

IMPLEMENTATION OF TEACHING FACTORY (TEFA) IN AN EFFORT TO INCREASE THE COMPETENCY OF VOCATIONAL HIGH SCHOOL GRADUATES IN KARAWANG DISTRICT (STUDY CASE AT HUMAN VOCATIONAL SCHOOL TAZAKKA AND TECHNOLOGY VOCATIONAL SCHOOLS IN THE REGENCY KARAWANG)

MACHRUS ALIE ¹, SOBARI ², ENDANG KOMARA ³ and R. SUPYAN SAURI ⁴

^{1,2,3,4} Universitas Islam Nusantara, Bandung, Indonesia.

E-mail: ¹machrus.alie@uninus.ac.id, ²sobari@uninus.ac.id, ³endangkomara@uninus.ac.id,

⁴supyansauri@uninus.ac.id

Abstract

Government through Regulation President No. 41 of 2015 has organize alignment programs form Teaching Factory and Technopark. Teaching Factory also defined as “factory in school” or factory teaching. Policy administering this program required for fulfil achievements HR standards, in order to have skilled graduates in field certain, so the gap that occurs between quality graduate of with IDUKA needs during this can handled. Of course it is point press the success of this program is require he woke up collaboration with Vocational School Teaching Factory with government region, department education, society as well as IDUKA via agreed regulations and mechanisms in the MoU together. Teaching Factory is a learning model in vocational school based production or services that refer to standards and procedures applicable in the industry and are implemented in atmosphere as happens in industry. One of factor supporter implementation Teaching Factory in the environment school is existence of the Production Unit School or Service Agency Regional General Affairs (BLUD) in the environment school. Application to the Teaching Factory (TEFA) in schools expected can increase competence students, so for in the future school can produce power competent work in accordance with the field. Study this use approach qualitative ones are not look for because consequences, however done in a way intensive, detailed, and in-depth to something organization, institution or symptom certain. In study this , researcher try understand as well as study about Teaching Factory (TEFA) as a learning medium in effort increase competence graduate at Human Vocational School Tazakka and Technology Vocational Schools in the Regency Karawang through observation on -site directive research and interaction communicative with civitas academics and the community involved in it. Implementation Teaching Factory (TEFA) in increase competence graduate at Human Vocational School Tazakka and Technology Vocational Schools in the Regency Karawang Already implemented at Human Vocational School Tazakka and Vocational School of Technology, however Teaching Factory (TEFA) at Insan Vocational School Tazakka and Technology Vocational School Not yet walk in accordance with guidance issued Directorate.

Keywords: TEFA, Teaching Factory, Competency.

INTRODUCTION

Vocational education is education specially designed for prepare student enter the appropriate world of work with field expertise and develop attitude professional in the field his profession. School Intermediate Vocational (SMK) is one of them formal education at the level middle who prepares participant educate become power Work level hold back in field certain.

In article 15 of Law Number 20 of 2003 concerning system education national , explained that school intermediate vocational is education national , explained that school intermediate vocational is education middle who prepares student especially For Work in field certain.

Learning process in vocational schools must be reflects the habituation process work, fine attitudes, knowledge and skills in context environment Work real. Ideally the learning process in vocational schools should be: identical with conditions of the business world and industrial world (DUDI), so reality competencies taught in vocational schools will the same with competencies required by DUDI. With thereby participant educate will always do development for guard attitudes, knowledge and skills so that they always in accordance with development DUDI technology.

Government through Regulation President No. 41 of 2015 has organize alignment programs in the form of a Teaching Factory and Technopark. Teaching Factory is also defined as “factory in school” or factory teaching. Policy administering this program required For fulfil achievements HR standards, in order to have skilled graduates in field certain, so the gap that occurs between quality graduate of with IDUKA needs during This can handled . Of course it is point press the success of this program is require he woke up Vocational Teaching Factory collaboration with government region, department education, society as well as IDUKA via agreed regulations and mechanisms in the MoU together.

Teaching Factory is a learning model in vocational school based production or services that refer to standards and procedures applicable in the industry and are implemented in atmosphere as happens in industry. One of factor supporter implementation of Teaching Factory in the environment school is existence of the Production Unit School or Service Agency Regional General Affairs (BLUD) in the environment school.

