

The Influence of Practicum Facilities to Support the Psychomotoric Ability of Students at State Vocational School (SMKN) 61 Jakarta

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Abstract

Vocational High School practicum facilities in Indonesia are currently supported by the integration of advanced technology. SMKN 61 Jakarta is a Central Vocational School of Excellence based on the Merdeka Learning curriculum which exists in the Maritime field. Psychomotor students of State Vocational High School (SMKN) 61 Jakarta have a flexible equivalent, adapted to learning methods that are deemed relevant. Student stimulants when absorbing the material provided, can be transformed in the form of cognitive assessments carried out in field practice. Students' motor skills and abilities are indicators supporting the hypothesis of the influence of practicum facilities. The school makes a policy for class XI students to carry out street vendors (Field Work Practices) with partners who have been determined based on ability classification. But the problems that occur, students are not able to apply their abilities to the fullest because the partners only provide a minimal and monotonous portion of work. This study aims to accentuate the influence of practicum facilities with advanced technology to support the psychomotor abilities of 61 Jakarta State Vocational High School (SMKN) students. This research method uses quantitative methods with data axioms in the form of numbers as outlined in the form of diagrams. The population in this study were all students majoring in Fishing Vessel Nautics (NKPI), Commercial Ship Nautics (NKN), Commercial Ship Engineering (TKN), and Marine and Brackish Fisheries Agribusiness (APAPL). Data collection techniques use primary data sources obtained by observing, interviewing, and questionnaires. The results of the study stated that 80% of students were satisfied with their understanding of the practicum facilities at State Vocational High School 61 Jakarta because they used the latest technology. It can be concluded, students psychomotor abilities are declared effective with the credibility of street vendors (Practice of Field Work) products.

Keywords: practicum facilities; technology; psychomotor; PKL (Field Work Practices); motivation

A. INTRODUCTION

Maritime Vocational High School (SMK) facilities are currently supported by the latest technology. The Merdeka Lecture Learning Curriculum (MBKM) makes the Center for Superior Vocational High School program by facilitating the school as a student foundation to encourage the flow of superior human resources (Sopiansyah et al., 2022). SMKN 61 Jakarta is a Central Vocational School of Excellence in the maritime field, which is equipped with a significant technological revolution as a provision for the world's maritime axis. The education adopted is based on cadetship in accordance with the vision it

has, to produce human resources with character and competence in the maritime field. The actualized learning method results from a combination of Project Based Learning (PjBL) and Competency Based Learning (PBK) because it has relevance to the cadet spectrum. Project Based Learning (PjBL) is a learning model that utilizes issues as the first step to obtain and combine new information, especially those based on real-life student experiences (Triana et al., 2022). The PBK learning system has benefits based on an education plan based on market needs, accreditation, transparency, and job analysis (Satibi, 2020). The learning materials received in class are then implemented with field practicums in laboratory facilities. So that the tendency of student abilities can be measured from skills and cognitive performance which refers to student psychomotor (Sofyan, 2019). Special areas of expertise possessed by students, will be channeled by the school in the maritime industrial sector after becoming graduates.

The results of the research referred to the article entitled "The Influence of Motivation and Utilization of Learning Facilities on Learning Achievement in Economics Class XI IPS at SMA Muhammadiyah 2 Surabaya", states that learning facilities partially do not affect student achievement. This is because students have a high fighting spirit in learning, so that they can achieve good learning achievements (Sunandi, 2013). This research contradicts the research we compiled, stating that facility qualifications are crucial and are able to dominate students psychomotor abilities in creating superior human resources with special skills. The analogy is if maritime vocational schools are not equipped with qualified technological facilities, the compatibility of the human resources in the maritime sector will be questioned. The essence of sophisticated technology is able to facilitate active students to explore specific abilities and skills, conversely if the facilities are not complete then the stimulants of students do not have causality with motor skills (Setiawan, 2020).

