# Absorption Of Inner Vocational High School Graduatesin The Business World, Industry and The World Of Work

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#### Abstract

Vocational High School as a level of formal education that provides special skills in preparing graduates to be ready to work. The unpreparedness of SMK graduates in doing work in the world of work has a domino effect on the user industry, because the industry must provide education within the industry to prepare its workforce. The research method used is quantitative research. The population in this study were graduatesEast Java School in particular SMKN 1 Magetan, SMKN 1 Geger Kab. Madiun and SMKN 2 Nganjuk as research locations because the three schools held industrial classes. The sampling technique in this study used non-probability sampling in the form of purposive sampling. The sample in this study was 110 respondents. The data collection technique used is a questionnaire.Data analysis technique used in this research is descriptive analysis with percentage technique. The results of the analysis of the absorption of graduates are seen from the number of graduates who are able to be absorbed in the world of work as many as 98 or 89% of graduates who are able to be absorbed in the world of work and 8 or 7% of graduates who have worked, and graduates who are unemployed as many as 4 people or 4%. This number can be said to be insignificant, but it could be enlarged if the competence of graduates is not increased to be able to compete in the world of work. Absorption of graduates seen from the type of work obtained in the world of work, the most are employees (others) with a percentage of 48%, while the positions/positions held by graduates are mostly as administrative staff with a percentage of 32.7%. The absorption of graduates is seen from the length of waiting time that requires a waiting time of less than 1 (one) year, with a percentage of 97.2%. while graduates who need more than 1 (one) year waiting time are 2.8%. The absorption of graduates is seen from the way to get a job, graduates get the first job vacancy information from other parties with a percentage of 25.5%. While the smallest percentage is teachers, which is 1.9%. Meanwhile, 62 graduates or 58.5% of graduates compete to get their first job by using a test or selection. As many as 30 graduates or 28.3% of graduates can enter the first world of work through an offer from the owner, or the owner's confidant. The implications of this research are expected to be able to provide input for schools and prospective graduates as material for consideration of improvements in the implementation of learning and/or distribution of graduates into the world of work. Graduates are expected to be better able to improve skills, interests, and have confidence, as well as motivation to have a suitable job. with competence; for example by participating in work internships, or increasing sharing/consultation, either with friends; alumni; as well as teachers. or increase sharing/consultation, either with friends; alumni; as well as teachers. or increase sharing/consultation, either with friends; alumni; as well as teachers.

Keywords: Absorption of Graduates, Vocational High School.

## I. Introduction

Vocational High School is a level of formal education that provides special skills in preparing graduates to be ready to work(Priambudi, Maheasy, & Susatya, 2020).Walter (1993)mentions that in the implementation of SMK, it must be more focused and directed to programs in order to lead and provide readiness for individuals to work. The resulting graduates can attract the stakeholders attention of in various fields(Mulder, 2020), the attraction is in the form of a workforce that is ready to use, in the sense that it can immediately work as expected and needed by the community, especially the business community, the industrial world and the world of work. The manpower needed by DUDIKA is qualified human resources according to their competence, skills, and high competitiveness. Thus, Vocational High School graduates are as key factors to improve or maintain the competitiveness of companies and the national economy(Rauner & Maclean, 2009)prepared to have expertise in accordance with the required skill competencies. Vocational High School has a vision to produce graduates who are ready to work. entrepreneurial, intelligent, competitive, and have national identity and are able to develop local advantages and can compete in the global market.

Vocational schools have an important impact on the sustainable development of a country. Vocational education is considered as a practical instrument in providing skilled workers to the labor market and increasing the ratio of profitable employment in human capital theory(Shavit & Muller, 2000). Priority vocational schools have a stronger relationship with the labor market in preparing students for immediate entry into the labor market after graduation. The results of a comparative study in England and Switzerland show that vocational school graduates are more profitable in terms of employment and income for all career fields(Korber, 2019). Although these countries have different vocational two education systems, vocational school graduates have better job opportunities than general academic pathway graduates, especially if both are not eligible to continue on to tertiary education.(Shavit & Muller, 2000).

Mane (1999)shows that vocational school graduates in America who are not tied to the need to continue their education at the college level, can work more successfully than high school graduates. In 2009-2018 the labor force participation rate and the employment opportunity ratio of vocational school graduates were quite high compared to general high school graduates. In addition, the unemployment ratio of vocational school graduates is relatively lower than that of general high school. Thus, vocational school graduates make more positive contributions to the workforce than general high school graduates(Özer & Suna, 2020). .

