regulating the relationship between the government and the community in an effort to achieve the goals that have been set. In the Indonesian context, government administration has an important role in carrying out various government programs and policies that aim to improve the quality of life of the community. Improving the quality of government administration in Indonesia is currently the main focus of the government in order to realize Good Governance.

Management information systems can help in data and information management, such as in staffing, finance, and public service management. Geographic information systems can be used in mapping and managing spatial data related to spatial planning and the environment. Big data can assist in data-driven decision-making, such as in terms of safety and public health analysis. Meanwhile, blockchain can be used in the management of data and information that is secure and reliable. [6]. The use of digital technology in government administration can provide many benefits, such as increasing the efficiency and effectiveness of public services, cost savings, and better transparency. However, there are also some challenges that must be overcome, such as limited infrastructure and technical skills, data security and privacy, and the handling of public complaints and complaints.[7]. The following are some related studies that are the reference material for the author to make this study, including by Kodarisman et al., concluding based on the analysis of statistical data and discussion regarding the evaluation of the use of the Personnel Management Information System in the Bogor City Government, it can be concluded that the success of the implementation of the Personnel Management Information System is influenced by the following factors, system quality, information quality, service quality, system usage, user satisfaction with the system, and the role of the organizational structure. [8]. Meanwhile, according to Fauzi et al., the model for the application of information systems in various fields, one of which is in government, both central and regional, which has not been widely discussed in various previous studies. The study focuses on the problems of the Local Government Information System (SIPD) and the Integrated Database (BDT) model used to support poverty alleviation efforts in Indonesia. [9]. Meanwhile, Heri et al, in their journal, revealed, based on the results of the research that has been carried out, it can be concluded that Ciangsana Village in Gunung Putri District, Bogor Regency is not fully ready to face the Society 5.0 era optimally because it still faces several shortcomings, such as the lack of maximum development in the creation of a website or village website. However, Ciangsana Village is not too far behind in the use of information technology because it has used social media, such as the village government's Instagram account, as a means to convey various information to the community. However, the digitalization process to support the implementation of Society 5.0 has also not reached the optimal level, one of which is due to the lack of public openness to technology as a whole. [10]. From Hasbi in his journal revealed the results, based on literature searches and discussions of community service activities, concluded as follows. First The use and understanding of information technology in supporting the administration of Customary Villages is still lacking. Next assistance is needed to strengthen the administration of Customary Villages through the use of information technology. Last Customary Villages show readiness to make changes and strengthen the administration of Customary Villages by collaborating with universities in utilizing information technology. [11]. Meanwhile, Sutanto et al, in their journal, revealed that, according to the results of the study, public services are all service activities of public service providers aimed at meeting the needs of service recipients and the implementation of legal provisions. Public service is defined as the provision of services (serving the needs of individuals or communities interested in the organization) according to established principles and procedures [12]. While from Sandiasa & Agustana, declaring results In his journal, the formation of bureaucracy and administration of local government can be realized through several things, starting with the need to strengthen government regulations, followed by the need to play a role in the development of local government regulations. egoverment and E-Government in encouraging openness in public services, the last is the cooperation or MoU between the governments called "Collaborative governance" So that it can strengthen local government, change the relationship between the central and regional governments, and strengthen ties with other regions in a region. These changes are carried out with the aim of improving the quality of public services provided by local governments, encouraging community participation, and building public trust in local

governments. Through the participation of various stakeholders in the region, by paying attention to the potential and values that exist in the region, development in the region can be accelerated to achieve community welfare. This can be realized through the implementation of a responsive, productive, and reliable development program. [13].

This study uses CIPP Evaluation Theory, CIPP Evaluation Theory is an evaluation framework developed by Daniel L. Stufflebeam. One of the most widely used evaluation approaches in the field of program and public policy evaluation. Here is a brief explanation of each element in the CIPP evaluation framework. Background, this element focuses on understanding the context or background of the program or policy being evaluated. It involves researching aspects such as program objectives, the social, political, and economic environment in which the program operates. The purpose of the context assessment is to understand the problems or challenges faced, as well as the suitability of the program to that context. Input, this element evaluates the resources and plans used in program planning. Input evaluation includes policy analysis, planning, and program formulation, as well as the resources available to implement it. The focus is on understanding the availability and suitability of resources as well as the planning done prior to program implementation. Process, this element evaluates the implementation of a program or policy. Process evaluation involves observation and analysis of how the program is run, including the implementation of activities, methods used, and interactions between program implementers and participants or other stakeholders. This evaluation helps to understand the extent to which the program is being run according to the initial planning. Product, this element evaluates the results or impact achieved by a program or policy. Product evaluations focus on the question of whether the program achieves the set goals, whether any benefits are produced, and whether any long-term impacts are expected. It involves measuring program performance and effectiveness, as well as analyzing the sustainability of program outcomes after implementation. The CIPP Evaluation framework provides a comprehensive approach to program and policy evaluation. By paying attention to all four elements (context, inputs, processes, and products), evaluations can provide deeper insights into the effectiveness and relevance of the program in achieving the set goals. [14]. Therefore, the author is interested in making aresearch entitled "Evaluation of the Higher Education Information System for Superior, Competent, Smart and Educated Human Resources (Smart Deer System) at the Regional Personnel & Human Resources Development Agency (BKPSDMD) of Bangka Belitung Islands Province" to understand how

