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Evaluation of the Validation Process of Prospective Recipients of Educational Scholarships on the Siaplah Platform: A Case Study at The West Kalimantan Provincial Education and Culture Office

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ABSTRACT

This study aims to evaluate the validation process of prospective recipients of educational scholarships through the Siaplah platform implemented by the West Kalimantan Education and Culture Office. The research methods used in this study are Business Process Improvement (BPI) and Failure Mode and Effects Analysis (FMEA). Because BPI can evaluate in aligning processes with organizational goals and strategies. In the context of this research, BPI can assist the West Kalimantan Education and Culture Office to ensure that the scholarship validation process supports the achievement of organizational goals related to education. Meanwhile, FMEA is used to identify potential risks, failures, and weaknesses in the validation process. Through this analysis, research can identify critical points in the process that could lead to failures or problems. So the FMEA can be improved by giving a score on each risk and impact. Research results: Business process recommendations for prospective PBP recipients are made based on the design of business process improvement that has been carried out using the Business Process Improvement (BPI) method. Some activities have changed, activities that have been added to activities that have been removed. From the results of simulations carried out on the current business process (as it is) and business process recommendations (to be), it was found that the increase in time analysis reached 02.8% in the business process of prospective PBP recipients, 1.44% in the implementation of the business of prospective PBP recipients, and 1.55% in the business evaluation of prospective PBP recipients.

Introduction

Education is one of the important factors in the development of a country. Many educational scholarship programs are organized by the government and private institutions to support the improvement of the quality of education. In the implementation

of the scholarship program, it is important to ensure that the data of students who apply for scholarships is valid and of high quality. Currently, the West Kalimantan Provincial Government is holding an Education Scholarship Financing work program for all high school/vocational high school students in Pontianak City amounting to Rp1,500,000 every year.

Data validation is an important step to ensure that only prospective recipients who are qualified and have good potential can obtain financing assistance, and also ensure that student data does not duplicate. This will cause a swelling in the budget that will be given as financing for educational scholarships. In the era of digitalization, the implementation of web-based information systems is an effective solution to simplify and improve the efficiency of the student data validation process. (Awele & Okocha, 2019). The current development of information technology has affected all areas of human life in all activities and is needed as a supporting means that can support the smooth flow of fast, precise, and accurate information. (Zhang, 2023).

The use of Information and Communication Technology can help the world of education distribute services to the community quickly, appropriately, and with high quality, especially regarding students. (Demirkan & Delen, 2013). Good quality of education is one of the main keys to the progress of civilization and the improvement of a nation's standard of living. To realize a good quality of education, an integrated learning process and data management system are needed using various learning methods and innovations that allow learning to be carried out continuously. (Hendarman et al., 2018).

So far, education quality services, the West Kalimantan Provincial Education and Culture Office to education units, especially data delivery services, are still using direct submissions or in the form of email or other social media. This service is less effective between schools and the West Kalimantan Provincial Education and Culture Office and has not even been integrated with the Regency/City Education and Culture Office and the Population and Civil Registration Office throughout West Kalimantan Province. (Achmad et al., 2016).

In connection with the above, to improve the quality of education, it is necessary to have an integrated, easy, unlimited quality of data and time, so the web-based School Data Collection Application System (SIAPLAH KALBAR) was developed as one of the designs for digitizing one school data as a solution. The Siaplah Platform, which is one of the web-based platforms that can be used in education, has the potential to be an effective tool in validating quality student data, the SIAPLAH Platform can overcome problems that occur repeatedly, especially in Pontianak City, namely the occurrence of double data so that the budget that has been provided for the financing of educational scholarships becomes bloated. SIAPLAH KALBAR has a business segment in the form of a School Data Collection Program organized by the Education and Culture Office, the Population and Civil Registration Office, and the West Kalimantan Provincial Government Digitally (Kim & Wiederspan, 2021).

Student data validation is an important part of financing educational scholarships. However, complex and complicated validation processes can hinder efficiency and

productivity in data management. Therefore, BPI needs to be done to simplify and improve the validation process. This can include the elimination of ineffective or repetitive steps, improved workflows, and the use of appropriate technology to speed up the validation process (Hwang & Ng, 2013).

