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Original Research Article

Impact of Cooperation Towards Quality Improvement of Expertise Competency

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Abstract: The aims of the study were (1) to analyze the improvement of the quality of skills competency at SMK Muhammadiyah 1 Surakarta with Astra Honda Motor, (2) to analyze the impact of the collaboration, (3) to analyze the factors that influence the quality of work. This research uses a qualitative descriptive approach based on case studies. The process of analyzing the data from the interviews was carried out using the thematic approach to the analysis of the Braun and Clark model. The results of the study (1) there is an increase in the quality of skill competencies, (2) the impact of cooperation between SMK and the Industry, (3) factors that influence cooperation in improving the quality of skill competencies. The research results indicated on; school policies regarding the implementation of industrial class, the suitability of the school curriculum with the needs of the world of work, recruiting new industrial class students, the readiness of school infrastructure, the industrial class learning process. teaching factories, implementing industrial work practices, the competencies and skills of industrial class students, the impacts and benefits and the quality of industrial class. The results of this study analyze the various challenges which result in the formation of Honda-assisted industrial classes, best practices and provide insights that are used as a reference in improving the quality of competency skills in Vocational High Schools, to develop policies for the advancement of vocational education.

Keywords: SMK, World of Work, Cooperation, Quality Improvement.

INTRODUCTION

Many SMK graduates still have not found a job, in fact according to the Central Statistics Agency (BPS, 2022) when viewed based on the highest education completed by the labor force, the Open Unemployment Rate (TPT) in February 2022 has a pattern that is almost the same as February 2021. In February 2022, TPT from vocational high school (SMK) graduates is still the highest compared to other education level graduates, which is 10.38 percent. While the lowest TPT is in elementary school education (SD) and below, which is 3.09 percent.

Disas (2018) explain with a case study approach (*Case Study*) regarding *link and match* as Government policy is expected get Being a solution to the problem of unemployment that is increasing today. Competence of skilled and dexterous SMK graduate students still has to be improved. The problems faced today, the demands of employment have not been fully accommodated by vocational graduates.

The job readiness of SMK graduates is still lacking so that there are still many who have not &get a job, this thing*∞ allegedly because the gap between the skills possessed by7 Alumnus 6with Skills needed in the world of work%. Azman, Ambiyar, Simatupang, Karudin, and Dakhi (2020b) Strengthening the same thing in his research, that policies are needed that can increase relevance and can be a solution to the problem of unemployment, namely by ®link and match between SMK and$ necessity 4World work, business and industry. 0Things it is aligned as expressed by Putranto (2017) In his research, he stated that cooperation between vocational schools and the world of work can be effective if it can produce standards 'The competence of education graduates is the same as the competency standards" that industry and the

world of work want. The indication is the level of work absorption. Research findings Putranto (2017) This is in tune with the data feed /from the Central Bureau of Statistics (BPS) on ?unemployment rate span of years} 2017 to~ 2020 which explained that the highest contributor to unemployment in Indonesia is still dominated by vocational graduates.

Hussein (2019) revealed that ideal policies in order to develop long-term strategies involving various competent parties in overseeing the clarity of the implementation of cooperation between the world of work and vocational schools must be designed. While according to Anisah, Triana, and Sutisna (2020) has found problems in industrial work practice activities that have been running at this time, detected not maximal provision of attitude values to students, lack of *Monitoring* By the accompanying teacher, the lack of contribution from the industry during the span of the Prakerin program.

Carlson (2020) Exposing vocationalism has conditioned society towards the disposition of education as a social commodity for the development of human capital. This research explores the importance of vocational education in overcoming unemployment through critical-historiographical case studies of educational reform during the progressive era. The study's findings are emerging tensions between vocational schools and academic education, the ideology of altruism in response to economic downturns, grassroots reform discourse, and the emergence of egalitarian democratic education aimed at developing youth in preparation for employment.