Indonesia, the success of vocational In education, especially SMK is measured by the number of graduates who can work at DUDIKA or become independent entrepreneurs.(Rojaki, Fitria, & Martha, 2021). However, in reality SMK graduates are graduates with the highest unemployment rates. Data from the Central Statistics Agency (BPS) the level ofUnemploymentOpen shows Vocational High School (TPT) is still the highest, reaching 11.13% as of August 2021. While in second place, TPT for Senior High Schools (SMA) is recorded at 9.09%. Furthermore, TPT for Junior High School (SMP) is 6.45%, University is 5.98%, Diploma I/II/III is 5.87%, and Elementary School (SD) is 3.61%. TPT at each level of education recorded a decline, except for elementary school graduates, which was stagnant when compared to August 2020 (year-on-year). SD TPT remained at 3.61% when compared to August 2020. At the SMK level, it was noted that TPT experienced the biggest decline compared to other education levels, which was down by 2.42% from the TPT figure of 13.55% to 11.13%. . In general, Indonesian TPT stood at 6.49% as of August 2021. This figure decreased by 0.58% from August 2020 TPT where male TPT was recorded at 6.74%,(Pahlepi, 2021).

With the unemployment problem, it shows that the low absorption of vocational graduates is caused by the impact of the industrial revolution, namely the skills possessed by graduates are not in accordance with what DUDIKA needs. The World of Business, the World of Industry and the World of Work (DUDIKA) prioritizes systems based on logical thinking skills, concept generation, creativity and innovation. In addition, there is a dominance of SMK graduates due to the policy on the proportion of the number of secondary schools where SMA is 30% and SMK is 70%. This condition underlies the President of the Republic of Indonesia, Joko Widodo, to issue Presidential Instruction (Inpres) Number 9 of 2016 concerning the Revitalization of Vocational High Schools in the Framework of Improving the Quality and Competitiveness of the Nation. This Presidential Instruction regulates the steps for revitalizing SMK, as follows: (1) Revitalizing human resources; (2) Building a School Administration System (SAS) based on a Management Information System (MIS); (3) Link and match with industry; (4) Industry-based curriculum; (5) Teaching factory; (6) Use of Video-Based Tutorial and Portfolio Media; (7) Professional Certification Test; (8) Fulfillment of facilities and infrastructure; (9) Developing Local Wisdom: (10) The Role of Vocational Schools as Drivers of the Local Economy(Indaryatno & Muchtar, 2019).

The labor market, which is dominated by automation and artificial intelligence in various industries, creates dynamic demand for skills, resulting in an imbalance in the labor market(Johansen & Gatelli, 2012). This labor market imbalance occurs because the needs of the labor market are not supported by human resources produced by education(CEDEFOP, 2015). The mismatch of skills possessed by the school graduate workforce ultimately increases the risk of unemployment(Özer & Suna, 2020).

The unpreparedness of SMK graduates in doing work in the world of work has a domino effect on the user industry, because the industry must provide education within the industry to prepare its workforce. Thus the industry must allocate extra costs beyond production costs. Actually, the industry and the school have their own limitations in forming and getting readymade workers. The school has limitations in financing and providing a learning environment, while the industry has limited educational resources to form the required workforce. Therefore, to get SMK graduates who are ready to use, both parties should make collaborative efforts,(Rojaki et al., 2021). There is a significant positive relationship between the number of projects implemented by the

European Union (such as Erasmus, eTwinning) implemented by vocational schools in the city center of Giresun Province, Turkey and the level of school effectiveness. This shows that partnerships with external parties provide positive changes to vocational schools in learning and teaching, innovation and new teaching methods, improving communication skills, cultural awareness and professional competence (Cakir & Kesme, 2018).

Vocational High Schools (SMK) which aim to be ready to enter the workforce, ideally, have expertise programs that are relevant to DUDIKA. However, the school finds it very difficult to adapt to DUDIKA, one of which is because the gap between industries is increasing. One of the efforts made by schools and industry in overcoming this is by forming an Industrial class. The establishment of the Industrial class is expected to produce students who have competencies in accordance with the standards required by industry in collaboration with schools.