The process of validating student data which takes time and large resources can hinder efficiency and productivity in the management of scholarship financing. In this context, BPI can help identify and mitigate the barriers that hinder the validation process, resulting in significant time and resource savings. This can include the use of automation technology, workflow optimization, or increased collaboration between the various parties involved in the validation process. (Faujiah et al., 2018).

BPI can also be related to increasing the satisfaction of stakeholders involved in the student data validation process. Stakeholders such as the Education and Culture Office, schools, students, and prospective PBP recipients will benefit directly from an efficient and effective validation process. By improving business processes, it can be expected that stakeholders will be more satisfied with their experience in the scholarship validation and financing process. (Smallwood & Brunner, 2017).

In the educational environment, regulations and policies related to scholarship financing may change from time to time. BPI is important to accommodate these changes quickly and effectively so that the Siap Lah platform can follow and implement changes in regulations and policies in general. The Siaplah platform actively monitors changes in regulations and policies related to the financing of educational scholarships. This can be done by following developments at the West Kalimantan Provincial Education and Culture Office and following various sources of information related to education regulations and policies. (Putra et al., 2018).

Through this process, researchers not only consider how often failures may occur but also the extent of the ability of the education and culture office to detect such failures before awarding educational scholarships. With a deeper understanding of these potential risks, they can take more effective preventive measures. By implementing FMEA, the West Kalimantan Provincial Education and Culture Office has succeeded in creating a more resilient and reliable validation process. It's not just a technical fix; This is an important step towards providing fairer and more efficient scholarships, providing better support to students in need. FMEA proves its worth by helping organizations understand risks, take proactive actions, and achieve their goals of providing better education for society.

The purpose of this study is to evaluate the business process of validating prospective recipients of PBP Education using BPI on the SIAP Platform To improve the validation of prospective recipients of PBP education and mitigate the risk of business process failure using FMEA on the SIAP Platform.

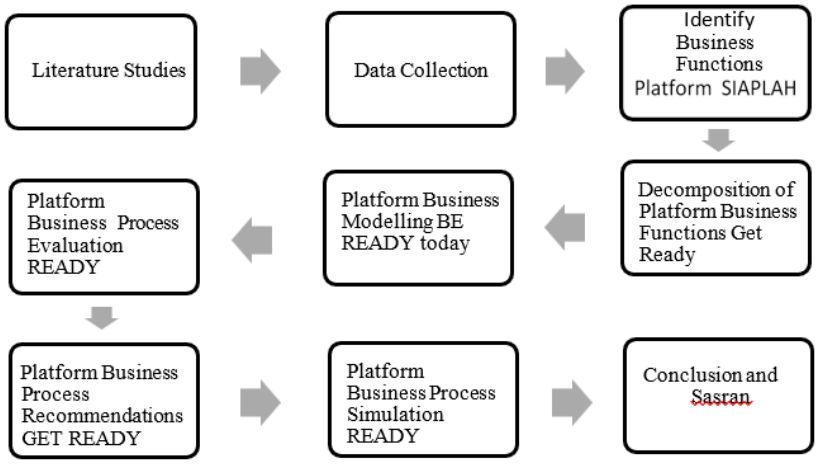
The benefit of this research is to improve the validation of student data, this research can contribute to improving the quality of education scholarship financing. The West Kalimantan Provincial Education and Culture Office will have more accurate and complete data to make the right decision in providing scholarship financing to students

who meet the criteria so that there is no duplicate data that can harm the budget that has been provided, improve the validation process, this research can help optimize the use of available resources, such as time, labor, and cost. An efficient process will reduce the waste of resources and ensure more optimal use. This research can help improve the efficiency and accuracy of the student data validation process. With improvements in the validation system, the time required to verify data can be shortened, while data accuracy is improved. This will help accelerate decision-making related to the provision of education scholarship financing (Kunwar et al., 2022).

This research aims to improve the user experience in using the Siaplah platform. By providing a simple user interface, clear guidance, and good responsiveness, users will have a better experience in accessing and using the platform. This research can also provide benefits in improving the security of student data. By implementing the right security measures, such as data encryption and restricted access settings, students' data will be better protected from possible security threats.

Method

A research method is a systematic approach or strategy used to plan, collect, analyze, and interpret data in a study (Patton, 2015). The research methods used in this study are BPI and FMEA research methods. With BPI, it can evaluate aligning the process with the organization's goals and strategies. In the context of this research, BPI can assist the West Kalimantan Education and Culture Office to ensure that the scholarship validation process supports the achievement of organizational goals related to education. While FMEA is used to identify potential risks, failures, and weaknesses in the validation process.