The psychomotor ability of students at SMKN 61 Jakarta has implications for the application of practicum facilities when carrying out street vendors (Field Work Practices), this is because the existing school bureaucratic principle is centralized. Students who have superior psychomotor abilities with maximum debriefing at school are unable to explore existing technology and resources available when carrying out street vendors. Students who are allegedly unable to improve existing skills in the partner environment. This problem becomes a record for a teacher to produce students who are competent in their field (Satibi, 2020). Classification of students' abilities and skills is optimized with synergy between teachers and students in mapping PKL partners (Field Work Practices), and being able to encourage student innovation to become superior resources in their fields (Sumirat et al., 2019).

This study aims to accentuate the effect of practicum facilities with advanced technology to support the psychomotor abilities of Jakarta 61 State Vocational High School (SMKN) students, based on experiments to build the significance of maritime development. A student is said to be successful in terms of motor skills seen when someone has received learning and has been assessed cognitively (Amaliah et al., 2014). Knowledge specifications can be operated on practicum facilities as a form of special skills that must be possessed to deal with field work practices (PKL) as school standards with vocational disciplines (Mujizah et al., 2020). Equipment in practicum facilities such as technology-based tools can be used for experimentation, so that connectivity between the use of practicum facilities and student psychomotorism, both when carrying out field practicums or field work practicums (PKL) can be implemented effectively. The results of

the study showed that there was a significant influence, supportive training facilities on students' psychomotor abilities (Hariyati et al., 2020). Based on the description above, the researcher is interested in conducting research with the title "The Influence of Practicum Facilities to Support Psychomotor Students at SMKN 61 Jakarta".

B. METHOD

This study uses a quantitative research method with data axioms in the form of numbers, aiming to test theory by analyzing numerical data presented in the form of diagrams (Kinanti et al., 2020). The diagram states the mapping data of employment practices (PKL) of students at SMKN 61 Jakarta, data on student satisfaction with practicum facilities, and data on students' psychomotor abilities. The population in this study were students of SMKN 61 Jakarta with a total of 76 students for the 2023 academic year, coming from the majors of Fishing Vessel Nautics (NKPI), Commercial Ship Nautics (NKN), Commercial Ship Engineering (TKN), and Marine and Brackish Fishery Agribusiness (APAPL). The sampling technique was carried out randomly using the proportional random sampling method based on the slovin formula with a 10% error margin, resulting in a sample of 62 students (Arieska et al., 2018). This study uses primary data sources obtained through observation, interviews, and questionnaires. Secondary data sources were obtained through the website of the SMKN 61 Jakarta school.

C. RESEARCH RESULT

The results of the study prove that SMKN 61 Jakarta has an existence in the maritime field, and is listed as a Central Vocational School of Excellence according to the Decree of the Director General of Vocational Education of the Ministry of Education, Culture, Research and Technology No. 26/D/O/2022 phase II. The education system here is based on cadetship with high discipline, with the aim of producing human resources with character and competence in the maritime field. The academic community carries out routine exploration of marine resources according to a level that supports the school's competence. Competency skills recorded include: Fishing Ship Nautics (NKPI), Commercial Ship Nautics (NKN), Commercial Ship Engineering (TKN), Marine and Brackish Fishery Agribusiness (APAPL) as majors of excellence. The following is a picture of SMKN 61 Jakarta cadets.



Figure 1. Cadets of SMKN 61 Jakarta
source: team documentation

Based on observations at SMKN 61 Jakarta, there are classrooms named after various kinds of fish, 2 computer laboratories, a biology laboratory, a library, a basement

for field practice, an office stationery storage room, and a field. Practicum facilities are used specifically by each competency expertise, sophisticated and up-to-date technology is considered sufficient to meet the world's maritime axis. The following is the classification of practicum facilities available at SMKN 61 Jakarta.

Navigation Laboratory

The navigation laboratory is a simulation laboratory for ship steering crew in navigational voyages. This laboratory is the prima donna room for the Nautics Department of Fishing Vessels, which has a function to improve students' understanding and competency skills which are equipped with advanced navigation tools. Inventory data for navigation laboratory rooms are recorded in BMN (State Property), among others : Iron filling cabinet, echo sounder, battery machine set/accu charger, big map, sextant, GPS receiver, SSB radio, VHF radio, morse keyer, handy talkie (HT), generator, radar beacon, magnetic compass, digital multi tester, parallel ruler , electric crabs, fire-resistant clothing, breathing apparatus, sonar, and other exploration aids. The following is an attachment to the navigation laboratory at SMKN 61 Jakarta.