Widarto, Pardjono, and Widodo (2012) According to him, there is still a gap between SMK and industry, where SMK emphasizes the quality of its graduates in aspects of knowledge and skills (*hard skills*), while the industry prioritizes more on! attitude aspect (*#soft skills*). Aspects $hard skills These include: **information/digital literacy* and *technological skills^*. While aspects *soft skills* Include Communication skills, critical and creative thinking, inquiry/reasoning skills, interpersonal skills, multicultural/multilingual literacy*% skills, and problem solving skills*

Usman and Darmono (2016) through *Research and Development Agency (Balitbang) of the Ministry of Education and Culture (Kemendikbud) in8 His article entitled Future Vocational Education said that, there are several Problems related to vocational in SMK at this time, including the mapping of the development of the latest vocational schools are still not stable, improving the quality of SMK by increasing the establishment of vocational schools will only increase the number of unemployed, moreover the amount of state financial expenditure will swell. Some of the problems are, the relationship *]link and match]* can't yet {running effectively, prakerin duration 9yang only Three months is felt by the industry to be too short, the industry as a prakerin place that meets the qualification standards is still difficult to obtain, there is still a lack of entrepreneurial spirit from SMK alumnus, another problem that is no less critical is that the partnership program is felt for partner industries to be only troublesome, the indication is that the industry is afraid of tools being damaged and materials being wasted during prakerin, then high school graduates are more acceptable to the industry than SMK alumni because *attitude* better, therefore the highest number of educated unemployed is detected from SMK graduates, the skills obtained by graduates during school in SMK are not as needed by industry.

Based on some of the descriptions mentioned above, there has been no research related to the quality of cooperation itself and its impact on the quality of expertise competencies in a vocational school. There is still a need for related data on how well the quality of this cooperation in reducing unemployment in Indonesia. Research on the quality of %cooperation between SMK and the world of work and its 5 impacts is very important 5 to do, because it will affect the quality of a skill competency. It is hoped that 'the results of this research can provide' insights that are used as a reference in improving the quality of expertise competencies in SMK, !' as a thought material in developing policies for the advancement of vocational education and contributing to reducing the unemployment rate in Indonesia.

The objectives to be achieved in this study are (1) analyzing the quality of expertise competence of SMK Muhammadiyah 1 Surakarta in collaboration with Astra Honda Motor, (2) analyzing the impact of cooperation, and (3) analyzing factors that affect the quality of cooperation between SMK Muhammadiyah 1 Surakarta and Astra Honda Motor.

METHOD

The method used in this '°research is qualitative research method, as described by Creswell (2015). The process in research is `°Ask^ questions and procedures, collecting data from participants, inductively analyzing data ranging from specific themes to general themes, and interpreting`° data. Aim to `°Finding traits and phenomena in one category, then researchers look for correlations between phenomena by comparing differences or similarities in the properties of various symptoms found`°, Hardani *et al.,* (2020). Then the final result will be obtained in the form of forming a theory of classification `°symptoms that have similar properties and make generalizations`°.

The study was conducted from August to November 2021 in '°SMK' Muhammadiyah'° 1 Surakarta which is located at Jalan Kahayan Number 1, Joyotakan Village, Serengan District, Kota'° Surakarta, on the competence of Motorcycle Engineering and Business (TBSM) expertise in collaboration with PT Astra Honda Motor (AHM). The

population of this study is all members of the academic community`° TBSM SMK* Muhammadiyah 1 Surakarta. '°Technique'°*purposive sampling*'° used in sampling with consideration or `°criteria with a specific purpose Creswell (2015). In accordance with this understanding, in order for the central phenomenon to be easily understood, the individual and the place of study are determined first.

Participants and research sites were conducted at SMK Muhammadiyah 1 Surakarta. Meanwhile samples are taken in`° This research includes: the principal of SMK Muhammadiyah 1 Surakarta, vice principals in their respective fields, namely the field of K'°kcurriculum, student affairs, facilities and infrastructure and public relations, four heads of expertise competencies, poductive teachers, class XII students of the four '°competence' °expertise which is at SMK Muhammadiyah 1 Surakarta. There are 15 productive teachers and 146 class XII students '√at SMK Muhammadiyah 1 Surakarta as a sample '√in This research will be applied `√data saturation. Saturation`√ Data is a condition where the data obtained no longer gets an addition`√ Information Although there are new cases, this happens because`√ There is a saturation of information. Each subsequent addition of the case will provide an additional`√ `√Less information `√than the previous case. If cases are added continuously, then the addition of cases will reach a point`√ saturation (saturation), `√marginal benefits of information that can be provided from case additions `√next equals zero Gentles, Charles, and Ploeg (2015). How large the sample needs to be to allow identification of a consistent pattern, becomes the sample size that will achieve saturation or redundancy, he added Kusumastuti and Khoiron (2019).

