

## DESCRIPTIVE APPROACH PROBLEM IN THE TRAINING PROCUREMENT PROCESS AT PT TRANSPORTASI JAKARTA (TRANSJAKARTA)

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### Abstract

The development of human resources in the corporate and industrial world is necessary to improve employee competency and productivity. The efforts made for the development of human resources are through the procurement of various training relevant to the field of work for each employee. As a company that focuses on transportation integration system services, PT. Transportasi Jakarta (Transjakarta) always tries to provide the best service. One form of effort in improving services is by improving the competence and insight of each employee through the procurement of relevant training. Currently, PT. Transportasi Jakarta already has its business process for procuring training for its employees. However, some problems often arise in the business process. Based on the interviews with staff and the Head of the Training Center Department at PT. Transportasi Jakarta, problems that often arise in the business process for procuring training for employees are the slow approval of documents by related directors, the need for additional training beyond the annual training plan, and numerous validation documents. These problems cause business processes to be hampered. This research focused on analyzing the causes of effects using Six Sigma DMAIC. This research uses a descriptive approach that emphasizes the question of how. The DMAIC (Define, Measure, Analyze, Improve, and Control) methodology used only reaches the Analyze stage because this study aims to focus on deeper problem exploration in the business processes. Understanding the cause of an issue is important for the company to take appropriate action to prevent the problem from recurring.

**Keywords:** Training procurement, business process, DMAIC methodology.

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### 1. Introduction

PT. Transportasi Jakarta (Transjakarta) is a Regional Owned Enterprise (BUMD) engaged in the services of the first Bus Rapid Trans (BRT) transportation integration system in Southeast Asia and South Asia. Transjakarta currently has a total of around 6,000 employees and has launched a variety of new busways to increase customer convenience and service satisfaction. In order to improve customer service satisfaction, Transjakarta is also trying to develop their human resources. This human resource development effort aims to improve employee competency and productivity. The main capital for a company to achieve its goals is to optimize employee performance (Saputri et al. 2020). Increased competence and insight for employees can help employees in improving services for customers indirectly. Through the provision of training for employees is a form of commitment and responsibility of the company in developing employees with high potential to be able to achieve a higher level of responsibility through providing opportunities to attend training (Rodriguez and Walters 2017). In order to conduct training for employees in the company, there are business processes that must be carried out according to applicable company policies. PT. Transportasi Jakarta (Transjakarta) currently has its own business process for procuring training for its employees, but the business process is quite complex and requires improvement in the business process. This complex business process is caused by several aspects of problems that often arise in business processes for procuring training in companies. Slow approval of documents by related directors, need for additional training beyond the annual training plan, and lots of validation documents are problems that are often encountered in the business process of providing training in companies. In addition, the

methods used in business processes to provide training for employees are still manual. The process of evaluation and documentation of each activity in the business process is not recorded properly. The approval process and activity document archives still use paper (paper-based), so that the control over all activities that have been carried out during the business process for training procurement is not well reflected as reference material for future training procurement. To overcome these problems, this study aims to use a descriptive approach to emphasize the how questions. The DMAIC (Define, Measure, Analyze, Improve, and Control) methodology used in this study was only used up to the Analyze stage. Because this research aims to focus on exploring deeper problems in business processes. Understanding the causes of a problem is important for companies to take appropriate action to prevent the problem from recurring. The paper is organized into several sections, as follows: the Introduction, Literature Review, Data Collection, Research Methodology, Research Design, Discussion, and Conclusion. In the Discussion section, it is divided into three DMAIC phases, which are Define, Measure, and Analyze.

## 2. Literature Review

### Training Development

In order to improve the quality of service in the public transportation industry, competency and productivity improvements for employees are needed through employee development programs. Provision of training for employees can improve competency development and employee productivity to give the best effort in their performance. Training development is an important part of human resource management. Procurement of training for employees to support employees in activities that require both physical ability and thinking of an idea to increase their productivity (Ismael et al. 2021).

In procuring training for employees it involves aspects such as training planning, preparation of training materials, and training methods that appropriate with the needs of employees to increase competence and achieve targets set by the company (Anwar and Ghafoor 2017). Provision of training for employees is a form of appreciation from the company for the loyalty given by employees to the company. The company appreciates this loyalty by providing opportunities for employees to take part in training programs in order to improve employee competency and employee satisfaction with their increased performance. Providing training for employees has a direct positive impact on the company's investment in their human resources, because it is able to maximize the potential of employees to become better trained and have broader insights (Oluwaseun 2018).

