

Management Transformation of Warga Vocational School toward a Center of Excellence Vocational School: A Case Study of the Process, Changes, and Impacts on the Teaching Factory

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ABSTRACT

This study aims to reveal the transformation process of the management of SMK Warga Surakarta in achieving the status of SMK Center of Excellence (SMK PK) and to find out the changes and impact of the SMK PK program on the implementation of the Teaching Factory (TEFA). The research uses a qualitative descriptive approach with a case study method. Data collection was carried out through interviews and documentation involving school principals, heads of the TEFA program, and teachers. Data analysis is carried out through the stages of data reduction, data presentation, and conclusion drawing with triangulation techniques to ensure the validity of the data. The results of the study show that the transformation towards SMK PK is carried out in stages through the process of program submission, selection, verification, and program implementation. In this process, the school implements management strategies in the form of synchronization with the industrial world, strengthening TEFA learning, and optimizing human resources and school facilities. The implementation of the SMK PK program provides changes to the implementation of TEFA, characterized by a more structured learning system, more organized administrative and managerial systems, improvements in facilities and infrastructure, and more student-centered learning methods. In addition, the PK Vocational School program also has an impact on improving student competence, teacher quality, learning quality, and increasing cooperation and industry trust in schools. This research contributes to enriching the study of the transformation of school management towards a Center of Excellence Vocational School and shows that strengthening TEFA through the PK Vocational School program can be an effective strategy in improving the quality of vocational education in line with industry needs.

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INTRODUCTION

Education in Indonesia continues to be the main spotlight to find solutions to various existing problems. The progress of national education can take place more rapidly if educators are given flexibility in managing learning and supported by equal access in all regions (Yudhistira et al., 2020).

The challenges in the era of globalization, which are characterized by free competition and technological advancements, require the world of education to be able to build a superior national character (Salman, 2022). This encourages the government to continue to formulate policies that are adaptive to the dynamics of the times (Hidayat et al., 2023). Vocational High Schools (SMK) have a strategic role to equip students with relevant skills so that they are ready to be absorbed in the world of work (Alimudin et al., 2019).

However, the reality on the ground shows that there is a significant gap between expectations and reality. Although the number of vocational school graduates continues to increase, many of them do not have the skills to meet the needs of the labor market (Judijanto et al., 2024). This phenomenon causes vocational school graduates to be the highest contributor to the unemployment rate in Indonesia (Khurniawan, Arie W., Erda, 2019). Based on data from the Central Statistics Agency (BPS) in 2024, the Open Unemployment Rate (TPT) of vocational school graduates reached 9.01%, the highest number compared to other levels of education. This condition is ironic because vocational school graduates are specially prepared as ready-to-use workers.

Table 1. TPT Based on Education Level 2024

Education Level	Open Unemployment Rate Based on Education
	Level 2024
No/Never School/Unfinished & Finished Elementary School	2,32
Junior High School	4,11
Public High School	7,05
Vocational High School	9,01
Diploma I/11/111	4,83
Universitas	5,25

To overcome these challenges, the government has designed a learning model based on *Teaching Factory (TEFA)*. TEFA is a production-based learning method that integrates industrial elements into the education system (Arifna et al., 2025). This concept aims to bridge the competency gap by directly involving students in the real work process according to industry standards (Firdaus et al., 2021). Implementation *CONCLUSION* supported by a strong legal foundation, such as Presidential Instruction Number 9 of 2016 concerning the revitalization of vocational schools (Arif Rembangsupu et al., 2022). In addition, the SMK Center of Excellence (SMK PK) program was launched in 2021 as a strategic effort to improve the quality of human resources through character strengthening and deep partnerships with industry (Munthe & Mataputun, 2021).

SMK Warga Surakarta is one of the institutions that has been trusted to be a PK Vocational School since 2021. Although TEFA has been widely implemented, the transformation of institutional

management towards the status of a Center of Excellence and its impact on strengthening the industry-based learning ecosystem still requires in-depth study. This research focuses on analyzing the transformation process of school management towards the SMK PK program to reform the *TEFA* model more effectively and uncover the changes and impacts of the SMK PK program on *TEFA*. Meanwhile, the purpose of this research is to reveal the transformation process of the management of SMK Warga Surakarta in achieving the status of SMK PK and to find out the changes and their impact on the implementation of *TEFA* in the school.