Picture 1 Research Methodology

Results and Discussion

Analysis of Current Business Process Activity

Activity analysis is carried out on each activity in the business process using value-added, namely Real Value Added (RVA) which is the main activity that has direct value

to the needs of participants. Business Value Added (BVA) is an activity that does not have direct value to participants but has the value needed in the business process. Non Value Added (NVA) is an activity that does not have added value so that it can be simplified. The results of this analysis are produced based on the results of the analysis of interviews and activity analysis used to carry out the 12 streamlining processes in Business Process Improvement.

Analysis of Activities on the Business Process of Scholarship Candidates

Table 1
Analysis of Activities in the Business Process of PBP Receipt

No.	Actor	*Task*	Description	Activity Categories
1.	Operator	Export data from Dapodik	Ensure that all data is appropriate and there is no damage to servers, computers, anti-viruses that maintain data security, and network device failures.	RVA
2.	Operator	Import student data	Ensure that all data is appropriate and there is no damage to servers, computers, anti-viruses that maintain data security, and network device failures.	RVA
3.	Learners	Complete data	Fill out the PBP data form	BVA
4.	Education Office	View valid data in the form of analytical tables and graphs	Ensure all data is valid according to the data view	BVA
5.	Education Office	Creating a PBP application period	Checking the completeness of the PBP submission application	BVA
6.	Learners	PBP Submission	Applying for a PBP	BVA
7.	Education Office	Checking the process of student data and account number	Ensure the account number matches the PBP recipient's data	BVA
8.	Education Office	Confirmation process of PBP application	Waiting for confirmation of the PBP application	BVA
9.	Bank of West Kalimantan	Examination of student data	Ensure the data is by the submission form	BVA
10.	Bank of West Kalimantan	Distributing student data to each Bank Kalbar branch office for disbursement	PBP participants who are eligible are distributed to each Bank Kalbar branch for disbursement	BVA
11.	Bank of West Kalimantan	Distributing PBP funds to students' accounts by Bank Kalbar branch	Transferring PBP funds	BVA

		offices		
12	Education Office	Transfer PBP funds from student accounts to school accounts	PBP funds transferred to school accounts	BVA
13	Operator	Receive historical data on the application history of all schools and their nominal	PBP data is stored as an archive	BVA
14	Operator	Transfer of PBP funds from student accounts to school accounts	PBP funds that have been received by students are first sent to the school account	BVA
15	Operator	Storing data on the history of the PBP application along with its nominal	Data stored in history	BVA

From the results of the analysis of the business process activities of the registration of prospective scholarship recipients in Table 4.9, it was found that there were 2 RVA activities, 13 BVA activities, and 0 NVA activities. From these results, it can be concluded that 1 activity can be simplified.

Analysis of Business Process Activities for the Implementation of PBP Admission Candidates

Table 2
Analysis of Activities in the Implementation of PBP Admission Candidates

No.	Actor	Task	Description	Activity Categories
1.	Operator	Ensure that all data of prospective PBP recipients is appropriate and does not cause damage to servers, computers, anti-viruses that maintain data security, and network device failures.	Ensure that all data on prospective PBP recipients has been fulfilled according to the needs of PBP.	BVA
2.	Education Office	Ensuring all prospective recipients of PBP	Ensure that all data on prospective PBP recipients has been fulfilled according to	BVA

			the needs of PBP correctly.	
3.	Operator	Prepare data on prospective PBP recipients to be sent	Preparing all the data to be sent is complete	BVA
4.	Operator	Data on prospective PBP recipients sent	Data sent to the Platform website READY to be checked again	BVA
5.	Operator	Fill in the file that has been sent	Filling in proof of delivery file	BVA
6.	Operator	Documenting data on prospective PBP recipients	Document the data that has been sent	BVA
7.	Operator	Upload data of prospective PBP recipients on the SIAP Platform	Upload data of prospective PBP recipients on the SIAP Platform to be displayed	BVA
8.	Operator	Platform Admin READY to provide confirmation	Confirmation from the Platform is READY to be given after the data is received.	BVA
9.	Platform READY	All data of prospective PBP recipients were filled in correctly according to	Check that the data filled in is appropriate and correct	BVA
10.	Operator	Check the suitability of data of prospective students who receive PBP before being sent.	Re-checking the form that has been filled in by prospective PBP recipients.	BVA
11	Operator	Supervising the process of submitting prospective PBP recipients	Continue to supervise the process of submitting prospective PBP recipients	BVA

From the results of the analysis of business process activities, 0 RVA activities, 11 BVA activities, and 0 NVA activities were obtained. From these results, it can be concluded that there is 1 activity that can be simplified.