Application to the Teaching Factory (TEFA) in schools expected can increase competence students, so for to the front school can produce power competent work in accordance with the field. Besides For print power competent work in the field, Teaching Factory (TEFA) is expected can grow attitude and soul entrepreneurship for student.

Create field Work for himself yourself and others or become a entrepreneur as well as become competent workers in their fields is criteria success from the Teaching Factory (TEFA) program. School Intermediate Vocational (SMK) plays a very important role in growing develop Teaching Factory (TEFA) activities , Teaching Factory (TEFA) can made as receptacle capable learning awaken Spirit businessman .

Based on matter the researcher interested for do study with title “Internal Teaching Factory Implementation (TEFA). Effort Increase Competence Graduate of School Intermediate Vocational Studies in the District Karawang (Study Case at Human Vocational School Tazakka and Technology Vocational Schools in the Regency Karawang)”.

RESEARCH METHOD

This research uses a descriptive method with a qualitative approach to explore implementation of teaching factory (tefa) in an effort to increase the competency of vocational school graduates in karawang district (case study at tazakka human vocational school and technology vocational school, karawang district).

Data Collection:

In-depth interviews with teachers and educational administration staff at schools to understand the processes, challenges and experiences related to teaching factory (tefa)

Direct observation of teaching factory (tefa) activities carried out by schools or partner companies.

The documentary study was carried out by analyzing policies, regulations, and reviewing data related to the teaching factory (tefa).

Data Analysis:

The results of interviews and observation notes were analyzed thematically to identify patterns, themes and main problems related to teaching factory (tefa).

Data from the documentary study were analyzed to understand the regulatory and policy context that influences the implementation of teaching factory (tefa) in vocational schools.

Data validation:

Triangulation of data sources in the form of interviews, observations and documentary studies. This is done to ensure the validity and reliability of research findings. Apart from that, discussions were also held with key informants and vocational education experts to test and validate the research findings.

RESULT AND DISCUSSION

Teaching Factory as a learning strategy own a number of objective. In paper published by the American Society for Engineering Education Annual Conference and Exposition, Alptekin, et al (2001: 1) states that objective teaching factory namely: produce graduates who are professionals in their fields, develop curriculum that focuses on modern concepts.

In the 2010-2014 Vocational School development roadmap (Directorate of PSMK: 2009), Teaching factory used as one of the models for empowering internal vocational schools create passionate graduates entrepreneurship and ownership competence skill through development cooperation with industry and entities relevant business . Besides That Teaching factory aim for increase quality learning through vehicle Study while doing (learning by doing). Learning with approach like this will grow entrepreneurial spirit.

Teachers and students in a way operational operate his task as implementation application standard decent work in the industrial world. Every students involved sued behave and appear professional to his job. Student yng involved in learning Teaching factory must wearing clothes

work already set. Student No permitted behave like joking on the spot workmanship product, out enter room without clear goals and others that are distracting comfort Work. By general learning model Teaching factory aim For practice participant educate in reach accuracy time , quality demanded industry , prepare participant educate in accordance with competence his expertise , imparting work straight away mentally For adapt in a way direct with conditions and situations industry , as well capable control ability managerial and capable produce product so those who have standard quality industry (Dadang M, 2011). Teaching Factory is a learning process in real situation For bridge gap competency between knowledge on the bench studying with needs of the industrial and business world aim For develop character and ethos work (discipline , responsibility answer , be honest , work same , leadership , character as well as increase quality results providing learning ability produce goods / services) (Polbangtan , 2019).

Teaching factory possible For Study produce appropriate items discipline knowledge and growth attitude professional in carry out various work, and improve creativity , competence and soul businessman . So that teaching factory give impact positive to participant educate. When the program objectives , curriculum and experience based place Work designed and implemented accompanied support adequate and evaluated staff with right , then Teaching factor in education vocational will give Lots benefit for institution education especially for graduates and industry (Gozali er al..2019). For discussion each instrument from implementation of the Teaching Factory at Insan Vocational School Tazakka and Technology Vocational School Karawang explained as following:

a) Internal Teaching Factory Planning Effort Increase Competence Graduates at Human Vocational School Tazakka and Technology Vocational School Karawang .