METHODS

This study uses a qualitative descriptive approach with a case study method to explore in depth the phenomenon of management transformation in SMK Warga Surakarta. The selection of the location at the Surakarta Citizen Vocational School is based on the relevance of the school as a Central Vocational School of Excellence (PK) that implements *the Teaching Factory (TEFA) learning model*. The research was carried out in the period from May 2025 to March 2026.

The data in this study consists of primary data obtained directly through observation, interviews, and documentation, as well as secondary data in the form of school administrative documents. The research subjects or informants were selected using *purposive sampling* and *snowball sampling techniques* to ensure that the information obtained was relevant to the research objectives. The total number of informants is 6 people namely, Head of *the TEFA* Program, *TEFA* Human Resource / K3 Development, *TEFA* Machining, *TEFA* Public Relations, Expertise Program Teacher, who takes part in *TEFA* SMK Warga Surakarta.

The main instrument in this study is the researcher himself, which is supported by interview guidelines, observation sheets, and documentation guidelines. In-depth interviews were conducted to uncover the management transformation process and its impact on *TEFA*. Participatory observations were conducted in the *TEFA* environment to see real interactions in the industry-based learning process, while documentation was used to verify field data.

To ensure the validity of the data, this study applied the triangulation technique, which includes source triangulation and method triangulation. Source triangulation is carried out by comparing information from various sources, while method triangulation is carried out by matching the results of interviews with direct observations in the field. Data analysis was carried out systematically following the Miles and Huberman interactive model, which included the stages of data collection, data reduction, data presentation, as well as conclusion drawing and verification.

RESULTS AND DISCUSSION

Based on qualitative data analysis, 5 points were obtained that underlie the transformation process of the management of SMK Warga Surakarta in towards SMK PK as well as changes and

impacts on *TEFA*. The five points are the main categories developed from various fields, as presented in Table 2.

Table 2 Axial Coding	
Problem Formulation	Axial Coding
The Process of Transforming the Management of Citizen Vocational Schools to PK Vocational Schools	Background of SMK PK at SMK Warga
	The Process of Getting to SMK PK
	Management Strategy Towards SMK PK
Changes and Impacts of the PK Program on <i>TEFA</i> in Citizen Vocational Schools	Changes in <i>TEFA</i> Before and After Becoming a PK Vocational School
	The Impact of the PK Program on <i>TEFA</i>

Background of SMK PK at SMK Warga Surakarta

The PK Vocational School program has the main goal of the government so that the appointed school is able to become an example and reference for other vocational schools around it, especially in the implementation of the learning process. PK Vocational School is expected not only to develop internally, but also to act as a model of *best practice* that can be replicated by other schools. Thus, the transformation towards SMK PK is not only interpreted as a change in status, but also as a process of increasing school capacity in a sustainable manner. Through the coaching process, the school is expected to be able to achieve standards as a center of excellence and have a positive impact on improving the quality of vocational education more broadly. This phenomenon was explained by an informant (PR) in an interview:

"The hope of SMK PK is from the government, that a school that is expected to be an example, can be a reference for the surrounding vocational schools in the process of implementing their learning"

It can be concluded that SMK PK is a government program that aims to make schools a center of excellence and reference for other vocational schools in improving the quality of learning and vocational education. This is in line with what was stated by the Yusuf Aditya & Kencanawaty, (2024) which revealed that SMK PK is a Vocational High School development program designed to improve the quality and performance of vocational schools so that they can produce graduates who have high competence, are ready to enter the world of work, and are relevant to the needs of the business world and industry.

The Process of Citizen Vocational Schools to PK Vocational Schools

Applying for the SMK PK program does not necessarily guarantee that the school will immediately receive the program. After the submission process is carried out, the ministry carries out the verification stage through direct survey activities to the school. This survey aims

to assess the feasibility of the institution, both in terms of infrastructure, human resources, and readiness in implementing the SMK Vocational School program. As expressed by the informant (MS) as follows.