### Six Sigma DMAIC

Six Sigma is supported by the DMAIC methodology which is a structural method for improving performance in existing business processes. DMAIC methodology for is able to identify the root causes of a business process and focuses on reducing process variation (Sordan et al. 2020). The DMAIC methodology implements concepts based on Define, Measure, Analyze, Improve, and Control to identify problems that exist in a business process, so as to be able to provide possible solutions to these problems in business processes (Murmura et al. 2021).

The DMAIC methodology was originally used to improve business processes in the manufacturing industry only, but recently is widely used to improve business processes in various fields of the service industry (Subagyo et al. 2020). The DMAIC methodology provides a systematic approach to fixing problems in business processes by understanding the workflow of business processes, analyzing potential problems in business processes, and identifying possible solutions that can be implemented to reduce the problems that have been identified (Bazrkar and Iranzadeh 2017). In identifying a problem and possible solutions that can be provided in existing business processes, DMAIC methodology refers to five phases that are interconnected

with one another consists of, Define, Measure, Analyze, Improve, and Control (Rahman et al. 2017).

Define is the first phase in the DMAIC methodology, where at this stage it begins by identifying problems that arise in business processes and classifying these problems based on their level of urgency. The second phase is Measure, which at this stage focuses on collecting relevant data or information, aiming at mapping problems and possible solutions that can be given to improve business processes. The third phase is Analyze, which at this stage focuses on analyzing relevant data or information that has been collected to validate the root causes of problems in business processes that can be eliminated and identify possible solutions that can be provided to improve business processes. The fourth phase is Improve, where after being able to analyze the root causes of problems in business processes, this stage focuses on determining the best possible solutions to improve business processes. This stage also focuses on the solutions provided that are able to provide a sustainable effect in solving problems in business processes. The last phase in the DMAIC methodology is Control, which at this stage focuses on standardizing the possible solutions used to solve problems and good management of these solutions (Kowalik 2019).

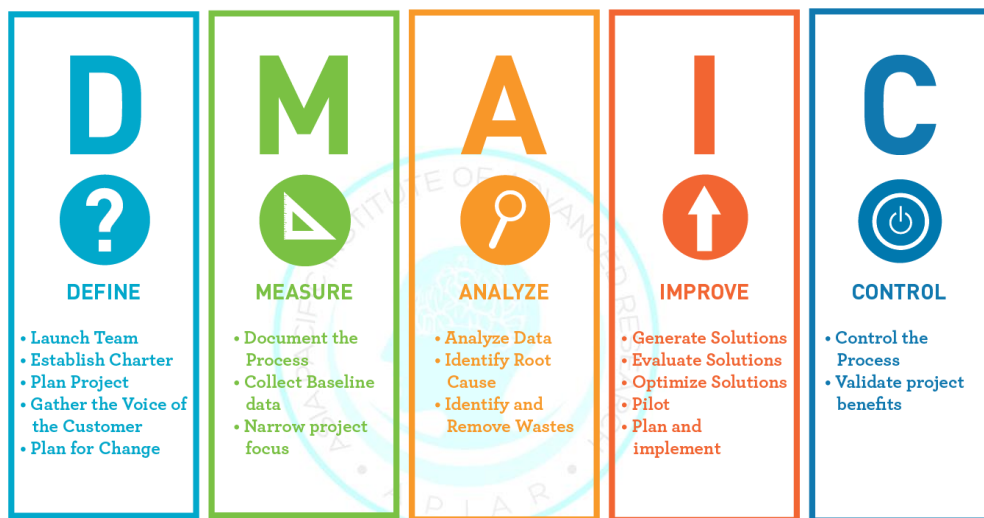


Figure 1: DMAIC Methodology

### 3. Data Collection

Data collection in this research used primary data derived from PT. Transportasi Jakarta (Transjakarta). The primary data collection was carried out through two methods, which were the method of collecting data regarding the current workflow process for procuring training for employees at the company and the method of direct personal interviews with staff and Head of Training Center Department from PT. Transportasi Jakarta (Transjakarta). The primary data collection aims to identify problems that often occur in business processes to provide training for employees in the company.