Data collection techniques used in research are interview techniques and document studies. The instruments used in this study were using documentation and interviews. Documentation is needed to obtain data such as guidelines for the implementation of PT* Astra Honda* ® ® Motor (AHM) assisted classes, industry lists, lists of students and supervisory teachers, lists of workshop equipment and other data needed in research. Interview guidelines ®are used as a reference when conducting interviews with the aim of obtaining data from resource persons during the implementation of the PT Astra Honda Motor (AHM) ® assisted class program. For this reason, it is necessary to have a *®grid of interview guidelines, the grid is used as a guideline to collect ®*data in research.

Table 6.1≤* *Grid≤* Interview Guidelines*

No.	≤*Indicators
1.	School policy≤* on the implementation of≤* industrial classes. Compatibility of the school curriculum with the needs of the world of work.
2.	Preparation for recruitment of industrial/≤* class students assisted by PT Astra Honda Motor (AHM). Readiness of school infrastructure facilities in supporting the implementation of industrial/fostered classes≤* PT Astra Honda Motor (AHM).
3.	The learning process of industrial class / fostered ≤*PT Astra Honda Motor (AHM≤*). The process of implementing *the Teaching Factory* (TEFA) in the industrial/built class program. The process of implementing Industrial Work Practices (prakerin) in industrial/fostered class programs.
4.	Competence and skills of class ≤ *fostered' students of PT Astra Honda Motor (AHM). Impact, benefits and quality of industrial class / 'fostered by PT Astra Honda Motor (AHM).

Table 6.2≤* *Interview Guidelines≤**

No.	Aspects	Question
1.	Planning	Do the school's programs and policies support the cooperation between the school and industry partners? If so, how effective are the programs and policies that have been issued?
2.	Organizing	Does the school have a clear organizational structure to implement the policies that have been issued? Does the school discuss together the authorities, duties, responsibilities and funding in the implementation of industrial class programs? Does the school support in terms of facilities and infrastructure for the realization of industrial classes?
3	Implementation	Does the school set detailed standards for implementation, monitoring and evaluation of industrial class programs? Can the KBM (Teaching and Learning activities) process in the industrial class program run well at SMK Muhammadiyah 1 Surakarta?
4	Controlling	How does the school's program prepare students after graduation and ready for work? Is BKK (Special Job Fair) functioning properly in schools?

No.	Aspects	Question
5	Evaluation	Does the school communicate regularly with industry partners to conduct evaluations related to the implementation of industrial classes? What kind of evaluation does it take?

Analysis techniques*® The data used in this study is using the method *Thematic Analysis* *®for analyze data with the aim of identifying patterns or to find themes through data that has been collected by researchers*® with the following stages: (1) understand the data, (2) compile the code, (3) search for themes, (4) review*® theme, (5) define the theme, {(5) generate reports. according to Heriyanto (2018); (Braun & Clarke, 2006).

RESULTS AND DISCUSSION

The results obtained from respondents of the quality of expertise competence of SMK Muhammadiyah 1 Surakarta after collaborating with Astra Honda Motor as an industrial partner made SMK Binaan Honda experience an increase. Indicated in: industrial class learning process, prakerin implementation, *Teaching Factory* (TEFA), alumni recruitment by partner industries.

Industry-class learning process that has been implemented ≤*Learning Model *Problem≤* Based Learning* proven to have an impact on increasing character *soft skills* and *hard skills* from students (Hartati, 2022). Implementation of industrial work practices (prakerin) in industrial classes according to Usman and Darmono (2016) that, prakerin becomes a mandatory activity for students to improve quality when graduating from SMK. (Septiana &; Indriayu, 2018) Adding the results of his research that, prakerin is part of the implementation of *link and match* industry and the world of work. Provision of attitude values to students, *Monitoring* by accompanying teachers, and the contribution of the industry during the span of the prakerin program must be carried out optimally so that skilled, reliable and work-ready vocational graduates can be produced.

On the other hand Ministry of Education and Culture (2021) also supports the statement that, the form of collaboration of SMK≤* With the world≤* work is not only in the form of an agreement outlined in the form of a memorandum of understanding, but is maximized in the 8+I program where one of the applications is Prakerin.