Activity Analysis on Business Process Evaluation

Table 3
Analysis of Activities in the Business Process Evaluation of Prospective PBP Recipients

No.	Actor	Task	Description	Activity Categories
1.	School operators	Request the number of approved PBP candidates	Ask for the number of PBP candidates to be approved and if some are not approved, ask for an explanation.	RVA
2.	School operators	Distribute from PBP to approved students to complete the next data	Fill in from PBP according to the approved recipient data	BVA
3.	Learners	Fill in from PBP recipients	Ensuring more thorough filling in from	BVA
4.	School operators	Documenting from PBP recipients	Documenting from PBP recipients so that they have evidence	RVA
5.	School operators	Asking students who receive PBP to fill in the data carefully and completely	Students who receive PBP complete the data before being sent Back to the SIAP platform.	RVA
6.	Platform READY	Sending PBP data back to the SIAP platform which is then forwarded to the Education and Culture Office	The PBP data sender is received by the SIAP platform and sent back to the Education and Culture Office.	RVA
7.	Platform READY	Conducting a review of PBP recipient data	Before being sent, a review of the completeness of the data is required so that the data does not have errors that allow the data to be returned and determines the deadline for resubmission.	RVA
8	Platform READY	Conformation of the data that has been sent whether it is complete or not	If the data is not sent back, you will be asked the reason for not sending or delaying	BVA

No.	Actor	Task	Description	Activity Categories
9	Platform READY	Notify the data that has not been sent to the SIAP Platform and ask for confirmation of the delay in delivery.	Provide confirmation	BVA
10	Platform READY	Receiving confirmation of delays due to a decrease in internet connection	Receiving confirmation that the network failed, then it is necessary to improve the internet network or add MPS to the network if it is still considered insufficient	BVA

From the results of the analysis of business process activities for the implementation of prospective PBP recipients, 5 RVA activities, 5 BVA activities, and 0 NVA activities were obtained. From these results, it can be concluded that there are no activities that can be simplified.

Business Process Improvement Design

The stages of the business process improvement design are implemented in the business process improvement design that has previously been analyzed and this improvement will be carried out using the streamlining tool contained in the Business Process Improvement (BPI) method. The purpose of improving this business process is to increase effectiveness and efficiency, especially in RVA and BVA activities to minimize the potential for errors contained in the SIAPLAH Platform. Meanwhile, NVAs can be removed so as not to hinder the running of existing business processes. The business process design is used as a further reference for the modeling of improvement business processes on the SIAPLAH Platform, especially the business process of accepting PBP candidates, implementing PBP, and evaluating PBP.

Recommended Business Processes

This section explains that business process modeling becomes a recommendation for new business processes after analysis and evaluation using Failure Mode and Effect Analysis (FMEA) and making improvements and improvements using Business Process Improvement (BPI) in existing business processes, namely the business process of accepting PBP candidates, implementing the acceptance of PBP candidates, and evaluating the acceptance of PBP candidates.

Table 4 explains the improvement of the business process of accepting PBP candidates. The table covers the initial business process activities and the activities that were fixed with additions or subtractions for the recommended business process changes, and will also describe the activities that were removed. Recommendations for improving

the business process of ordering the admission of PBP candidates will be explained as follows:

Table 4
Improvement of Business Processes for the Implementation of Prospective PBP Recipients

Recommendation Process	Activities in the Initial Business Process		Added or Changed Activities		Eliminated Activities	
	Activity	Actor	Activity	Actor	Activity	Actor
Implementing *an interconnected One Write System* to other business processes	Ensure that all data of prospective PBP recipients is appropriate and does not cause damage to servers, computers, anti-viruses that maintain data security, and network device failures.	Operator	Checking and ensuring safety	Operator		
	Ensuring all prospective recipients of PBP	Education Office	Check online	Education Office		
	Prepare data on prospective PBP recipients to be sent	Operator				
	Data on prospective PBP recipients sent	Operator				
	Fill in the file that has been sent	Operator				
	Documenting data on prospective PBP recipients	Operator				
	Upload data of prospective PBP recipients on the SIAP Platform	Operator				
	Platform Admin READY to provide confirmation	Operator				
	All data of prospective PBP recipients were filled in	Platform READY		Fill out with Google form.		