influential the application of this "the ingenious lander" is. In this context, there are problems that need to be understood, such as how this application can produce a continuing education management system that can provide detailed and accurate information and descriptions in personnel management in the Provincial Government. Babylon. Meanwhile, the " Smart Deer System " application, which is currently a system that is still used by civil servants to access advanced education information, as an overview below at a glance about the " Smart Deer System" application:
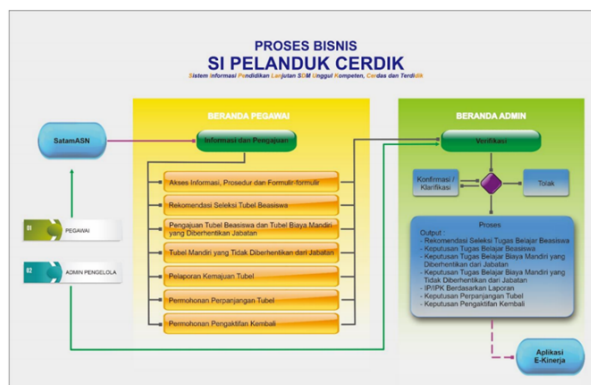

Figure 1. Sipelanduk Cerdik Application

"SiPelanduk Cerdik" can be accessed on the following website http://satamasn.babelprov.go.id/. The purpose of this study is as an evaluation material for the information system "the ingenious pelanduk" in order to find out how much the application is useful in improving the management needs of prospective classical, non-classical and tubel training participants in BKPSDMD Prov. BaBel and provides a strong supervisory basis for management in the form of an internal control structure within the developed system. This research will discuss the evaluation of digital technology in government administration in the application of advanced education information systems for superior, competent, intelligent, and educated human resources. "The Ingenious Peanut".

2. Research Methods

This study uses a qualitative descriptive method through case study design. Data were collected from 10 informants including 1 policymaker, 2 system developers, 4 BKPSDMD staff, and 3 ASN system users. Observations were conducted in a non-participatory manner to understand how the system operates in real-time. Documentation was also collected from reports, internal policies, and system records. For analysis, data were manually coded, and themes were clustered based on each of the CIPP dimensions. For instance, in the Context evaluation, indicators include alignment with strategic plans and organizational needs.

In the Input dimension, indicators involve the availability of infrastructure, human resources, and budget. The Process dimension observes system implementation, user training, and technical support. Finally, the Product dimension measures outcomes such as the quality of ASN data, planning effectiveness, and user satisfaction. Triangulation of interview, observation, and documentation data ensured the validity of findings. In this research writing, the author uses qualitative method. This method is usually used to describe the characteristics and properties of a population or research sample, so that it can provide a clear and detailed picture of the object being studied. According to [15]. Meanwhile, according to [16] Qualitative descriptive research is more narrative and descriptive in nature that produces qualitative descriptive data in the form of discourse or words. Qualitative descriptive research usually uses data collection techniques such as observation, interviews, and documentation. The advantage of the descriptive research method is that it can provide an accurate and detailed picture of the object being studied. In addition, this method is also relatively easy to do and relatively inexpensive. However, the disadvantage of the descriptive research method is that it cannot show a cause-and-effect relationship between the variables studied.

The data in this study was obtained through in-depth interview and observation techniques. The interview technique was carried out by interviewing resource persons from the Computer Institution of young experts of BKPSDMD Prov. BaBel where the resource persons are directly related to the use of advanced education information system applications for superior, competent, intelligent, and educated human resources. "The Ingenious Peanut". In addition to interview techniques, this study also uses observation techniques. Participant observation was carried out by directly observing the use of advanced education information system applications for superior, competent, intelligent, and educated human resources. "The Ingenious Lander" in the government administration at the BKPSDMD Prov. Babylon. The data obtained from interviews and observations were then analyzed using qualitative data analysis techniques. The data analysis process is carried out by reducing data, extracting data, and presenting the findings obtained. The data that has been reduced is then interpreted and associated with theories relevant to the purpose of this study.