The results of research conducted byWicaksono, Yoto, & Basuki (2017)states that one of the main agendas in the development of educational development is the development of the quality and quality of the curriculum. This is the basis for achieving qualified and competitive graduates and reaching national and even international scope. The tendency of Indonesian education to only produce graduates without paying attention to the details of the abilities of graduates has resulted in an increasing number of SMK graduates. In addition to graduates who do not work in accordance with the fields taken during school, graduates have to wait a long time to get these According toAzizah. Murniati. iobs. & (2015)stated that the Khairuddin. SMK program is a secondary education program in the form of strengthening vocational education with the aim of preparing graduates who do not continue to the higher education level to be better prepared to enter the world of work in accordance with the competencies possessed in their fields. And based on Government Regulation no. 19 of 2005 concerning the minimum provisions for formal education units in order to meet the desired quality of education. If the quality of an education is to be improved, it is necessary to improve the quality first, namely the curriculum.

Therefore, the curriculum applied in vocational schools is designed differently from that applied in general high schools(Ixtiarto & Sutrisno, 2016). Because it is focused on training students with certain occupational skills, the teaching materials for the learning system in vocational schools are more focused on things that are practical or the majority are related to psychomotor aspects. In an effort to maximize and guarantee the quality and quality of graduates, vocational schools have as early as possible brought their students closer to the world of work and industry through several programs that have been designed in the learning system for a certain period. However, with regard to ensuring the quality of graduates, vocational schools face many obstacles and challenges.

One way that can bring competence closer to DUDIKA's needs is to develop an industrial class program with a curriculum that is in accordance with DUDIKA-based needs. Based on the Regulation of the Minister of Industry (Permenperin) No. 3 of 2017. In Permenperin No. 3 of 2017 requires the role of industry in the implementation of vocational education to suit the needs of the industry. Therefore, competency-based vocational education is needed that links and matches with industry.

#### 2. Research Method

The type of research used is descriptive quantitative research. This study aims to find data, facts, descriptions/conditions regarding the absorption and relevance between competencies and the type of work that graduates are engaged in. Absorption of graduates in the world of work is a percentage of graduates who can enter and work in the world of work in accordance with the competencies that have been owned and studied in the vocational school.

The population in this study were graduates of SMKN in East Java, especially SMKN 1 Magetan, SMKN 1 Geger Kab. Madiun and SMKN 2 Nganjuk as research locations because the three schools held industrial classes. The sampling technique in this study used non-probability sampling in the form of purposive sampling. This is due to limited information or initial data owned by researchers and the wide distribution of graduate domiciles and by considering the research objectives based on predetermined criteria. Number of samples according toFrankel & Wallen (2019)sampling of at least 100 respondents for descriptive research already represents the population. So in this study using a sample of 110 respondents.

The data collection technique used is a questionnaire. The questions in this questionnaire are the types of questions that have provided alternative answers (closed) which include the Absorption of Graduates in the World of Work and the relevance of SMK competencies to the type of work involved.

Data analysis technique used in this research is descriptive analysis with percentage technique. Qualitative data derived from each item of the questionnaire instrument were scored to become quantitative data. After that, the quantitative data is given a percentage and consulted with the benchmarks that have been set.

#### 3. Research Results and Discussion

The absorption of graduates is seen from the number of graduates who are able to be absorbed in the world of work. The absorption of graduates is seen from the number of graduates. The results of the questionnaire are as follows:

Graph 1 of the number of graduates who are able to be absorbed in the world of work



Based on Graph 1 above, it can be seen that as many as 98 or 89% of graduates are able to be absorbed in the world of work and 8 or 7% of graduates who have worked, and graduates who are unemployed are 4 or 4%. This number can be said to be insignificant, but it could be enlarged if the competence of graduates is not increased to be able to compete in the world of work.

The results of this study are supported by the theory from the Ministry of National Education (2003) regarding the success of graduates. Judging from one aspect, graduates are said to be successful if "the absorption of graduates within a period of two years after graduation is at least 75%". This opinion is in accordance with the results of research, which shows the number of graduates who are absorbed in the world of work within a period of two years after graduation is 89%. Absorption of SMK graduates in the workforce is the level or percentage of success of SMK graduates to enter the workforce(Rakhman & Trihantoyo, 2020). This absorption can be seen from two different sides.Kagaari (2007)propose the concept of employability and absorbability. Manpower employability is whether or not graduates are able to enter the world of work in terms of the work ability of graduates, meaning that graduates are able to work / be employed (employable), because they do have the ability. Employability is a guarantee of the quality and skills of graduates to be employable. Manpower absorbability is a risk, meaning that whether graduates work or not is a risk of having or not having job opportunities. Graduates can work or not, determined by the available job opportunities.