Figure 2. Navigation Laboratory of SMKN 61 Jakarta
source: team documentation

Space Extend Map

The map prediction room is a special competency area for the expertise of the Fishing Ship Nautics (NKPI) and Commercial Ship Nautics (NKN) departments, which contains a collection of giant-sized sea navigation maps placed on the table. Before using technological facilities to determine sea maps, vital students study the basis of nautics by analyzing the projection of the earth off the sea and on the coastline. The marine chart used in the long run is updated at least once every 5 years. Graphical visualization of sea space is represented by students in the study of bathymetry, sea morphology, coastlines, language of navigation navigation, Navigation Assistance Facilities (SBNP), according to the provisions of Map No.1 released by the Center for Hydro and Oceanography of the Indonesian Navy (Pushidrosal). This activity is absolute in the world of nautics, with the ultimate goal of ships sailing safely and safely to their destination. This activity is absolute in the world of nautics, with the ultimate goal being that the ship sails safely and safely to its destination. The following tools are frequently used: marine charts, a pair of triangular rulers, rulers, pencil calipers, pinpoint calipers, protractor, 2B pencil and eraser (Yaimil, 2018). The following is an attachment to the long-term map of SMKN 61 Jakarta.



Figure 3. Future Space Map of SMKN 61 Jakarta
Source: documentation of SMKN 61 Jakarta

Fishing Equipment Laboratory (Fishing Gear)

The fishing equipment laboratory is a laboratory that facilitates conventional to modern fishing equipment that is environmentally friendly. The basis for using fishing gear here is based on the Ministry of Maritime Affairs and Fisheries Regulation No. 59 of 2020 concerning the use of prohibited fishing gear. Tools and techniques created based on the synergy between teachers and students. Fishing gear and fish resources which are the objects of productivity in this laboratory include: purse seine, gillnet, iron and wood traps. The consumptive pelagic fish resources are 1,800 pomfret, 200 grouper, lobster seeds, and tiger prawn seeds. The following is an attachment to the fishing gear laboratory at SMKN 61 Jakarta.



Figure 4. Fishing Gear Laboratory at SMKN 61 Jakarta
Source: documentation of SMKN 61 Jakarta

Fish Feed Laboratory

Fish feed laboratory is related to managerial feeding of fish, with predetermined formulations. The existence of a fish feed laboratory is crucial, because feed is a basic need for fish. Students are required to have the ability for proximate analysis, isolation and culture of natural food as well as making fish pellets/feed that can be used for research activities or service to the community (Primawati, 2022). The routines of students at SMKN 61 Jakarta are preparing fish pellets, routine scheduling of feeding, and skills in operating a pellet milling machine. The following is an attachment to a fish feed laboratory at SMKN 61 Jakarta.



Figure 5. Laboratory of Fish Feed SMKN 61 Jakarta

Source: team documentation

Hatchery Laboratory

The hatchery laboratory is a wet laboratory for aquaculture productivity, which contains freshwater fish ponds in the form of tubs with a diameter of \pm 3-5 meters. This laboratory is used by students majoring in Marine and Brackish Fisheries Agribusiness (APAPL) to carry out field practicums with major teachers. The hatchery laboratory is equipped with facilities that support water elimination such as: hose catheters, salinometers, pH meters, analytical scales, thermometers, oxygen cylinders, filter bags, and other analytical media. Cultivation activities are carried out starting from seeding, nursery, to enlargement. Data on activities that have been carried out include injecting hormones into catfish broodstock, stripping catfish, planting *Gracilaria* sp. seaweed species. The products in this laboratory are tiger prawns, catfish, clown fish and pomfret. The following is an attachment to the Hatchery laboratory at SMKN 61 Jakarta.