3. Results and Discussion

CIPP Evaluation Theory is used to evaluate "The Ingenious Lander". 1) Context Evaluation, the following are the advantages or strengths of the application of the ingenious lander, quick and easy access, increasing the competitiveness of human resources, encouraging educational innovation, reducing educational gaps. As for the weakness of the application of the ingenious lander, it is necessary to train/socialize ASN about the use of the application. 2) Input Evaluation, to carry out the application of the ingenious lander, there are several resources available, including. Human resources, in the form of Provincial Government ASN. Babel as a user, and a development team consisting of programmers, designers, project managers, and specific domain experts are needed to design, develop, test, and launch applications. Hardware. Applications often require the right hardware to run properly. This can include servers, computers, laptops, smartphones, tablets, sufficient hardware essential to guarantee smooth application performance. Software, to execute this application will require software or hardware that can run the application. This includes operating systems such as Windows, macOS, or Linux. Software developer, database, server. Cloud. 3) Process Evaluation, to access the Smart Deer System application, log in to satamasn.babelprov.go.id, enter your username and password, after entering the dashboard menu click Smart Deer System on the bottom right corner of the dashboard.

Figure 2. frontpage dashboard page

After entering the dashboard page, click on the Service Type menu to select what type of service the User wants to choose,
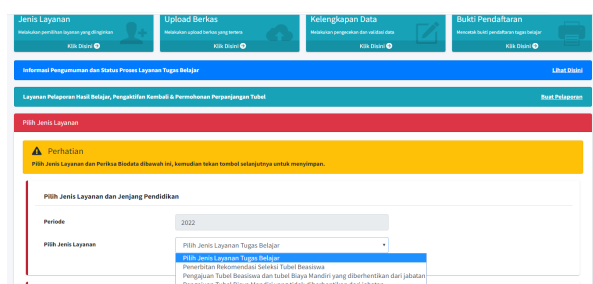

Figure 3. service page

Here is the display of the File Upload Page, on this page the User uploads the required file according to the type of service chosen,
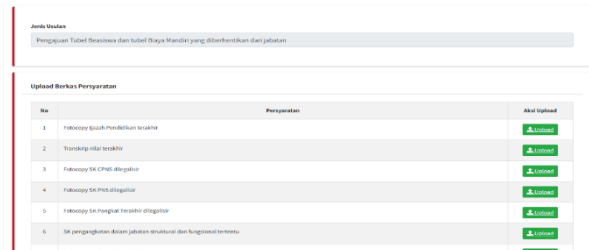
Figure 4. file upload page

On this page, the user can see the input of the selected Service Type, the required file uploaded if there are errors can be updated on the previous page, and if the data entered and uploaded is all correct, select check and end the submission process,

Figure 5. Data completeness page

In this menu, users can report study assignments, reactivate study assignments and extend the duration of study assignments, as shown below,
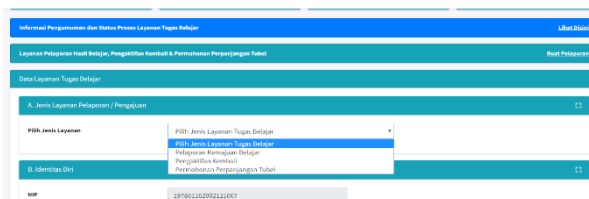

Figure 6. service type page

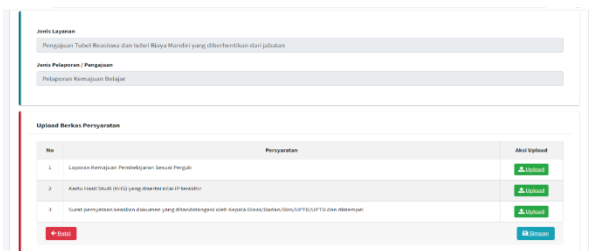In this menu, users can also choose the type of service and upload files in the next menu,

Figure 7. service file upload page

This menu works to upload files according to the type of service you choose, after which click save.

4) Product Evaluation, The Superior, Competent, Smart, and Educated Human Resources Advanced Education Information System Program is a program designed to improve advanced education for human resources (HR) with the aim of producing superior, competent, intelligent, and educated individuals. The program has several significant achievements and the following are some of them, namely. Improve educational accessibility, improve the quality of learning, facilitate skill development, monitor and evaluate progress.

The reasons why this program needs to be continued are as follows. increase the competitiveness of human resources, increase adaptability, encourage educational innovation, reduce educational gaps. By continuing the Advanced Education Information System program for Superior, Competent, Smart, and Educated Human Resources, we can create ASN who have superior, competent, intelligent, and educated human resources. The program provides long-term benefits in shaping a better future for individuals and the country as a whole.