Teaching Factory planning is something approach integrated education learning at school with practice industry . With implementing Teaching Factory, vocational school students can get experience direct in context industry, improve competence them, and create they more Ready For enter the world of work. Teaching Factory Planning at Human Vocational School Tazakka and Technology Vocational School Already walk in accordance with applicable standards. Teaching Factory Planning at Human Vocational School Tazakka and Technology Vocational Schools in the Regency Karawang aim for integrate learning with experience industry to use increase competence graduate of. Approach This possible student For learn Skills relevant practical and theoretical with the world of work. Following is steps possible planning applied:

- 1) Analysis Need Industry and Profile Graduates : First steps is do analysis need industry local For determine skills and competencies required by companies in the District Karawang . Analysis this also helps in determine profile desired graduate.
- 2) Collaboration with Industrial Partners : Building partnership with company industry local For obtain support and input in Teaching Factory planning . Partnership This Can covers provision equipment , sources power , opportunity internships , and training for students and teachers.

- 3) Development Curriculum Based Industry : Developing curriculum that covers Skills relevant technical and soft skills with need industry . Curriculum This must covers learning based projects , simulations , and practice Work direct .
- 4) Enhancement Facilities and Equipment : Ensure that school own adequate facilities and equipment For supports Teaching Factory. This covers purchase machine , device software , and tools others as appropriate with field studies student .
- 5) Teacher and Teaching Staff Training : Teachers and teaching staff teacher need trained For teach in Teaching Factory environment . Training This Can involve learning technology latest , practice industry , and methods teaching based project .
- 6) Preparation of Internship and Practical Programs Work : Designing internship programs that provide chance for student For working in industry in period time certain . This program can do that too covers projects real information provided by partners industry For completed by students .
- 7) Evaluation and Bait Come back from Industry : Building system involved evaluation bait come back from industry For ensure that Teaching Factory is successful in increase competence graduate of . Evaluation This Can covers test skills , bait come back from company , and valuation project student .
- 8) Implementation of the Pilot Teaching Factory: Before implementation full , school can conducted a Teaching Factory pilot for test and improve the program. Stage This help identify challenge and do necessary adjustments .
- 9) Implementation Full and Monitoring : After the pilot stage , school can implement Teaching Factory effectively full . This must accompanied with monitoring periodically For ensure the program runs smooth and giving desired result .
- 10) Collaboration with Alumni and Society: Involving alumni and members people who work in industry For give insight and guidance to student . Collaboration This can strengthen network and deliver opportunity Work for graduate of .

With careful planning and a holistic approach, Teaching Factory at SMK Insan Tazakka and Technology Vocational Schools in the Regency Karawang can become effective tool For increase competence graduate, so they Ready For enter the world of work with relevant skills and knowledge.

b) Implementation of Internal Teaching Factory Effort Increase Competence Graduates at Human Vocational School Tazakka and Technology Vocational School Karawang.

Implementation of Teaching Factory at Human Vocational School Tazakka and Technology Vocational Schools in the Regency Karawang aim for combine learning academic with experience industry for increase competence graduate of. This create an environment that resembles the world of work real, so student can develop relevant skills with industry. Implementation of Teaching Factory at Human Vocational School Tazakka and Technology Vocational Schools in the Regency Karawang endeavor increase competence graduate of with

combine learning academic with experience industry practical. The goal is For ensure that student No only own knowledge theoretical, but also skills practically relevant with the world of work . Following is steps and approaches in implementation of the Teaching Factory for increase competence graduate of:

- 1) Collaboration with Industrial Partners : Teaching Factory implementation begins with build strong collaboration with company industry local . Companies This give input about skills and competencies required by industry , as well offer chance internship and practice Work for student .
- 2) Development Curriculum Based Industry : Curriculum at Human Vocational School Tazakka and Technology Vocational School designed based on need industry local in the District Karawang . This covers adjustment material lesson For reflect technology and practice latest in the sector industry . Curriculum based industry help ensure that student obtain relevant knowledge and skills .
- 3) Provision Facility Practical and Laboratory : Human Vocational School Tazakka and Technology Vocational School must own adequate facilities For support implementation of the Teaching Factory. This including laboratories , workshops and equipment used in industry . Facility This possible student For do practice and experimentation in safe and controlled environment .
- 4) Learning Based Project : One approach main in Teaching Factory is learning based project . Student Work in team For finish simulating projects real world situation . Approach This help student develop problem-solving, collaboration , and management skills project .
- 5) Internship and Practical Programs Work : Internship and practical programs Work is component key in Teaching Factory. Student given chance For working at the company partner during period time certain , usually during holiday school or end of semester. Apprenticeship This give student experience direct in environment Work industry .
- 6) Teacher Training and Guidance : Teachers and personnel teacher must get training For ensure they own appropriate skills and knowledge with industry . Mentoring from expert industry also helps teachers in teach Skills technical to student .
- 7) Evaluation Based Skills : Evaluation student in Teaching Factory is based on skills and competencies , right just on knowledge theoretical . Evaluation can covers projects , tasks practical , and bait come back from partner industry . Evaluation based Skills help ensure that student own required competencies .
- 8) Involvement Industry in the Learning Process : Representative industry can involved in the learning process , providing lecture guests , and give bait come back to student . Involvement This help student understand expectation industry and strengthen connection between schools and companies .

- 9) Soft Skills Development : Apart Skills Technically , the implementation of the Teaching Factory also focuses on developing soft skills such as communication , work team , and ethics Work . These soft skills are very important for success students on site Work .
- 10) Monitoring and Evaluation Sustainable : Implementation of the Teaching Factory requires monitoring and evaluation sustainable For ensure its effectiveness . School must Keep going monitor and adjust the program accordingly with need industry and feed come back from student as well as partner industry .

With steps This is the implementation of the Teaching Factory at Insan Vocational School Tazakka and Technology Vocational Schools in the Regency Karawang can succeed in increase competence graduates , help they become more Ready facing the world of work , and giving contribution positive for industry local . Close collaboration between schools and industry as well as support source adequate power become key success implementation of the Teaching Factory.

c) Evaluation of Internal Teaching Factory Effort Increase Competence Graduates at Human Vocational School Tazakka and Technology Vocational School Karawang.

Evaluation of Teaching Factory in effort increase competence graduate at Human Vocational School Tazakka and Technology Vocational Schools in the Regency Karawang covers various aspects that ensure this program effective and appropriate with desired goal. Evaluation this focuses on assessment quality learning, relevance with industry, and its impact on competency student. Evaluation this done through various methods and approaches for ensure that this program effective in reach objective education. Proper evaluation possible school for measure the extent to which the Teaching Factory program contributes to competency graduates and assess areas for repair. Following is ways evaluation done for objective this:

- 1) Evaluation Based Skills (Competency-Based Assessment): Assessment This measure Skills technical and practical knowledge obtained student during implementation of the Teaching Factory. Method This covers evaluation assignments , projects , exams practice , and tests competence . Evaluation This allows teachers to evaluate to what extent are the students has reach required competencies For industry .
- 2) Evaluation Continuous (Continuous Evaluation): Evaluation done in a way sustainable during the semester or year teachings . Teachers and staff teacher monitor development students and provide bait come back in a way regular . Evaluation this is also possible identification problems and solutions more beginning in the learning process .
- 3) Bait Come back from Industrial Partners : Working industrial companies The same with Human Vocational School Tazakka and Technology Vocational School give bait come back about performance student during the internship program or practice Work . Bait come back This covers evaluation to Skills technical , ethos work , and abilities student For adapt with environment industry.

- 4) Surveys and Interviews with Student can do survey or interview with student For gather bait come back about experience they in Teaching Factory. Survey This covers question about quality learning , relevance with industry , and the development of soft skills. Interview possible student For give bait come back in a way deep .
- 5) Evaluation Towards Teachers and Teaching Staff : Teachers and teaching staff teachers involved in the Teaching Factory is also evaluated For ensure that they give learning quality . Evaluation This covers observation class , assessment method teaching , and bait come back from student .
- 6) Curriculum and Facilities Audit : Evaluation This involve inspection curriculum and facilities used in Teaching Factory. School ensure that curriculum still relevant with need industry and facilities fulfil standard safety and quality . This audit help school guard program quality .
- 7) Placement Rate Work Graduates : One indicator The success of Teaching Factory is level placement Work graduate of . Evaluation This measure How many Lots graduates who get jobs in relevant industries and how much fast they get work after graduate.
- 8) Meeting with Parents and Stakeholders Importance : Evaluation is also carried out through meeting with parents students and stakeholders interest other . Meeting This give chance For get bait come back and discuss method For improving the Teaching Factory program.
- 9) Evaluation by Parties External : Inside a number of case , school involve party external or consultant For do evaluation independent . Approach This give perspective objective and helpful school identify areas for repair .