Casmudi, Sugianto, and Maulida (2020) In his research, *Teaching* Factory (TEFA) as a synergy-based learning model between SMK and industry, namely aligning the competencies achieved by students to match the demands of the growing industry in schools. This is in accordance with previous research by which explained that the SMK revitalization steps formulated by the government are trying to make ≤*SMK to be able to ≤*Take an active role as ≤*mover ≤*local economy (Khurniawan, 2018).

Based on the findings of the research results, it can be summarized related to the recruitment process of new students in industrial classes, namely, already has a good process flow, easy to do by the organizing committee and easy to follow by prospective new students. With the presentation of the company profile at the beginning, namely during the presentation to Junior High School (SMP), it will make understanding for prospective new students, if they later pass and are accepted in industrial classes and study for three years then graduate and will be absorbed to work in the company β'the β' corresponds to talents and interests of students. Learning in SMK can begin after β`class β` Industry is formed. β`It starts with acceptance β` new students (PPDB) accompanied by exposure to partner industry company profiles followed by tests β`Basic knowledge, tech aptitude and interest, medical tests β'and Psychotests in accordance with β`standard. The results of the selection will be conveyed to prospective new students, Hadam *et al.,* (2017). (Suyetno &; Nurmalasari, 2021) explained that the right solution for the current era for teaching education in SMK is to cooperate with industry by supporting the realization of SMK PK by paying attention to three important aspects, namely 1) human resource readiness, 2) infrastructure readiness, 3) management readiness. The ultimate goal is the creation of skilled labor as a fulfillment of industrial needs and the reduction of unemployment in Indonesia from vocational graduates. The impact arising from the cooperation between SMK Muhammadiyah 1 Surakarta and Astra Honda Motor can be analyzed from the following: kSchool policy on the implementation of industrial classes, the suitability of the school curriculum to the needs of the world of work, readiness of school infrastructure facilities in supporting the implementation of industrial classes.

Policy making to cooperate with the industrial world is appropriate, this program is prepared as a collaboration between the school and the industry applied in learning in SMK as a contribution to the development of education programs. Cooperation between vocational schools β'with Industry and the world of work aim to produce graduates who are ready to work with indications of having skills, professional attitudes and life skills so that they are able to work with income to survive, said Usman and Darmono (2016). Putranto (2017) He explained that the cooperation with the industrial world was carried out from the beginning when β`acceptance β'students new by providing socialization β`to prospective students related to the competencies needed by the industry, so that they will be identified and grouped to take majors in SMK

according to their talents, interests and the needs of the world of work. According to Asmuni, Sudirman, and Fahrudin. (2020) The implementation of School Based Management (SBM), namely planning, organizing, implementing and monitoring with the application of autonomy, flexibility, participation, transparency and accountability, is proven to be able to improve the quality of education and teaching in schools. This is reinforced by Djojonegoro (1998) That, the process of vocational education development so far must lead to quality improvement. This quality improvement can be seen from SMK which can produce graduates into skilled workers in their fields according to the needs of partner industries.

The results of the research presented describe that to be able to improve students' vocational competencies and the quality of expertise competencies, schools must collaborate with partner industries and carry out industrial class planning activities carefully. Therefore, curriculum synchronization is a mandatory agenda in planning an industrial classroom education model *(Industrial Education Class)* which will later be stated in the cooperation agreement/*Memorandum of Understanding* (MoU) by both parties. According to (Indriaturrahmi &; Sudiyatno, 2016), curriculum development is carried out in the form of curriculum workshops. In the development of the school curriculum, it is determined what kind of competencies are needed by the industry that will be taught to students. To achieve relevance to the needs of the world of work, the involvement of partner industries is needed. Hadam *et al.,* (2017); (Indriaturrahmi &; Sudiyatno, 2016) explain βb'that, curriculum validation by partner industries is considered important as a form of mutual ability in the cooperation agreement to prepare an implementative curriculum with the hope that the material needed by the industry can be taught to students while in SMK.

Ministry of Education and Culture (2021) conveyed, to be able to enroll in the SMK Center of Excellence program, the school must improve student practice facilities through renovation of learning rooms and procurement of industry-standard practicum equipment. Alwi, Sarbini, and Kohar (2021) conveyed that facilities and infrastructure are one of the educational resources that are very important to be well organized and an inseparable part of education management. Infrastructure facilities are one of the elements of education management that has an important role in the learning process. Infrastructure can be used to facilitate students' understanding of learning presented with the right learning facilities in the learning process to be more effective, fun and efficient.