	correctly according to		
	Check the suitability of data of prospective students who receive PBP before being sent.	Operator	Check on Google Forms.
	Supervising the process of submitting prospective PBP recipients	Operator	

Table 4, recommendations for problems with the implementation of an integrated system, namely the One Write System in the business process of implementing prospective PBP recipients. With the implementation of the One Write System, there will be a change in activities that were previously done manually to use the system, as well as the elimination of activities to speed up the process. Furthermore, table 5 explains the improvement of the business process in the evaluation of prospective PBP recipients. The table covers the initial business process activities and the activities that were fixed with additions or subtractions for the recommended business process changes, and will also describe the activities that were removed. Recommendations for improving the business process of evaluating prospective PBP recipients will be explained as follows:

Table 5
Improvement of Business Process Evaluation of Prospective PBP Recipients

Recommendation Process	Activities in the Initial Business Process		Added or Changed Activities		Eliminated Activities	
	Activity	Actor	Activity	Actor	Activity	Actor
Implementing *an interconnected One Write System* to other business processes	Deploy through the SIAP Platform application in the form of google from	Operator	Check online	Operator		
Optimizing the use of the READY Platform			*Review* on the GET READY Platform	Operator		

In Table 5, there are 2 recommendations for problems with the implementation of an integrated system, namely the One Write System in the business process of evaluating prospective PBP recipients. With the implementation of the One Write System, there will be a change in activities that were previously carried out manually to use the system. In addition, there is also an optimization of the use of the SIAP Platform which has been owned so far to increase value digitally.

Recommended Business Process Modeling

This sub-chapter describes the recommended business process that is improved after analysis and evaluation carried out on the description of the business process, flow, and diagram of BPMN as well as the description of the task process in the BPMN that is made. The following business process modeling is based on the Business Process Improvement and Business Process Improvement design.

Business Process of Prospective PBP Recipients

Regarding the business process of prospective PBP recipients, the results of the recommendations are by the analysis and evaluation that has been carried out on the SIAPLAH Platform. The following is a description of the business process of prospective PBP recipients as a result of the recommendation:

Table 6
Description of Business Process of Prospective PBP Recipients

Business Process Name	Prospective PBP Recipients
Actor	Operators, Education Office, Platform SIAP
Description	This business process is a process where prospective recipients are directly handled by the operator who will explain the filling of the requirements for prospective PBP recipients, to the available facilities. The operator will be given a form for prospective PBP recipients. This process will generate a Confirmation Letter sent down by the Event Manager which will be continued for the process of completing the data and sending the data of prospective PBP recipients. This process is carried out using a new integrated system to speed up the process of prospective PBP recipients and minimize errors that can occur.