With use various method evaluation This is Human Vocational School Tazakka and Technology Vocational Schools in the Regency Karawang can ensure that Teaching Factory delivers benefit maximum for students and help they reach required competencies For success in the world of work . Effective evaluation is also possible school For Keep going increase program quality and ensure sustainability of Teaching Factory in period long.

d) Act Continue Teaching Factory Dalam Effort Increase Competence Graduates at Human Vocational School Tazakka and Technology Vocational School Karawang.

Act Teaching Factory continues in effort increase competence graduate at Human Vocational School Tazakka and Technology Vocational Schools in the Regency Karawang covers series planned steps For ensure that the program remains effective and relevant with need industry. Following is method follow carry on this done for increase competence graduate of:

- 1) Evaluation and Bait Come back Structured : Action process carry on started with evaluation structured towards the Teaching Factory program. Teachers and staff school gather bait come back from students , partners industry , and stakeholders interest other For evaluate program success and identify areas of need improved . Evaluation This can covers evaluation performance students , effectiveness method teaching , and engagement industry.

- 2) Analysis and Adjustment Curriculum : Data collected during evaluation used For analyze strengths and weaknesses of the Teaching Factory program. Based on analysis this school do adjustments to the curriculum For ensure that material learning and practice industry in accordance with development latest in the field technology and energy market needs Work.
- 3) Development Teacher and Staff Competency: Action carry on includes training and development programs for teachers and staff school . With enhancement competence teacher , school can ensure that they own knowledge and skills latest For supports the Teaching Factory program. Training This Possible involve participation in workshops, courses , or collaboration with partner industry.
- 4) Strengthening Partnership with Industry: Act further also includes strengthening connection with partner industry . This Can done through meeting routine , cooperation in project together , and involvement industry in program planning . With strong partnership , school can ensure that the Teaching Factory remains relevant and delivering experience practically useful for student.
- 5) Enhancement Facilities and Infrastructure: As part from follow go on , school review facilities and infrastructure that support the Teaching Factory. If necessary , repair or enhancement done For ensure that student own access to equipment and resources power required For study and practice with Good.
- 6) Collaboration with Party External and Consultants: Schools can also involve consultant external or expert education For get perspective independent about the Teaching Factory program. Collaboration This help school understand trend education latest and get advice about method increase program effectiveness.
- 7) Strengthening Internship and Practical Programs Industry: Act carry on covers strengthening internship and practical programs industry . This involve coordination with partner industry For ensure that student get experience practical , relevant and useful . Act further also helps school guard connection with company that provides chance apprenticeship for student.
- 8) Development Alumni Network: Another part of follow carry on is development alumni network . With intertwine communication with graduate , school can gather bait come back about experience them in the world of work and use information This For improving the Teaching Factory program. Alumni can do it too help in placement work and give guidance to student moment This .

With do follow carry on in a way comprehensive and structured, Human Vocational School Tazakka and Technology Vocational Schools in the Regency Karawang can increase competence graduate and ensure that Teaching Factory continues contribute to success students in the world of work. Steps follow carry on This help school guard quality education and permanent relevant in face change and development technology.

e) Obstacles in Teaching Factory In Effort Increase Competence Graduates at Human Vocational School Tazakka and Technology Vocational School Karawang .