Indicators in analyzing the evaluation of "The Ingenious Lander" at the BKPSDMD Prov. Babylon is,

a.Time Efficiency Indicator

b.Accessibility Indicators

c.User Satisfaction Indicators

d.Indicators of Benefits and Sustainability

e.Indicators of Conformity with Expectations

As previously explained, the results of the evaluation were obtained from the indicators above and using the qualitative method method, which aims to describe in detail the system that has been developed and its impact on the State Civil Apparatus (ASN), through the qualitative method with interview and observation techniques and the indicators above. Here are the results obtained from this study:

1.The system was worked on for 2 months of this system through the planning, application creation, and trial stages before finally being implemented. In the two-month period, the system development team has successfully completed all stages well.

2.Quick and easy access with this application, ASNs can quickly access the system whenever and wherever ASNs are. This provides high flexibility for civil servants to apply for competency development without time and location constraints.

3.The high level of satisfaction of civil servants as a result of the study shows that the level of satisfaction of civil servants with this system is very high. They feel helped and feel that this system provides convenience in the application process for competency development.

4.The benefits and continuity of the application that has been developed have proven to be successful and until

now still provide great benefits for ASN. This application continues to run well and is the main means in the application process for competency development.

5.The conformity with the expectations of the results of this study shows that the application developed is in accordance with the desired expectations. This application can meet the needs of civil servants in submitting competency development quickly, easily and effectively

Based on the above discussion, it can be concluded that the evaluation of the application of "the clever lander" at BKPSDMD Prov. BaBel produces an application that can provide easy access and time for civil servants, as well as increase their satisfaction level. The app also proves to be useful and fits the desired expectations. The existence of this application also has a positive impact on the submission of further education by ASN. Before this application, the process was done manually for a very long time. However, with this application, the time it takes for ASN to apply for competency development can be significantly reduced in just about 30 minutes. This proves that the "shrewd lander" can provide solutions in overcoming complex government administration challenges. In addition, the level of satisfaction of civil servants with this system is very high, indicating that this application meets their expectations and needs. The quick and easy access provided by this application provides high flexibility for ASN to apply for competency development whenever and wherever ASN is. In the long run, this app has proven to be useful and still works well. This shows the sustainability and reliability of the system that has been developed. It is hoped that this application can continue to provide benefits and support civil servants in developing their competencies.

Table 1. CIPP evaluation results to clarify the contribution of each indicator

CIPP Dimension	Evaluation Indicators	Findings
Context	Alignment with regional strategy, ASN needs	System supports competency development goals based on strategic direction
Input	Infrastructure, HR support, budget availability	Resources are available but require periodic updates and capacity building
Process	Implementation flow, training, system support	Good planning exists, but training and user support are still insufficient
Product	Output quality, system utilization, impact on planning	Improves data accuracy and planning quality, but limited user feedback loops

The findings of this study are in line with research conducted on other personnel information systems such as SIPEG (Sistem Informasi Kepegawaian) used in several ministries and SIPKD (Sistem Informasi Pengelolaan Keuangan Daerah) which includes modules related to ASN management. Similar to Smart Deer System, SIPEG also emphasizes data integration and monitoring but often faces constraints in user training and system maintenance. Meanwhile, SIPKD's integration with regional financial planning provides an added advantage in budget synchronization. Compared to these systems, Smart Deer System has strengths in aligning with local competency development policies but still requires improvements in system socialization and user interface design. These comparisons underscore the importance of user engagement and interoperability in optimizing ASN management systems.

4. Conclusion

Based on the results and discussion using qualitative methods, this study concludes that the Smart Deer System (Smart Deer System) application has provided significant benefits for ASN in the process of submitting competency development at BKPSDMD of Bangka Belitung Islands Province. The application simplifies access, reduces time and complexity, and improves user satisfaction, thereby proving its value and success in managing ASN competency development. Over the course of two months, the system has enabled easier access and streamlined processes for civil servants, leading to increased satisfaction and offering effective solutions in administrative procedures. Evaluated using the CIPP model, the system demonstrates strategic alignment, sufficient input, structured processes, and valuable outcomes, particularly in improving planning. Furthermore, the system shows strong potential for replication in other regions aiming to digitize and integrate their ASN competency development systems, though this would require alignment with local regulations, user training, and technical support. For future development, enhancements should focus on refining the user interface, providing periodic training,

establishing continuous feedback mechanisms, and integrating with national databases such as BKN or MenPAN-RB to improve system value and interoperability.

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