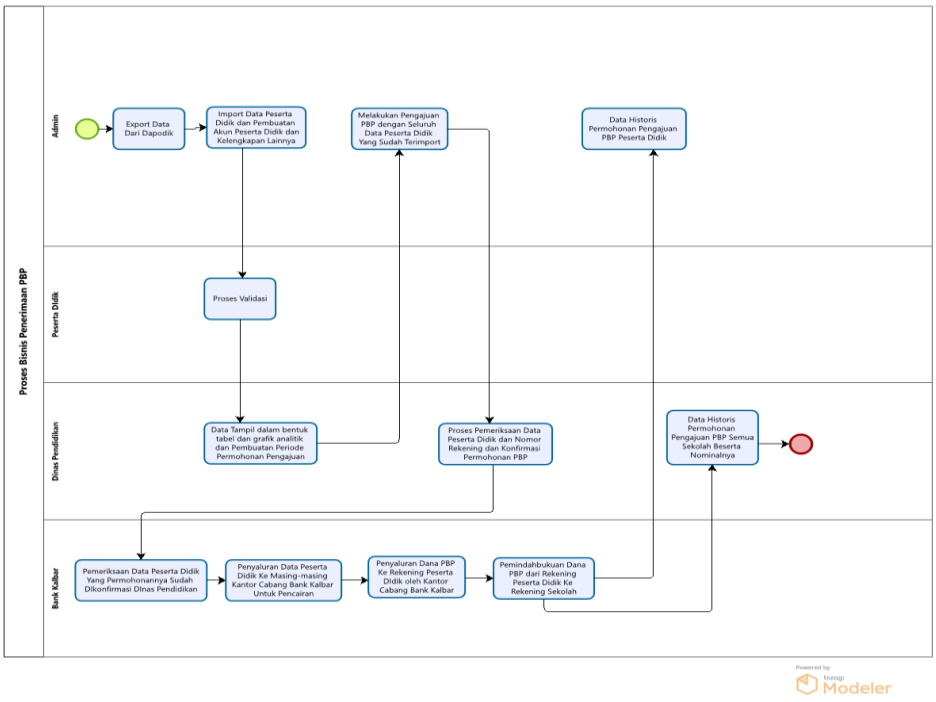


Figure 2
BPMN Business Process Diagram of Prospective PBP Recipients

Business Process for the Implementation of Prospective PBP Recipients

Regarding the business process of implementing prospective PBP recipients, the results of the recommendations are by the analysis and evaluation that has been carried out on the SIAPLAH Platform. The following is a description of the business process of prospective PBP recipients as a result of the recommendation:

Table 7
Description of the Business Process of Implementing Prospective PBP Recipients

Business Process Name	Prospective PBP Recipients
Actor	Operators, Education Office, Platform SIAP
Description	The implementation of prospective PBP recipients is a process where prospective PBP recipients have begun to be implemented and is the goal of all activities. The implementation is directly supervised by the Education and Culture Office and handled by the SIAPLAH Platform.

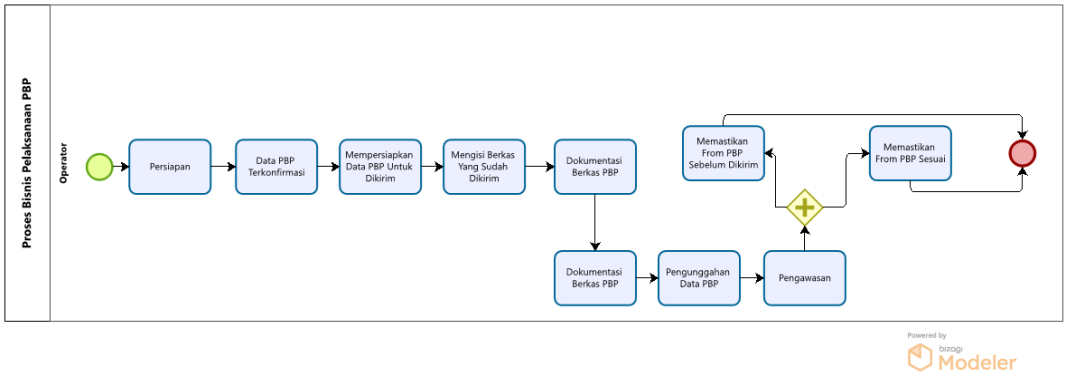


Figure 3
BPMN Diagram of Business Process Implementation of Prospective PBP Recipients

Business Process Evaluation of Prospective PBP Recipients

Regarding the business process, the evaluation of prospective PBP recipients is recommended by the analysis and evaluation that has been carried out on the SIAPLAH Platform. The following is a description of the business process of prospective PBP recipients as a result of the recommendation:

Table 8
Description of the Business Process Evaluation of Prospective PBP Recipients

Business Process Name	Prospective PBP Recipients
Actor	Operators, Education Office, Platform SIAP
Description	In this business process, the final stage is the evaluation of prospective PBP recipients. It is hoped that with the evaluation of prospective PBP recipients, the SIAP Platform will be able to find positive and negative feedback. The Education and Culture Office will also document the event as a document for the SIAPLAH Platform. This process is carried out with a new integrated system to make it easier for prospective

	PBP recipients, minimize errors, and speed up the process.

Business Process Simulation

The simulation of business processes that have been carried out on the SIAP Platform will be explained. The business process that will be simulated is the business process that is given improvement recommendations, namely the business process of prospective PBP recipients, the business process of implementing prospective PBP recipients, and the business process of evaluating prospective PBP recipients. Simulations will be carried out on the business processes that are currently being carried out (as-is) and recommended business processes (to-be). Simulations are carried out based on the process time and will explain the advantages of the business process, recommendations, and solutions to potential problems that have been identified.