Constraint or obstacle in teaching Factory you can influence effectiveness effort increase competence graduate at Human Vocational School Tazakka and Technology Vocational Schools in the Regency Karawang. Factors this can appear in various shapes and on various stage implementation of the Teaching Factory. Following is how a number of constraint or obstacle can hinder competence graduate of:

- 1) Limitations Facilities and Equipment : If Human Vocational School Tazakka and Technology Vocational School own limited facilities or existing equipment out of date, students Possible No get experience adequate practice . Limitations This can hinder hands-on learning , which is what Teaching Factory is all about .
- 2) Lack Source Power Humans : Lack of teachers with skill industry or staff supporter Can become obstacle significant . Teachers who don't own experience industry Possible No capable give relevant guidance for students , temporary staff supporters who don't adequate Can hinder operation daily .
- 3) Lack of Partnership with Industry : Teaching Factory requires strong partnership with industry . If Human Vocational School Tazakka and Technology Vocational School difficulty intertwine cooperation with company local or national , this Can hinder opportunity for student For do internship , practice work , or get experience industry other .
- 4) Limited Funds and Resources Power Finance : Implementation of the Teaching Factory requires investment significant in equipment , facilities , and teacher training . If Human Vocational School Tazakka and Technology Vocational School face limited funds, this Can hinder program development and updates necessary equipment For support learning based practice .
- 5) Lack of Support from Stakeholder Importance : Teaching Factory also requires support from various holder interests , incl government area , parents students , and community local . If support This less , school Possible experience difficulty in get source Power or necessary support For implement the program effectively effective .
- 6) Problem Curriculum and Schedule Learning : There are also obstacles appear If curriculum or timetable learning No give Enough room for Teaching Factory. Too much curriculum rigid or No flexible Can hinder chance for student For Study through practice . Besides that, if timetable learning No aligned with need industry , this Can reduce program effectiveness.
- 7) Problem Logistics and Administration: Teaching Factory involves complex coordination between schools and partners industry. Problem logistics, such as transportation student to place internships, and problems administration, such as arrangement timetable practice, you can hinder smoothness program implementation.

- 8) Challenge in Evaluation and Assessment: Effective evaluation and assessment is part important from Teaching Factory. If school face difficulty in collect data or evaluate competence students, this Can hinder effort For improve the program and ensure that student own required skills.

For overcome obstacle this is Human Vocational School Tazakka and Technology Vocational Schools in the Regency Karawang need develop a holistic and proactive approach. This including strengthen partnership with industry, allocate source adequate power, develop flexible curriculum, and ensure support from holder interest. With approach this is a problem or obstacle in Teaching Factory you can overcome for increase competence graduate of.

f) Solution of Obstacle in Teaching Factory In Effort Increase Competence Graduates at Human Vocational School Tazakka and Technology Vocational School Karawang .

This solution integrate experience practice direct and collaborative with industry For ensure that graduate of own relevant skills and ready Work. Following is a number of method How Teaching Factory solutions can help increase competence graduate at Human Vocational School Tazakka and Technology Vocational Schools in the Regency Karawang:

- 1) Learning Integration Practical in Curriculum : Teaching Factory solutions involve integration learning practical in curriculum . Student Study with do , use relevant equipment and technology with industry , and participate in projects that reflect real world conditions .
- 2) Cooperation with Industry : Teaching Factory often involve cooperation tightly with companies and partners industry . School Work together with company For develop reflective curriculum need industry and provide chance for student For get experience direct through apprenticeship or project industry .
- 3) Training by Practitioners Industry : In Teaching Factory, practitioners industry often invited For give training to student . This help student get outlook direct from experts industry and understand Skills as well as standards required in place Work .
- 4) Use Equipment and Technology Industry : Teaching Factory allows student For study and work with equipment as well as the same technology with those used in industry . This give student real and equipping experience they with Skills technical requirements For work in the field technology .
- 5) Evaluation Based Competency : Assessment in Teaching Factory tends to based competence , meaning student assessed based on ability they For apply knowledge and skills in context practical . This ensure that graduate of own competencies recognized by industry .
- 6) Learning Based Projects : Teaching Factory often involves learning based project , where students Work in team For finish project real . This help they develop Skills Work team , solving problems , and communication , which is important in the world of work .