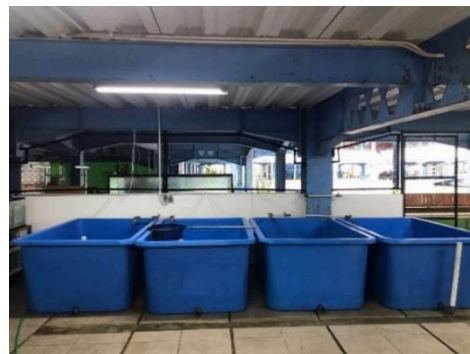


Figure 6. Hatchery Laboratory of SMKN 61 Jakarta

Source: team documentation

Floating Net Cage

Floating net cages are intensive aquaculture containers built by SMKN 61 Jakarta on the shoreline of Tidung Island, DKI Jakarta, about 3 km from land. Profit-oriented floating net cages, after students have carried out practicum with the teacher through hatchery to enlargement activities, the output will be sold to partners or fish auctions. Fish products cultivated include: lobsters, 1,800 pomfret stars, and 200 groupers. The technology used in this facility is qualified according to the standards set by the KKP. The technologies used include: cranes with mooring and anchorage systems, net cleaning monitoring systems, and sensors. The management of floating net cages is carried out simultaneously by teachers and students, the efficiency of fish rearing is already structural so that the economic value can be calculated directly. The following is an attachment to a floating net cage at SMKN 61 Jakarta.



Figure 7. Floating Net Cage SMKN 61 Jakarta

Source: team documentation

Ship Engineering Workshop Room

The ship engineering workshop is a dirty room or laboratory facility at SMKN 61 Jakarta, and is used by Commercial Ship Engineering (TKN) students as a practicum facility to support the manufacture, repair and maintenance of ships using machine technology according to standard analysis of practice space requirements in SNP (National Education Standards). The essence of an automated workshop is inherent in having to deal directly with heavy machining robots. Basic procedures to machine operating procedures are given by subject teachers and technicians with high flying experience. The tools available at the ship engineering workshop include: grinding machines, drilling machines, lathes, ship engines, compressor machines, vises, key tools, power blocks, and arc welding.



Figure 8. Ship Engineering Workshop of SMKN 61 Jakarta

Source: team documentation

Ship Engine Simulator Room

The ship engine simulator room is a room for students majoring in Commercial Ship Engineering (TKN) conducting visual nautical training, through ARI (Applied Research International) technology in Engine Room Simulator programming with international standards. The operating machine software used was issued by PT. Aman Rezeki Indonesia is based on the standard of the Minister of Education and Culture of Technology Research Regulation No. 1 of 2019. This computer is adapted to real conditions in the field, starting from conditions, situations, technical algorithms, machine programs, and machine button positions listed in the procedure book. The specifications contained in this technology are able to maintain safe (automatic) technician flight hours, use an internal communication system, operate and manage the main engine, operate and manage the fuel system; lubrication; ballasts; and pumping system. The following is an attachment to the ship engine simulator room at SMKN 61 Jakarta.



Figure 9. Ship Engine Simulator Room at SMKN 61 Jakarta
Source: team documentation

Barracuda Training Ship

The training ship is a motor boat facility (km) provided by the school as a student practicum boat, which includes: navigation, fishing, and handling of caught fish. The training ship for SMKN 61 Jakarta is named "Barracuda Motor Boat (KM)" because the shape of the ship resembles the torpedo body of this fish, with tough qualities measuring 10 GT. The ship's raw materials are made of teak and meranti wood, sturdy for up to 30 years. The barracuda boat can accommodate 15-20 people including the captain. The following is an attachment to a barracuda training ship at SMKN 61 Jakarta.



Figure 10. Barracuda Training Ship
Source: team documentation

The specifications of the training ship are fairly tough as a medium for training students at SMKN 61 Jakarta, equipped with 15 KVA ship ammunition, accompanied by navigation equipment which includes: VHF radio, fish fender, echosounder, GPS, navigation lights, and horn (horn). The following is an attachment to a fish finder belonging to SMKN 61 Jakarta.