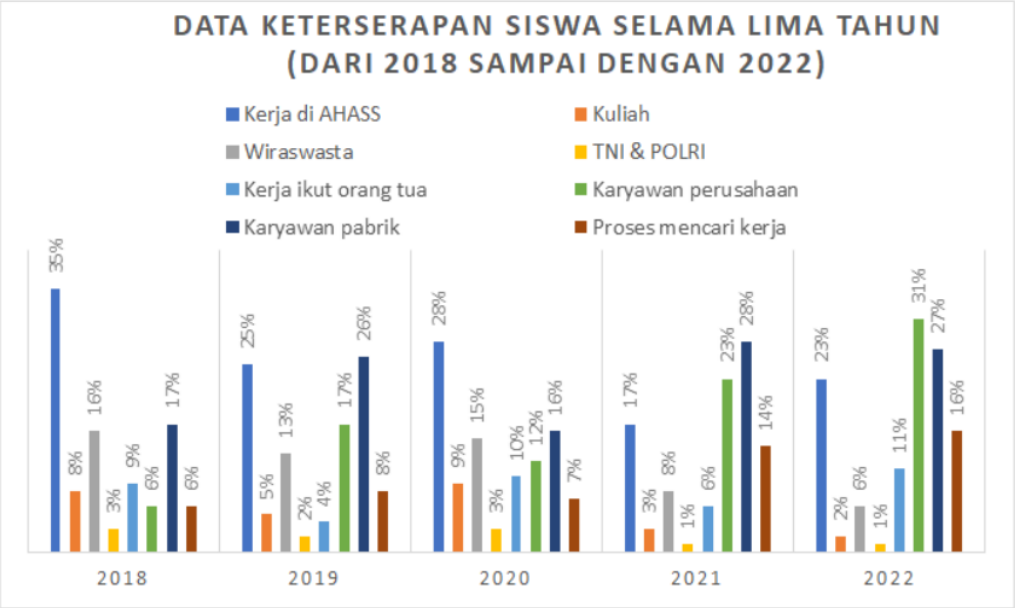
Factors that influence the cooperation between SMK Muhammadiyah 1 Surakarta and Astra Honda Motor can be analyzed from the following things: the competence and skills of industrial class students, as well as the quality of industrial class expertise competencies. Based on the findings of the research results, it can be described that after the school implements an industrial class program with partner industries and is implemented properly, it is proven that the competence and skills of industrial class students have increased significantly. Upgrading tools, technology, teacher training, student internships, industrial visits, prakerin and industrial culture that are applied in schools and managed properly have proven to have an impact on the TBSM industrial class at SMK Muhammadiyah 1 Surakarta is in grade predicate (Good). It is proven that the number of students entering TBSM *expertise competencies (input*) from the 2020/2021 school year to the 2022/2023 school year reaches in the range of 45.87% as filler students at SMK Muhammadiyah 1 Surakarta and almost 35% graduates *(output)* are accepted to work at AHASS Solo City and its surroundings.

According to (Made &; Novika, 2020) after the formation of the industrial class, it is hoped that SMK will lead to the formation of SMK Center of Excellence, because SMK PK is one of the priority programs of the Directorate General of Vocational Education (Ditjen Pendidikan Vocation) of the Ministry of Education and Culture in 2021. This program is an effort to develop vocational schools with certain expertise programs in order to improve quality and performance, as well as being a reference for other schools. The SMK Center of Excellence program carries the spirit of Independent Learning which focuses on strengthening human resources and bringing the world of education closer to the professional world, preparing strategy plans, implementing vision and mission implementation and evaluating effective activities efficiently achieving SMK Center of Excellence. SMK PK is one of the activities to achieve and meet the target of a SMK to become SMK PK. Research results (Mardi, 2021) in the Journal of Innovation and Academic Research entitled Improving the quality of Human Resources (HR) in the field of animation through the SMK PK (Center of Excellence) program said that the flow of globalization allows foreign workers to enter any country, including Indonesia. Level II workers at the level of SMK graduates are quite much needed by companies. These skilled personnel must be prepared from school, so that unemployment no longer occurs. A learning process that follows industry needs with a model *Project Base Learning* It is expected to be linear with the production process carried out by the company. SMK PK is required to strive to develop the performance and improve the quality of human resources in SMK through alignment partnerships with the business world and industry. The purpose of the program is expected to be that the human resources of SMK graduates are really ready to use / ready to work. Work done in industry is also taught and done in schools. It is supported by Afrita I., Imron A., and Arif A. (2018) In his research that the school's relationship with the business world and industry, with good and professional management management, will have a positive impact on improving the learning achievement of vocational high school students. One of the final estuaries of the establishment of industrial classes is that the competence and skills of students have increased. These two things become ≤*capital ≤*basis ≤*for students to look forward to the