- 7) Internship and Practice Work : One aspect important from Teaching Factory is provision chance apprenticeship or practice Work for student . This possible they For get experience in industry and building network with professionals .
- 8) Training Non-Technical Skills : Apart Skills technical , Teaching Factory also encourages development non- technical skills like communication , leadership , and management time . Skills This important For success in career and life professional .
- 9) Bait Come back from Industry and Alumni: Teaching Factory Solutions often involve bait come back from industry and alumni for ensure that this program Keep going relevant and fulfilling labor market needs . Bait come back This used For repair curriculum and activities practice .
- 10) Participation in Activity Extracurriculars : Teaching Factory also encourages participation in activity relevant extracurriculars with industry , like competition technology or exhibition innovation . This give student chance For hone Skills them and expand knowledge they .

With approach comprehensive this is a Teaching Factory solution at Technology Vocational Schools in the Regency Karawang can help increase competence graduate of so that they Ready For enter the world of work and succeed in career them in the field technology.

CONCLUSION

Based on results research and discussion, then can stated conclusion special study as following:

1. Teaching Factory Planning (TEFA) In Effort Increase Competence Graduate of School Intermediate Vocational includes : building a partnership between SMK and DUDI, development Vocational School Education Facilities , development Competency and Quality of Vocational Teachers , strengthening Participant Educate , develop the Teaching Factory Learning Model in Vocational Schools, improve Community Participation and DUDI,
2. Implementation of Teaching Factory (TEFA) in Effort Increase Competence Graduate of School Intermediate Vocational includes : vocational school conditioning , improvement of practice rooms / workshops - laboratories , determination Products – Teaching Factory Services, Learning models – training, resources Power Human (HR)
3. Teaching Factory Evaluation (TEFA) In Effort Increase Competence Graduate of School Intermediate Vocational includes : management , workshop – laboratory , patterns Learning - Training, marketing – Promotion , Products – Services, Resources Power Human (HR), Relationships Industry
4. Act continued Teaching Factory (TEFA) In Effort Increase Competence Graduate of School Intermediate Vocational includes : products and or Services , Learning models , Management , Resources Power Human , Relationship Industry , Information Product Goods and or Service

5. Barriers (TEFA) In Effort Increase Competence Graduate of School Intermediate Vocational includes : sources Power people , facilities and infrastructure , budget ,
6. Solution to Overcome Teaching Factory Barriers (TEFA) In Effort Increase Competence Graduate of School Intermediate Vocational includes : improving quality Source Power Humans , complete Facilities and Infrastructure , add budget For Teaching Factory (TEFA) needs .

References

- 1) Afrizal, 2015, Method Study Qualitative: A Effort Support Use Qualitative in Various Discipline Knowledge. Jakarta: Raja Grafindo Homeland.
- 2) Alptekin, SE, et al, 2001, Teaching Factory, Proceedings of the 2001 American Society for Engineering Education Annual Conference and Exposition, Cal Poly, San Luis Obispo.
- 3) Anonymous , 2017, Teaching Factory Technical Guide. Jakarta: Directorate Coaching School Intermediate Vocational.
- 4) Arikunto, Suharsimi, 2013, Procedures Research, Jakarta: Rineka Create.
- 5) -----, Suharsimi, 2019, Basics of Educational Evaluation, Jakarta: Earth Script.
- 6) Bali, MMEI, 2017, Interaction Model Social in Elaborate Skills Social , Pedagogical, 4, 2, July.
- 7) Directorate Vocational School Development, 2017, Technical Implementation Guidance 2013 School Curriculum Intermediate Vocational (Dynamics Development Curriculum School Intermediate Vocational, Java Middle: LPMP.
- 8) -----, 2017, Guidelines Drafting Secondary Education Unit Level Curriculum (KTSP). Vocational, Central Java: LPMP.
- 9) Djazari, M., Endra Murti Sagoro, 2016, "Evaluation Performance Study Continuation Program Students Studies Department of Accounting Education Reviewed from LPK D3 and Asala Higher Education", Indonesian Journal of Accounting Education, 9, 2, July.
- 10) Djojonegoro, Wardiman, 1998, Development Source Power Man via SMK, Jakarta: Jayakarta Agung Offset.
- 11) GB, 1968, Methods of teaching shop and technical subjects, New York : Delmar Publishing.
- 12) Gozali, et al, 2017, "Implementation of Teaching Factory Catering Services for Increase Student Entrepreneurial Competencies School Intermediate Vocational", Journal Social Humanities and Education, 2, 1, November.
- 13) Gunawan, Heri, 2014, Islamic Education, Theoretical Studies and Thought Figures, Bandung: Teenager Rosdakarya.
- 14) Hamalik, Oemar, 2002., Learning Process Teaching, Jakarta: Earth Script.
- 15) Handoko, TH, 2003, Management , Yogyakarta: UGM Press.
- 16) Hidayat, Dadang, 2016, Teaching Factory Learning Model for Increase Competence Student in Productive Subjects ", Journal Educational Sciences, 17, 4, February . 173
- 17) Ibsal, U., 2016, Teaching Factory, School Based Industry and Entrepreneurship, Bandung: Teenager Rosdakarya.
- 18) Idrus, Muhammad, 2011, Method Study Knowledge Social, Jakarta: Pustaka Raya.