Based on these two data collection methods, it will be possible to identify the problems that often arise in the business process. In collecting data regarding the current workflow process for the training procurement, it is used as an initial description regarding the business processes for training procurement that are currently carried out by companies as their workflow. Meanwhile, for data collection through direct personal interviews with staff and Head of Training Center Department, the aim is to find out various perspectives from the staff and Head of Training Center Department at PT. Transportasi Jakarta related to the business process for the procurement of training that is currently being carried out. The list of questions used in the interview are about the business processes that are currently being carried out, problems that

are often encountered in these business processes, how to solve these problems, the length of time needed in the business processes, until the possible solutions provided from staff and Head of Training Center Department in order to improve business processes in the procurement of the training.

The data collection will be used as a consideration to determine what solutions are appropriate to overcome the problems faced by the company to improve business processes in providing training for employees. DMAIC methodology aims to improve business processes for the procurement of training for employees by identifying various factors that can affect the quality of these business processes (Sandu and Sharma 2020). The identified factors have two functions, either they can have added value for the business processes being carried out or do not have added value to business processes, so they need to be reduced or eliminated from the business process.

#### **4. Research Methodology**

This research uses a qualitative methodology, because it aims to redesign existing business processes into simpler business processes. The data collection methodology was obtained using primary data derived from company data related to current process workflows for training procurement and the results of direct personal interviews with staff and Head of Training Center Department at PT Transportasi Jakarta (Transjakarta). It is intended that the data that has been obtained can be analyzed to identify problems that arise and possible solutions as output for solving these problems. However, data related to the current process workflow cannot be disseminated so that it becomes a limitation in this research. In addition, all data obtained from companies cannot be measured, so this research purely focuses purely on improving the quality of business processes.

The methodology used to redesign business processes for the procurement of training for employees uses the Lean Six Sigma methodology supported by the DMAIC (Define, Measure, Analyze, Improve, and Control) methodology. The DMAIC methodology identifies problems in business processes, making it easier to make decisions to find the root causes of problems by eliminating activities that have no added value to business processes for training procurement. In addition, the qualitative methodology in this study also aims to bring out new knowledge that is better and relevant to current and future research needs, and emphasizes understanding related to business processes for the procurement of training for employees in a company.