This research is also strengthenedHidayati (2016)The absorption of graduates with a fairly high percentage is one of the goals of SMK, namely 40%-50% of SMK graduates have been ordered by the industry and 75% of SMK graduates have worked with a waiting period of approximately 2 years. However, the level of absorption itself is determined by the ability of graduates and the opportunity/opportunity to work. Thus, it can be said that absorption includes the percentage of SMK graduates employed at DUDIKA.

Absorption of graduates is seen from the type of work obtained in the world of work

Absorption of graduates seen from the type of work can be described in the following table:

Type of work	First Job		Last job	
	Frequency	Percentage	Frequency	Percentage
	(F)	(%)	(F)	(%)
Working	106	96.4	98	93.4
Unemployment	4	3.6	7	6.6
Amount	110	100	105	100
Table 3 Types of Graduate Jobs				

Table 2 Graduate Absorption

Type of work	First Job		Last job		
	Frequency	Percentage	Frequency	Percentage	
	(F)	(%)	(F)	(%)	
civil servant	2	2	6	6	
Businessman	3	3	2	2	
Private employees	31	29	43	44	
Other	70	66	47	48	
Amount	106	100	98	100	

Based on the results of the data above, it can be seen that the types of work obtained in the world of work are civil servants (initial percentage of 2% to 6%) and private employees

(initial percentage of 29% to 44%). Entrepreneurial jobs and other types of work (employees, coolies, laborers) have decreased. Types of entrepreneurial work decreased by 1%, while other types of work decreased by 18%. The last job column, there are 5 graduates who are no longer working because they are continuing their studies.

The types of work above are still divided into the category of position/graduate position in the workplace. Based on the results of these data, the positions/positions of graduates in the workplace can be seen in table 4 below:

Position/Position	First Job		Last job	
	Frequency	Percentage	Frequency	Percentage
	(F)	(%)	(F)	(%)
Saleswoman	30	28.3	10	10.2
Waitress	2	1.9	0	0
Factory workers	24	22.6	30	30.6
Administration staff	22	20.8	32	32.7
Other	28	26.4	36	26.5
Amount	106	100	98	100

Table 4 Position/Position of Graduates in the Workplace

The results of the data show that the number of graduates working in their last job is only 98 people, because 5 people choose to stop working and continue studying, while 3 people are unemployed. Position/position as a shop employee/salesperson became the highest position/position for the first job of 30 graduates or 28.3%. The position/position decreased by 18.1% in the last job. In addition to the position/position of a waitress, the position/position of a waitress also experienced a decline in the last job by 1.9%. While the position/position of administrative staff became the highest position in the last job with a percentage of 32.7% or 32 graduates who experienced an increase from the first job of 11.9%. In addition to administrative positions/positions, in the last job the position/position of factory workers also increased by 8% from the first job. For other positions/positions, such as operators, construction workers, staff, contract employees; In fact, the number decreased by 2 people, but in percentage terms it increased by 0.1%.

The absorption of graduates is seen from the long waiting time

The length of waiting time is the period each graduate has to get the first job after graduating from vocational school as follows:

	Table 5	Waiting	Time for	Graduates
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Time	Frequency	Percentage
	(F)	(%)
Less than or equal	94	88.7
to 4 months		
More than 4 months, less than or equal to 1 year	9	8.5
More than 1 year	3	2.8
Amount	106	100

Based on the table above, the grace period needed by most graduates to get a job is still under one year. However, in fact there are still graduates who have a long waiting period, which is above 1 (one) year.

In addition to the waiting period, the working period or length of work for graduates is also one aspect of the object of this research. The data was obtained from the results of the questionnaire data, which are summarized in table 6 below:

Time	First Job		Last job	
	Frequency	Percentage	Frequency	Percentage
	(F)	(%)	(F)	(%)
$X \le 6$ months	38	35.9	16	16.3
6  months < x < 1  year	17	16	28	28.6
x≥1 year	51	48.1	54	55.1
Amount	106	100	98	100

Table 6. Length of Employment of Graduates in the Workplace

Based on it, it can be seen that most graduates choose to stay or still feel at home working in one place. As for graduates who change jobs frequently, the percentage is not so much, but not too small.