Comparison of Simulation of the PBP Admission Candidate Process

After the simulation of the current business process of accepting PBP candidates and recommendations is carried out, it can be seen that there is a difference between the current business process and the recommendation business process. The comparison will be measured in terms of the number of task processes and the time needed to complete the business process. The improvements produced by the recommendation business process can be seen from several aspects, such as solving problems that occur in the current running business process and decreasing the time it takes to complete the business process.

Comparison of Time Analysis Simulations

The number of task processes in the business process of accepting PBP candidates that are currently running is 17 activities, while in the recommendation business process, there are 13 activities. In the current business process, the business process of accepting PBP candidates, while the recommendation business process is carried out using a one-write system.

Results of Business Process Simulation of the Implementation of Prospective PBP Recipients

In business process simulation, a simulation is carried out on time analysis. The amount of time for each task was obtained from the distribution fitting on the variation in the time of process implementation based on interviews and observations. In this simulation, uniform, triangle, or normal distributions are used.

Results of Business Process Simulation of the Implementation of Prospective PBP Recipients (as-is)

In this section, a simulation of the business process of implementing prospective PBP recipients will be conducted assuming that there are 87 participants. This number is based on the average number of students who receive PBP.

Team Analysis Simulation

Table 9
Time Analysis Simulation of Business Process Implementation of Prospective PBP Recipients

Name	Type	Instances completed	Instances started	Min. time (m)	Max. time (m)	Avg. time (m)	Total Time (m)
Business Process of PBP Implementation	Process	87	87	24	24	24	2697
NoneStart	Start event	87					
Preparation	Task	87	87	2	2	2	174
Ensuring All Data of Prospective PBP Recipients	Task	87	87	3	3	3	261
Education and Culture Ensures All Data on Prospective PBP Recipients is Confirmed	Task	87	87	5	5	5	435
Preparing PBP Data for Submission	Task	87	87	5	5	5	435
Fill in the file that has been sent	Task	87	87	2	2	2	174
PBP File Documentation	Task	87	87	3	3	3	261
PBP File Documentation	Task	87	87	3	3	3	261
Uploading PBP Data	Task	87	87	2	2	2	174
Supervision	Task	87	87	2	2	2	174
ParallelGateway	Gateway	87	87				
Ensuring PBP-compliant	Task	87	87	2	2	2	174
Ensuring From PBP Before Shipping	Task	87	87	2	2	2	174
NoneEnd	End event	174					

Table 9 explains the results of the simulation time analysis carried out on the business process of implementing prospective PBP recipients that are currently running (as-is). In the table, it can be concluded that to carry out transactions for the implementation of prospective PBP recipients, it takes a minimum duration of 24 minutes, a maximum duration of 24 minutes, and an average duration of 20 hours 57 minutes 1 second.

Simulasi Resource Analysis

Table 10
Simulation of Resource Analysis Business Process Implementation of Prospective PBP Recipients

Resource	*Utilization*
Admin	100.00 %
Education Office	0.0

Results of Business Process Simulation of Event Implementation (to-be)

In this section, a simulation of the business process of implementing prospective PBP recipients will be conducted assuming that there are 87 participants. This number is based on the average number of PBP recipients each year

Comparison of Business Process Simulation of the Implementation of Prospective PBP Recipients

After the simulation of the business process of evaluating prospective PBP recipients who are currently running and recommendations are carried out, it can be seen that there is a difference between the current business process and the recommended business process. The comparison will be measured in terms of the number of task processes and the time needed to complete the business process. The improvements produced by the recommendation business process can be seen from several aspects, such as solving problems that occur in the current running business process and decreasing the time it takes to complete the business process.

Results of Business Process Simulation Evaluation of Prospective PBP Recipients

In business process simulation, a simulation is carried out on time analysis. The amount of time for each task was obtained from the distribution fitting on the variation in the time of process implementation based on interviews and observations. In this simulation, uniform, triangle, or normal distributions are used.

Results of Business Process Simulation Evaluation of Prospective PBP Recipients (as-is)

In this section, a simulation of the business process of evaluating prospective PBP recipients will be conducted assuming there are 87 participants. This number is based on the average number of students who receive PBP.