## 5. Research Design

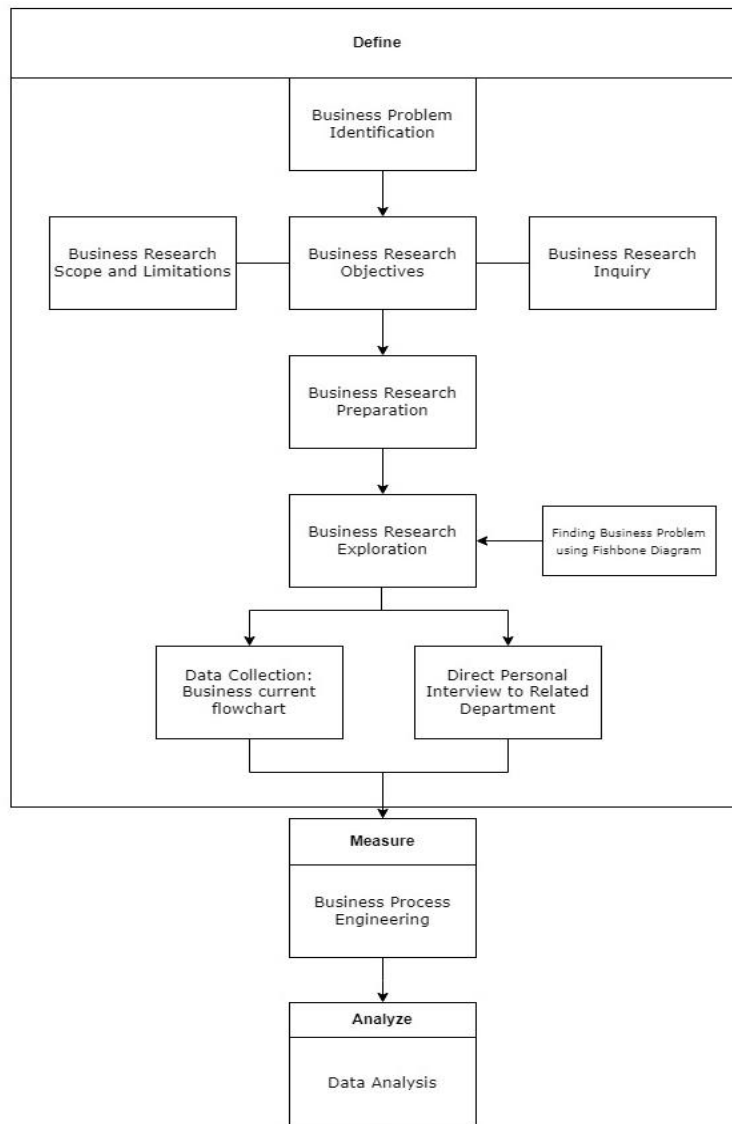


Figure 2: Flowchart for Research Design

The DMAIC methodology was carried out from the initial stage to the final stage of the research. The Define stage is the initial stage carried out in this research. There are various activities carried out at this stage. The initial activity carried out in the **Define** is to identify possible business problems contained in business processes to be discussed as material for business research. After identifying possible business problems contained in the business process, the next activity is to determine the objectives of the business research to be carried out by considering the scope and limitations of the business research, as well as preparing questions related to the problems that arise in the business process. The next activity is to prepare the things needed to build business research so as to facilitate in-depth exploration of the problems contained in the business process and identify possible solutions that can be given to overcome these problems. Fishbone diagram is used in in-depth exploration activities to analyze the root causes of these business problems to facilitate the collection of data relevant to business research. The data needed in this study include current business flowcharts used by the

company and conducting direct personal interviews with the relevant departments that carry out business processes to provide training for employees.

Entering the next stage is the **Measure**, where after all the data and information has been collected, the activity carried out is to measure the data and information using Value Chain Analysis. Value Chain Analysis is an analysis process that focuses on identifying activities that have benefits in a process (Mulyono et al. 2022). Activities in the business process are measured by determining whether the activity has added value or not in the business process. After all the data and information is measured, the next stage is the **Analyze**. The data and information that has been measured using the Value Chain Analysis method is then analyzed to determine the root causes of problems that are often encountered in business processes for procuring training for employees at PT. Transportasi Jakarta (Transjakarta).

## 6. Define Phase (D)

### Current Business Process for Training Procurement

One form of the company's efforts in improving employee competence is through the provision of training for its employees. The procurement of training programs is able to increase the competence of employees with high competitiveness to be able to compete in the era of globalization (Kurniawan et al. 2019). However, in the training procurement process there are various common problems that are often faced by the training center team in the company to fulfill the training procurement process for its employees.

The business process for procuring training at PT. Transportasi Jakarta (Transjakarta) is currently in the stage of the board of directors' approval process for updating the new process workflow after adjusting to the business processes that have been implemented by the company so far. The purpose of establishing this work process flow is to detail business processes and as a reference in business processes in order to conduct training at PT. Transportasi Jakarta (Transjakarta). There are five process workflows, as follows: 1) Annual Training Planning; 2) Request for Training Needs; 3) Preparation for Training Execution; 4) Training Execution; 5) Training Evaluation.

### Root Cause Analysis (Fishbone Diagram)

**Figure 3** below explains the fishbone diagram identifying various aspects that are the root causes of complex business process problems for providing training for employees at PT. Transportasi Jakarta (Transjakarta). Identification of various problems in complex business processes for procuring training for employees was obtained from interviews with staff and the Head of Training Center Department of PT. Transportasi Jakarta (Transjakarta), as the Department directly in charge of carrying out the process of procuring training for all employees in the company. Based on the results of these interviews, there are three general problems that affect business processes for procuring training for employees. These problems cause the business process to procure training for employees become complex, resulting in the procurement process of training for employees being hampered.

The first problem obtained from the identification results through the fishbone diagram is the slow approval process for the relevant directors caused by the absence of a definite deadline to pressure the directors to approve documents for the training procurement program. The second problem is the addition of training needs beyond the agreed training plan. This is based on immature training planning and minimal coordination between the Training Center Department and related work units. In addition, these problems are also usually caused by sudden training needs and without careful planning. This resulted in the existing training planning being disrupted because the time and budget that had been set for the implementation of the training had changed. The third problem identified is excess validation documents. This is due to the numerous supporting documents for the validation process and the long workflow for

the validation process. As is known, PT. Transportasi Jakarta (Transjakarta) is a Regional Owned Enterprise (ROE) in which all forms of activities carried out by the company are under the responsibility of the local government. This causes the company's administrative process to become convoluted.