- 19) Iskandar, Akbar, 2013, Development Device Evaluation Psychomotor in School Intermediate Vocational (SMK), *Inspiration: Journal Technology Information and Communication* , 3, 1.
- 20) Kurniawan, Rahmat, 2017, “ Influence Application of the Teaching Factory 6 Step Learning Model (TF-6M) and Achievement Study Entrepreneurship to Interest Entrepreneurship, *INVOTEC Journal*, 10, 1, February.
- 21) Kuswanto, Agung 2014, *Teaching Factory: Entrepreneurship Plans and Values*, Yogyakarta : Graha Knowledge.
- 22) Lestari, et al, 2016, " Effectiveness Implementation of Student Teaching Factory School Intermediate Vocational Schools (SMK) in Solo Technopark”, *Journal of Mechanical Engineering Education* , 3, 4, July.
- 23) Moleong, Lexy, 2006, *Method Study Qualitative* , Bandung: Pt Teen Rosdakarya .
- 24) Muhitasari, Reni, 2019, "Management Teaching Factory Learning For Increase Competence Entrepreneurship Vocational School Students”, *Seminar Proceedings* , Yogyakarta, 28 September.
- 25) Mulyadi, 2014, *Educational Evaluation*, Malang: UIN Maliki Press.
- 26) Nurwati, A, 2014, *Assessment Realm Psychomotor Student in Language Studies*, *Edukasi Journal Islamic Education Research*, 9, 2, March.
- 27) Prastowo, Andi, 2016, *Method Study Qualitative* , Jogjakarta: Ar-Ruzz Media.
- 28) Ryan, DC, 1980, *Characteristics of teachers. A Research study: Their description, comparison, and appraisal.*, Washington , DC: American Council of Education.
- 29) Siswanto, Ibnu, 2011, *Implementation of Teaching Factory for Increase Competence and Entrepreneurial Spirit Student School Intermediate Jurusan* , National Seminar 2011 Wonderful Indonesia.
- 30) Sobron , Sudarno, et al ., 2012, *Guidelines Writing Thesis*, Surakarta: Alfabeta.
- 31) Sudiyanto, Yoga Guntur Sampurno , and Ibnu Siswanto, 2017, *Teaching Factory at SMK St. Mikael Surakarta*, *Journal Plant Vocational* , 1, 1, March.
- 32) Sudjiono, Ana, 2013, *Introduction Educational Evaluation*, Jakarta: Rajagrafindo Homeland.
- 33) Sugiyono, 2015, *Understanding Study Qualitative*. Bandung: Alfabet.
- 34) Sukardi, 2015, *Evaluation of Educational Principles and Operations* 8th printing , Jakarta: Earth Script .
- 35) Terry R. and WL Rue, 2009, *Principles of Management (translation)* by GA Ticolu , Jakarta: Earth Script .
- 36) Wahyuni, Ni Komang Ayu, et al , 2020, " Application of the Teaching Factory Learning Model for Increase Activity Learning and Learning Results Students in Processing and Presentation Subjects Food ”, *Journal of Educational Media* , 4, 2, December .
- 37) Wibowo, 2007, *Performance Management* , Jakarta : PT Raja Grafindo Homeland .
- 38) Yunanto, Dwi, 2016, " Implementation of Teaching Factory at SMKN 2 Gedangsari Gunungkidul ”, *Vidya Karya Journal* , 31, 1, April.