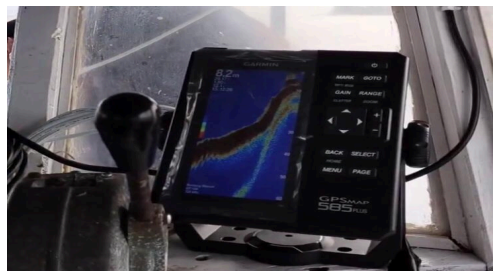


Figure 11. Fish finder
Source: documentation of SMKN 61 Jakarta

D. DISCUSSION

The results of the study stated that 70% of SMKN 61 Jakarta facilities used the latest technology as a center for supplying the world's maritime axis. Classification of students' abilities and skills is optimized with synergy between teachers and students in the mapping of street vendors partners. (Field Work Practice). Equal employment opportunities will encourage student innovation to become superior resources in their fields (Sumirat et al., 2019). The following is the mapping data for street vendors (Field Work Practices) for students of SMKN 61 Jakarta.

MAPPING DATA OF FIELD WORK PRACTICES (PKL) SMKN 61 JAKARTA

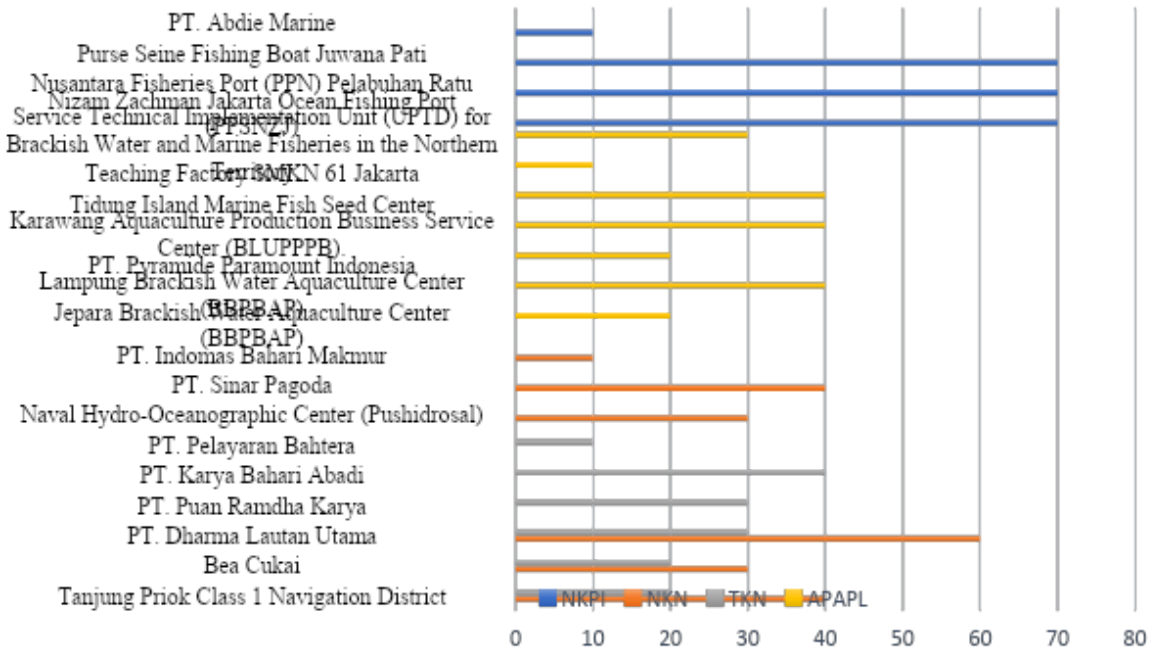


Diagram 1. PKL (Field Work Practice) student data at SMKN 61 Jakarta

The results of the study show that the mapping of Employment Practices (PKL) supports students' psychomotor abilities from existing complexities. The product produced by the teacher is in the form of a combined learning method of Project Based Learning (PBL) and Competency Based Learning (PBK), with the aim of increasing students' psychomotor skills from the material that has been obtained by actualizing it in the form of field practicums. Products and students, namely carrying out Field Work Practices (PKL), through attention to questionnaires on the use of existing practicum facilities at SMKN 61 Jakarta. The following is data on the influence of facility technology to support the psychomotor abilities of students at SMKN 61 Jakarta from an online questionnaire.