future. The hope is that industrial class graduate students can apply three things, namely working in partner industries, can ≤*Forward≤* to a higher level of education and/or self-employment accordingly ≤*field in which it works.

Table 4.4: ***Data on Student Absorption of SMK Muhammadiyah '€ 1 '€Surakarta for five years (from 2018 to 2022)***

Year	Work at AHASS	Lecture	Self employed	Work in non-AHASS				Job search process
				TNI &; POLRI	Work with parents	Company employees	Factory employees	
2018	35 %	8 %	16 %	3 %	9 %	6 %	17 %	6 %
2019	25 %	5 %	13 %	2 %	4 %	17 %	26 %	8 %
2020	28 %	9 %	15 %	3 %	10 %	12 %	16 %	7 %
2021	17 %	3 %	8 %	1 %	6 %	23 %	28 %	14 %
2022	23 %	2 %	6 %	1 %	11 %	31 %	27 %	16 %



Empirical data on student absorption evaluation results *(assessment)* Performance of Motorcycle Business Engineering Expertise Competency (TBSM) SMK Muhammadiyah 1 Surakarta which is the Industrial Class of Honda-assisted SMK. The data describes, performance evaluations for five years from 2018 to 2020 show that the number of graduate students working at AHASS as a partner industry is still at a fairly good number. Robst (2017) explained that, education and teaching in schools are said to be successful if there is suitability as evidenced by the number of SMK graduates who are quite a lot needed by partner companies/industries. (Azman, Ambiyar, Simatupang, Karudin, &; Dakhi, 2020a) Vocational education cooperation with the world of work as a proportional program and policy as well as a means of reducing unemployment in a country.

CONCLUSION

Based on the results of the research and discussion that has been described, the following conclusions can be drawn:

The quality of expertise competence of SMK Muhammadiyah 1 Surakarta after collaborating with Astra Honda Motor as an industrial partner and the world of work has increased. Indicated in some of these things below: [1], the learning process of industrial classes is very influential on the formation of the quality of alumnus, students will later compete in the world of work. The formation of industrial classes can make students have superior abilities and skills in the world of work [2], the process of implementing Industrial Work Practices (Prakerin) in the Industrial / Fostered Class Program runs smoothly because it is well planned and managed, starting from mapping the AHASS workshop, student data collection and AHASS workshops that must be synchronized, handing over students to the workshop, monitoring and withdrawing students when they finish prakerin. After

going through this prakerin activity, it is hoped that prospective professional workers will be formed [3]. Teaching Factory (TEFA) in the Industrial / Assisted Class Program is a solution to overcome unemployment, especially SMK graduates is an integrated systematic concept starting from building partnerships between SMK and the world of work, developing vocational education facilities, developing the competence and quality of vocational teachers, increasing community participation and the world of work [4], the correct flow of the PPDB process at the beginning of the new academic year will get input in the form of qualified new students, exposure to company profiles at the beginning of the promotion will make understanding for prospective new students, if they later pass and are accepted in industrial classes and study for three years then graduate and will work in partner industries [5], appropriate school policy making will determine the development of educational programs in vocational schools in the future [6], curriculum synchronization is a mandatory agenda in planning *an industrial education class model which* will later be included in a cooperation agreement (MoU) by both parties, this will build a harmonious relationship between SMK and partner industries [7], readiness of school infrastructure facilities plays a vital role in supporting the implementation of industrial / assisted classes of PT. Astra Honda Motor (AHM) [8]. Student competence and skills have increased significantly, students become independent individuals, have a high work ethic, and have job readiness [9], anemo community has increased, as evidenced by the large number of prospective new students who choose TBSM with the number of incoming applicants almost 50% meeting the total number of students in the school.

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