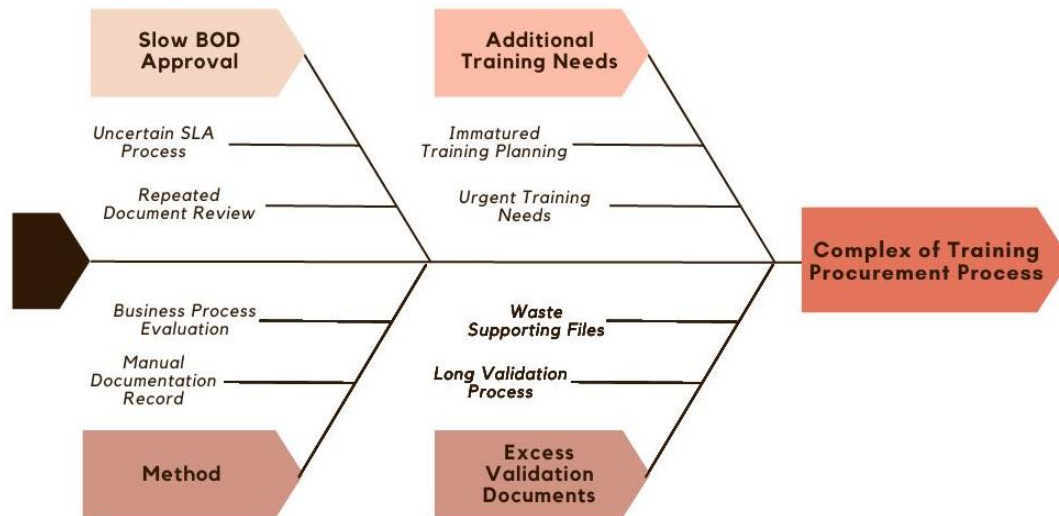


Figure 3: Fishbone Diagram

From these three problems that have been identified, the business process for procuring training becomes complex, resulting in a decrease in the quality of the business process. In addition, the methods used in each activity in the business process for procuring training for employees are still manual. The process of evaluation and documentation of each activity in the business process is not recorded properly. Also, the approval process and activity document archives are still paper-based, so that the control over all activities that have been carried out during the business process for the procurement of training is not well reflected as a reference material for the procurement of training in the future.

## 7. Measure Phase (M)

In this Measure phase, the focus is on measuring the duration of each activity in the business process as a benchmark for the time required for each activity for the business process. Based on the results of interviews with staff and heads of the PT. Transportasi Jakarta (Transjakarta), there is no definite time benchmark for each activity in the current business process. The department focuses on the deadlines required to conduct training for employees and prioritizes each business process they carry out, so that the time required for each activity cannot be measured in precise terms. This is also reinforced by the process workflow images obtained from the Training Center Department of PT. Transportasi Jakarta (Transjakarta) that there is no clear time benchmark for each activity in the process workflow. However, based on the results of interviews with staff and the Department Head of Training Center of PT. Transportasi Jakarta (Transjakarta), explained that the ideal time in the business process to provide training for employees at the company is around 10-14 working days or around 2-3 weeks. In fact, the business process for procuring training for employees can take up to 1 month at the latest depending on the type of training to be held, the administrative documents required, as well as the approval process from stakeholders based on predetermined authority from the nominal budget for training procurement for employees.

The business process in procuring training for employees at the company has activities that are classified as complex because it involves various activities that do not have added value in business processes. In addition, the thing that makes the business process complex is because it

requires identification and planning of mature training needs, a lot of approval documents and supporting documents as justification material for the board of directors' approval of training needs, as well as activities in business processes that are "looping" in nature. so that the activities in the business process become repetitive. These activities will be reduced in the business process, so that the new business process will be simpler and not have many "waste" activities.

### **8. Analyze Phase (A)**

In order to analyze problems in a business process, identify the root causes of the business process by making a fishbone diagram which has been explained in chapter 4.1.1.2 (Root Cause Analysis) **Figure 3**. Based on **Figure 3** (fishbone diagram), it is shown that the root cause of the complexity of business processes for providing training for employees at PT. Transportasi Jakarta (Transjakarta) is caused by several things, which are the slow approval of the relevant directors, additional training needs outside of training planning, as well as excessive validation documents. In addition, the methods used in each activity in the business process for procuring training for employees are still manual. This was also reinforced by the results of interviews with the Staff and Head of the Training Center Department of PT. Transportasi Jakarta (Transjakarta), which mentioned similar things related to problems that often occur in business process activities for procuring training for employees. In addition, in the process workflow implemented by PT. Transportasi Jakarta (Transjakarta) currently also has various activities in business processes that do not have added value in these business processes.