"So, for SMK PK itself, we submit, but not 100% we get it immediately. So we apply through an application called Takola. Well, we submit it to the ministry. From the ministry the survey to us... The goal is to see if this SMK deserves to get a PK Vocational School or not..."

It can be concluded that the process of applying for the SMK PK program does not automatically make the school a recipient of the program, but must go through the verification and survey stage from the ministry to assess the feasibility of the school based on the aspects of infrastructure, human resources, and readiness in implementing the SMK PK program. These findings are in line with opinion Sari et al., (2025) which emphasizes that program planning already includes goal setting, resource analysis, and implementation strategies, but still needs strengthening, especially in the aspects of funding and cooperation with the business world and industry (DU/DI).

Management Strategy Towards SMK PK

The management strategy of SMK Warga in moving towards a Central Vocational School of Excellence (SMK PK) is carried out through synchronization with the industrial world, strengthening *Teaching Factory (TEFA)* learning, improving student services, improving school quality, and managing the activity timeline. The strategy is implemented to adapt learning to industry needs, improve the quality of schools, and prepare graduates to be better prepared to enter the world of work. As revealed by the informant (MS)

"The main priority, huh? The main priority is that, Mas, synchronization was earlier. If, if the school is synchronous, the curriculum is in sync with the industrial world, automatically our graduates are in demand. Many are sought after in the industrial world..... So I think that synchronization between industry and school is very important because a good school is a miniature of the industry. So approaching, we are trying to approach what the needs of the industry are like, I see, Mas."

It can be concluded that the main strategy implemented by schools in getting to SMK PK is to synchronize regularly with the industrial world to adapt the curriculum and learning process to the needs of the world of work, so that the competence of graduates becomes more relevant, easily absorbed in the industry, and able to face work demands according to industry standards. These findings are in line with the theory Komara & Iskandar, (2025) which reveals that the program *link and match* It aims to align education with the needs of the business world

and industry so that graduates have competencies that are relevant to the needs of the job market.

TEFA Changes After Becoming a PK Vocational School

After the implementation of the SMK PK program, there were changes in the implementation of *TEFA* in the aspects of curriculum, administration, infrastructure, learning quality, and learning methods. The curriculum has become more adaptive to industrial needs, the administration and work system are more structured, and infrastructure facilities have improved through the addition of machines and supporting facilities. In addition, the quality and learning methods of *TEFA* have become more systematic, oriented to industrial practices, and student-centered so that they can improve students' competence and work readiness. As conveyed by the informant (PR) as follows.

"After the existence of SMK PK, because it was demanded from SMK PK earlier, it also demanded that the managerial was also getting better, so from then on it began to be neatly arranged. How is the workflow, from the customer coming to the customer receiving it again, it starts to be well arranged..... Until the satisfaction form reaches the customer, it has also been well fixed"

It can be concluded that the implementation of the PK Vocational School program brings changes to the implementation of *TEFA* at SMK Warga, covering aspects of curriculum, administration, infrastructure, quality, and teaching methods. These changes are characterized by more structured management, improved facilities, more student-centered learning, and adjustments to industry needs and technological developments. The findings were clarified by Ansori et al., (2025) which reveals that supporting factors in the implementation *TEFA*. It includes the availability of workshop facilities and infrastructure that meet industry standards, the existence of a strong commitment from teachers and school management, and the establishment of active partnerships with the business world and the industrial world.

The Impact of the PK Program on *TEFA*

The PK Vocational School program has a positive impact on the implementation of *TEFA* at SMK Warga through improving the quality of learning, student and teacher competence, practical facilities, and cooperation with industry. In addition, learning becomes closer to the industrial work culture so as to support the work readiness of graduates. As conveyed by the informant (ND) as follows.