Team Analysis Simulation

Table 11
Time Analysis Simulation of Business Process Evaluation of Prospective PBP Recipients

Name	Type	Instances completed	Instances started	Min. time (m)	Max. time (m)	Avg. time (m)	Total time (m)
Business Process of PBP Implementation	Process	87	87	22	22	22	2001
NoneStart	Start event	87					

Asking for the Number of PBP Candidates	Task	87	87	2	2	2	174
Deploy From PBP For Further Completeness	Task	87	87	3	3	3	261
Fill In From	Task	87	87	5	5	5	435
Documentation	Task	87	87	5	5	5	435
Fill out the Repair Form	Task	87	87	2	2	2	174
Sending To The Platform READY	Task	87	87	1	1	1	87
Review	Task	87	87	1	1	1	87
Confirmation	Task	87	87	2	2	2	174
Approved	Task	87	87	1	1	1	87
Not Approved	Task	87	87	1	1	1	87
NoneEnd	End event	174					

Table 11 explains the results of the time analysis simulation carried out on the current (as-is) business process of evaluating prospective PBP recipients. In the table, it can be concluded that to conduct an evaluation transaction for prospective PBP recipients, it takes a minimum duration of 22 minutes, a maximum duration of 22 minutes, and an average duration of 9 hours 21 minutes 1 second.

Comparison of Business Process Simulation Evaluation of Prospective PBP Recipients

After the simulation of the business process of evaluating prospective PBP recipients who are currently running and recommendations are carried out, it can be seen that there is a difference between the current business process and the recommended business process. The comparison will be measured in terms of the number of task processes and the time needed to complete the business process. The improvements produced by the recommendation business process can be seen from several aspects, such as solving problems that occur in the current running business process and decreasing the time it takes to complete the business process.

Comparison of Time Analysis Simulations

The number of task processes in the business process of prospective PBP recipients that are currently running is 87 activities, while in the recommendation business process, there are also 87 activities. Although the activities needed to complete the evaluation business process of prospective PBP recipients are the same, there are changes.

Table 12
Comparison of Time Analysis Simulation Business Process Evaluation of Prospective PBP Recipients

Process Validation & Time Analysis	As-Is	To-Be	Time Difference	Increase (%)
Min. Time	22m	9m	13m	0,40
Max. Time	22m	9m	13m	0,40
Avg. Time	2:30 p.m.	9h21m1d	5h4m1s	1,55

Table 12 shows that on the average time to carry out the recommended business process, there is an increase of 1.55% or 6 hours, 4 minutes, and 1 second. This recommended business process can overcome problems that occur in current business processes.

Comparison of Resource Analysis

Table 13
Comparison of Resource Analysis Simulation of Business Process Implementation of Admission of PBP Candidates

Resource	***As-Is***	***To-Be***	**Information**
Admin	99.82 %	91.50 %	Turku
Platform READY	5.24 %	79.77 %	Climb
Learners	0.00 %	84.47 %	Climb

Conclusion

The conclusion after conducting a discussion of the research that has been carried out, the conclusion can be drawn, namely After the evaluation of the existing business process using the Failure Mode and Effect Analysis method, potential errors in the business process can be identified. Some of the mistakes include network failures and decreased internet connectivity. Errors that have been identified by the Failure Mode and Effect Analysis method will be selected based on the highest ranking to find the root of the problem. The results of the evaluation that has been carried out on the business process of prospective PBP recipients found several root problems that are obstacles to the business process. Based on the results of the evaluation the Business Process Improvement method, was applied to prepare recommendations for process improvement using tools in BPI called streaming. In the streamlining process, standardization is applied to the process of checking needs. Then Duplication Elimination in the process of making a confirmation letter and ensuring that all data of prospective PBP recipients is appropriate and there is no damage to servers, computers, anti-viruses that maintain data security, and network device failures. Business process recommendations for prospective PBP recipients are made based on business process improvement designs that have been carried out using the Business Process Improvement (BPI) method. Several activities have changed, activities that have been added to activities that have been removed. From the results of simulations carried out on the current business process (as is) and the recommendation business process (to be), it was found that the increase in time analysis reached 02.8% in the business process of prospective PBP recipients, 1.44% in the

implementation of the business of prospective PBP recipients, and 1.55% in the business evaluation of prospective PBP recipients.

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