The absorption of graduates is seen from the way to get a job

The process of getting a job cannot be separated from the graduates' efforts to find job vacancies. Information about job vacancies can be obtained from various sources. Research data regarding the source of information on the first job vacancies for graduates was obtained from the results of a questionnaire. The results of the data can be seen as follows:

Table 7 Source	s of Job '	Vacancies
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Source	Frequency	Percentage
	(F)	(%)
School/BKK	22	20.8
Teacher	2	1.9
Alumni	16	15.1
Print media	8	7.5
Electronic media	10	9.4
Friends/acquaintances	21	19.8
Other	27	25.5
Amount	106	100

Judging from the results of the data that has been obtained, it is known that graduates get information on the first job vacancies from other parties with a percentage of 25.5%. While the smallest percentage is teachers, which is 1.9%. Other parties referred to in table 7 are parties not listed in the answer choices, such as neighbors and family. Apart from being a source of information on job vacancies, graduates also have to take several ways to get a job. The ways taken by graduates to get a job can be seen in table 8 below:

Table 8. How to Get a Job

Method	Frequency (F)	Percentage (%)
Test/selection	62	58.5
Recommendations	7	6.6
offer	30	28.3
Other	7	6.6
Amount	106	100

Based on the results of these data, it is known that as many as 62 graduates or as many as 58.5% of graduates compete to get their first job by using a test or selection. As many as 30 graduates or 28.3% of graduates can enter the first world of work through an offer from the owner, or the owner's confidant. The smallest percentage is through recommendations (schools and workplace owner trusts) and others, namely without any process because they are directly put into the workplace by the respective owners as many as 7 people or 6.6%. Judging from the results of these data, it can be concluded that so far graduates have the competitiveness to get jobs in the world of work. This is evidenced by the most common method used by graduates to get a job, namely through tests or selections.

### 4. Conclusion

The results of the analysis of the absorption of graduates are seen from the number of graduates who are able to be absorbed in the world of work as many as 98 or 89% of graduates who are able to be absorbed in the world of work and 8 or 7% of graduates who are have worked, and graduates who unemployed as many as 4 people or 4%. This number can be said to be insignificant, but it could be enlarged if the competence of graduates is not increased to be able to compete in the world of work. Absorption of graduates seen from the type of work obtained in the world of work, the most are employees (others) with a percentage of 48%, while the positions/positions held by graduates are mostly as administrative staff with a percentage of 32.7%. The absorption of graduates is seen from the length of waiting time requiring a waiting time of less than 1 (one) year, namely with a percentage of 97, 2%. while graduates who need more than 1 (one) year waiting time are 2.8%. The absorption of graduates is seen from the way to get a job, graduates get the first job vacancy information from other parties with a percentage of 25.5%. While the smallest percentage is teachers, which is 1.9%. Meanwhile, 62 graduates or 58.5% of graduates compete to get their first job by using a test or selection. As many as 30 graduates or 28.3% of graduates can enter the first world of work through an offer from the owner, or the owner's confidant. Thus graduates still have the competitiveness to compete with many people in order to get a job. The absorption of graduates is seen from the way to get a job, graduates get the first job vacancy information from other parties with a percentage of 25.5%. While the smallest percentage is teachers, which is 1.9%. Meanwhile, 62 graduates or 58.5% of graduates compete to get their first job by using a test or selection. As many as 30 graduates or 28.3% of graduates can enter the first world of work through an offer from the owner, or the owner's confidant. Thus graduates still have the competitiveness to compete with many people to get jobs. The absorption of graduates is seen from the way to get a job, graduates get the first job vacancy information from other parties with a percentage of 25.5%. While the smallest percentage is teachers, which is 1.9%. Meanwhile, 62 graduates or 58.5% of graduates

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The implications of this research are expected to provide input for schools and prospective graduates as material for of improvements consideration in the implementation of learning and/or distribution of graduates to the world of work. Graduates are expected to be able to improve their skills, interests, and have confidence, as well as the motivation to have jobs that match their competencies; for example by participating in work internships, or increasing sharing/consultation, either with friends; alumni; as well as teachers.