**QUESTIONNAIRE THE INFLUENCE OF FACILITIES
 TECHNOLOGY TO SUPPORT THE PSYCHOMOTORIC
 ABILITY OF STUDENTS IN VOCATIONAL HIGH SCHOOL
 (SMKN) 61 JAKARTA**

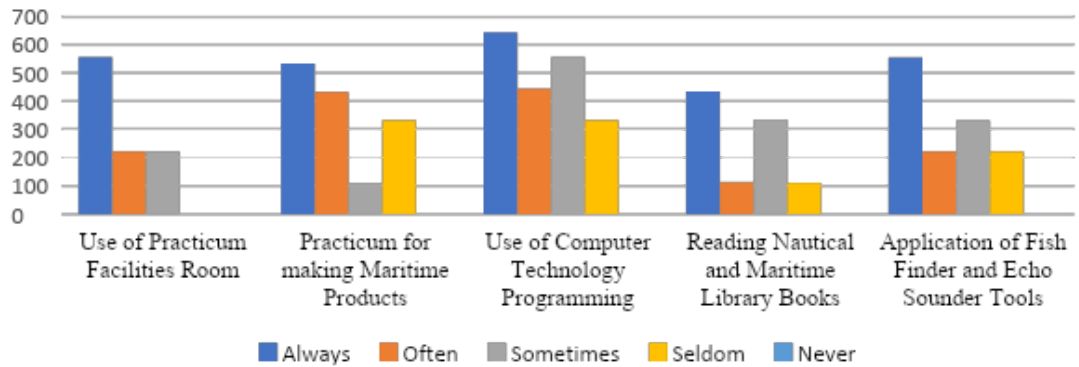


Diagram 2. Questionnaire Data on the Effect of Facility Technology on the Psychomotor Ability of Students at SMKN 61 Jakarta

The results of the study stated that 80% of students were satisfied with their understanding of practicum facilities at State Vocational High School 61 Jakarta because they used the latest technology with relevant learning methods.. A minority of 20% of students feel that they still have difficulties with the causality of psychomotor abilities, because several related agencies do not provide opportunities for students to explore existing technology and resources. Students are required to study independently with the provision of maritime abilities and skills. The school has increased credibility in the qualifications of students for the Professional Certification Institute (LSP) certification test with the competency "Cluster Scheme for Assembling and Maintenance of Various Fishing Gear" on the National Professional Certification Agency (BNSP) license. The following is an attachment to the Professional Certification Institute (LSP) certification image.



Figure 12. Certification of Professional Certification Institutions (LSP)

Source: team documentation

The results of the interview with the Head of the Fishing Vessel Nautical Competency Program said, "I hope that the Young Maritime candidates will be able to continuing studies in fields that have been practiced since Vocational High School with the hope of being able to go international on a higher and wider level, and being able to advance maritime affairs in Indonesia both in the fishing, aquaculture, economic and social sectors."

E. CONCLUSION

This study aims to concentrate the influence of practicum facilities with advanced technology to support the psychomotor abilities of students of State Vocational High School (SMKN) 61 Jakarta. The results showed a significant influence on the implementation of practicum facilities that support students' psychomotor abilities. The hypothesis states that students who have superior psychomotor skills with maximum debriefing at school, are unable to explore the existing technology and resources available when implementing PKL (Field Work Practice). The problem has been resolved with the mapping of SMKN 61 Jakarta students when carrying out PKL (Field Work Practice at related partners, with their abilities and skills. The results of the study stated that 70% of SMKN 61 Jakarta facilities use the latest technology as the world's maritime axis supply center, and are considered qualified. The research questionnaire analyzed 80% of students were satisfied with the understanding of practicum facilities at SMKN 61 Jakarta using the latest technology with relevant learning methods. Student psychomotor is considered optimal as a form of supporting practicum facility products.

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