### **9. Conclusion**

In order to reduce activities that are "waste" or have no added value in business processes to provide training for employees, the Training Centre Department of PT. Transportasi Jakarta (Transjakarta) needs to reconsider the process workflow they have created and are currently implementing. Complex business processes for procuring training for employees at PT. Transportasi Jakarta (Transjakarta) can be improved through the application of the DMAIC method in this business research to identify the root causes of problems in business processes. Problems that are often encountered in business processes for the procurement of training at PT. Transportasi Jakarta (Transjakarta) can be identified by using the DMAIC method to find the root causes of problems in procurement business process of training for employees at PT. Transportasi Jakarta (Transjakarta). In addition, this research is also limited to focusing on identifying and analyzing the root causes of problems in business processes to provide training for employees in PT. Transportasi Jakarta (Transjakarta). In further research, improvements should be made in this complex business processes into simpler business processes by using Business Process Reengineering (BPR) methods.



## References

- I. Anwar, K. and Ghafoor, C. 2017. Knowledge Management and Organizational Performance: A Study of Private University in Kurdistan. *International Journal of Social Sciences and Educational Studies*. 4 (2), pp. 53-66.
- II. Bazrkar, A. and Iranzadeh, S. 2017. Choosing a Strategic Process in order to Apply in Lean Six Sigma Methodology for Improving Its Performance using Integrative Approaches of BSC and DEA. *Journal of Business and Retail Management Research*. 11 (4), pp. 114-123.
- III. Ismael, B. N., Othman, B. J., Gardi, B., Hamza, P. A., et al. 2021. The Role of Training and Development on Organizational Effectiveness. *International Journal of Engineering, Business, and Management*. 5 (3), pp. 29-38.
- IV. Kowalik, K. 2019. The DMAIC Cycle in Managing The Development of Work Potential in Service Enterprise. *World Scientific News*, Online, February 26 2019.
- V. Kurniawan, U. M., Aknuranda, I., and Kurniawan, T. A. 2019. Business Process Analysis and Improvement on Training Management in Government Training Institution (Case Study of Institution XYZ). *Journal of Information Technology and Computer Science*. 4 (2), pp. 202-211.
- VI. Mulyono, S., Nuraprila, S., Kamila, H. H., and Awalia, N. 2022. Value Chain Analysis in Indomaret Rawa Simprug Kebayoran Lama. *International Journal of Economics, Business, and Accounting Research*. 6 (3), pp. 1-9.
- VII. Murmura, F., Bravi, L., Musso, F., and Mosciszko, A. 2021. Lean Six Sigma for The Improvement of Company Processes: The Schnell S.p.A. Case Study. *The TQM Journal*. 33 (7), pp. 351-376.
- VIII. Oluwaseun, O. O. 2018. Employee Training and Development as a Model for Organizational Success. *International Journal of Engineering Technologies and Management Research*. 5 (3), pp. 181-189.
- IX. Rahman, A., Shaju, S. U. C., Sarkar, S. K., Hashem, M. Z., Hasan, S. M. K., Mandal, R., and Islam, U. 2017. A Case Study of Six Sigma Define-Measure-Analyze-Improve-Control (DMAIC) Methodology in Garment Sector. *Independent Journal of Management and Production*. 8 (4), pp. 1310-1323.
- X. Rodriguez, J. and Walters, K. 2017. The Importance of Training and Development in Employee Performance and Evaluation. *World Wide Journal of Multidisciplinary Research and Development*. 3 (10), pp. 206-212.
- XI. Sandu, A. S. and Sharma, P. 2020. Implementation of DMAIC Methodology of Six Sigma in Vocational Education and Training for Quality Improvement. *International Journal of Advance Research and Innovation*. 8 (4), pp. 297-301.
- XII. Saputri, P., Lorensa, D., Asriani, and Zainurossalamia, S. 2020. The Influence of Training and Development to Employee Performance. *International Journal of Economics, Business, and Accounting Research*. 4 (1), pp. 133-140.
- XIII. Sordan, J. E., Optime, P. C., Pimenta, M. L., Chiabert, P., and Lombardi, F. 2020. Lean Six Sigma in Manufacturing Process: A Bibliometric Study and Research Agenda. *The TQM Journal*. 32 (3), pp. 381-399.
- XIV. Subagyo, I. E., Saraswati, D., and Kusmulyono, M. S. 2020. Benefits and Challenges of DMAIC Methodology Implementation in Service Companies: An Exploration Study. *Journal of Applied Management*. 18 (4), pp. 814-824.