"But after this assistance, we understand more and more, 'Oh, it turns out that for TEFA it's not just, 'Oh, students who work,'... But how is the culture almost like an industry..... But culturally we try to apply it like an industry. Why is there a QC yesterday, there is

a PPIC in our place? The child should understand, 'Oh, in the industry there is also this,' that's the culture."

It can be concluded that the implementation of the PK Vocational School program has a positive impact on the development of TEFA, which is shown through improving the quality of learning, student and teacher competence, practical facilities, and cooperation with the industrial world. The SMK PK program also encourages the application of industrial work culture in learning so that it can increase students' work readiness and the relevance of learning to industrial needs. The findings are in line with the theory Muzani et al., (2019) that industrial work practice activities provide opportunities for students to be directly involved in the world of work so as to increase competence and work readiness.

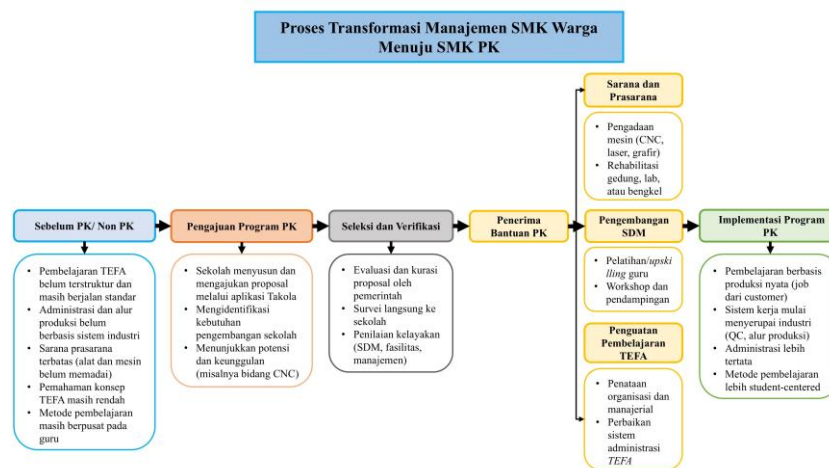


Figure 1 Visualization of the Transformation Process of Citizen Vocational Schools to PK Vocational Schools

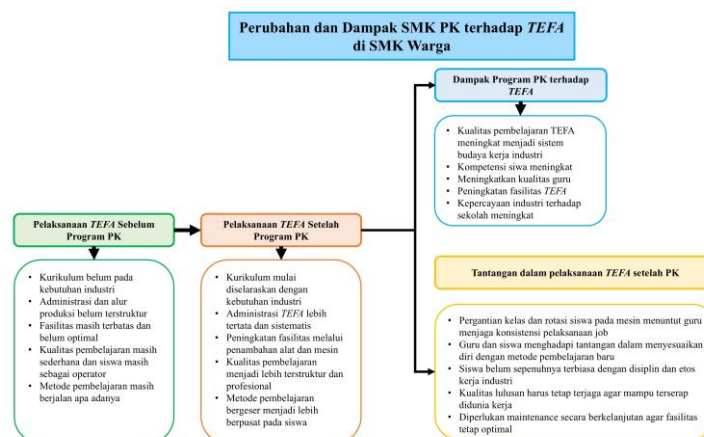


Figure 2 Visualization of Changes and Impacts of SMK PK on TEFA at SMK Warga

CONCLUSION

The transformation of the management of the Surakarta Citizens' Vocational School into a Central Vocational School of Excellence (PK) took place gradually through the process of submission, selection, and determination as a program recipient. After obtaining the PK program, the school carried out various developments such as improving facilities, quality of human resources, and strengthening

TEFA learning through synchronization strategies with the industrial world and optimizing school resources.

The implementation of the PK Vocational School program has made positive changes to the implementation of *TEFA*, characterized by more structured learning, a more organized managerial system, more adequate practical facilities, and more student-centered learning methods. In addition, the PK program also improves student competence, teacher quality, and the relevance of learning to industry needs.

Further research is suggested to examine the implementation of the PK Vocational School program in different schools or skill competencies in order to gain a more comprehensive understanding of its impact on the quality of vocational education.

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