#### References

- Azizah, Murniati, & Khairuddin. (2015). School Cooperation Strategy With Business And Industry (Du / Di) In Improving. Education Administration, 3(2), 148–158.
- [2] CEDEFOP. (2015). Work-based learning in continuing vocational education and training: Policies and practices in Europe. Luxembourg: Publications Office of the European Union. Cedefop research paper.
- [3] Frankel, JR, & Wallen, NE (2019). How to Design and Evaluate. Research in

Education. Boston: McGraw-Hill Higher Education.

- [4] Hidayati, A. (2016). Career Planning as a Form of Educational Investment for Vocational Students (Case Study at SMK Negeri 1 Batang). Journal of Social Science Education, 25(2), 1–10.
- [5] Indaryatno, A., & Muchtar, HS (2019). Management of Vocational High School Revitalization in an Effort to Improve the Quality of Graduates. Nusantara Education Review (NER), 2(3), 277–286.
- [6] Ixtiarto, B., & Sutrisno, B. (2016).
  Vocational High School Partnership With Business And Industry. Journal of Social Science Education, 26(1), 57–96. Taken from

https://journals.ums.ac.id/index.php/jpis/ar ticle/view/2130/1568

- Johansen, J., & Gatelli, D. (2012).
  Measuring mismatch in ETF partner countries: a methodological note.
  European: Training Foundation.
- [8] Kagaari, JRK 2. (2007). Evaluation of the Effects of Vocational Choice and Practical Training on Student Employability. Journal of European Industrial Training, 31(6), 449–471.
- [9] Korber, M. (2019). Does vocational education give a labor market advantage over the whole career? A comparison of the United Kingdom and Switzerland. Social Inclusion, 7(3), 202–223. https://doi.org/10.17645/si.v7i3.2030
- [10] Mane, F. (1999). Trends in the payoff to academic and occupation-specific skills: the short and medium run returns to academic and vocational high school courses for non-college-bound students. Economics of Education Review, 18(4), 417–437.
- [11] Mulder, M. (2020). Handbook of Vocational Education and Training. Handbook of Vocational Education and Training. https://doi.org/10.1007/978-3-319-49789-1
- [12] zer, M., & Suna, HE (2020). Türkiye'de Mesleki ve Teknik Eğitim ile Piyasası Arasındaki Bağlantı: stihdam ve Beceri Uyuşmazlığı. Kastamonu Eğitim Dergisi, 28(2), 558–569. https://doi.org/10.24106/kefdergi.704878
- [13] Pahlepi, R. (2021). The Open Unemployment Rate for Vocational High School Graduates. databox. Taken from

https://databoks.katadata.co.id/datapublish /2021/11/06/level-pengangguran-terbukalulusan-smk-paling-tinggi

- [14] Priambudi, P., Mahmudah, FN, & Susatya, E. (2020). Industrial Class Management in Vocational High Schools. Journal of Vocational Technology Education, 3(2), 15–25.
- [15] Rakhman, ML, & Trihantoyo, S. (2020). Increasing the Absorption of Graduates of the Multimedia Expertise Program at Smk Negeri 12 Surabaya. Journal of Educational Management Inspiration Volume, 08(03), 199–212.
- [16] Rauner, F., & Maclean, R. (2009). Handbook of Technical and Vocational Education and Training Research. Handbook of Technical and Vocational Education and Training Research. https://doi.org/10.1007/978-1-4020-8347-1
- [17] Rojaki, M., Fitria, H., & Martha, A. (2021). Management of Vocational High School Cooperation with the Business World and the Industrial World. Tambusai Journal of Education, 5(3), 6337–6349.
- [18] Shavit, Y., & Muller, W. (2000). Vocational Secondary Education, Tracking, and Social Stratification. New York: Handbook of the Sociology of Education.
- [19] Walter R., J. (1993). Machining fundamentals. Fundamentals basic to industry. South Holland: The Goodheart Willcox Company, Inc.
- [20] Wicaksono, DE, Yoto, Y., & Basuki, B. (2017). Implementation of the Industrial Class Curriculum at SMK Muhammadiyah 1 Kepanjen Malang Regency. Journal of Professional Education, 6(1), 156–165.