

# Management Of Competency Test For Computer And Network Engineering Skills In Improving The Quality Of Graduates (Case Study At Qurrota A'yun Vocational School, Al Farisi Vocational School, And Maarif Vocational School In Garut Regency)

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## Abstract

This research is motivated by the policy of implementing the Expertise Competency Test for Computer and Network Engineering majors (UKK TKJ) at Vocational High Schools but graduates are less recruited by business and industry. The purpose of this study is to uncover and discuss the management of UKK TKJ in the aspect of (1) Planning, (2) Organizing, (3) Implementation, (4) Evaluation, (5) Obstacles, (6) Solutions, and (7) Graduate Quality. The theories used are G.R.Terry's management and Joseph Juran's quality. This research uses a qualitative approach with descriptive analysis method. The technique of data collection used by observation, interviews and documentation studies. The results of the study revealed: (1) Planning includes of the MoU drafting, preparing the committee, arranging external and internal examiners, verifying UKK participants, designing schedules, and preparing question packages; (2) Organizing includes assigning internal assessors, establishing partnership with external institution, and preparing competency test sites; (3) Implementation includes performance of the work and written tests, measuring the competence of assessees,

making assessment decisions, and reporting; (4) Evaluating is carried out by the principal as the program manager, the Head of the TKJ program as the chief executive, and the partner institution as the UKK assessor; (5) Constraints occur in the imbalance of the ratio of examiners to participants, and the limitations of external partnerships that are still limited to assessor personnel; (6) The solutions include integrated of curriculum cooperation and exam preparation standards; (7) The quality of graduates has met the competency standards, but there has not fully met the competency standards of industry needed.

**Keywords:** Expertise Competency Test, Computer and Network Engineering, Vocational High School, Graduate quality management

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## 1. Introduction

To prepare human resources that meet the needs of the national workforce, the country needs vocational education institutions. The educational process in vocational schools can implement a curriculum that maximizes skills education and job training in synergy and leads to the fulfillment of the competencies needed by graduates to compete in the world of work. This principle is stated by Carrol and McCrackin (1998) that competence must contain the core competency category, which is an advantage that adds competitiveness to competitors. Similarly, the government needs to have a skill education system that prepares people to work in business and industry.

SMK (Vocational High School) is among the educational units prepared by the government for vocational purposes. Law No. 20/2003 on the National Education System in the explanation of article 15 states: Vocational education is education that prepares students to work in certain fields. Then, the existence of SMK is further clarified in the Regulation of the Minister of Education and Culture of the Republic of Indonesia No. 34 of 2018 in article 1 paragraph 4, stating that SMK is a formal education at the secondary education level that organizes vocational programs, namely education that prioritizes the development of students' abilities to work in certain fields.

In reality, many studies have discussed the quality of SMK graduates and found problems. Among them mention that not all SMK graduates are fully absorbed in the

world of work, and that there are problems in the competence of the workforce of SMK graduates (Widodo, 2017; Ngadi, 2014). In another study, Sudira (2015) discussed SMK graduates as the largest contributor to the number of educated unemployed in Indonesia. The conclusion from the above studies is that the quality of SMK graduates has not yet become a productive workforce and does not hold sufficient competencies to be fully recruited by business and industry.

The problematic conditions of the last few years have not changed. Indonesia's Central Bureau of Statistics shows the 2019-2021 open unemployment data by Education Level, where it can be seen that Vocational High School education is the biggest contributor to the unemployment rate.

EDUCATION LEVEL	Open unemployment rate by education level		
	2019	2020	2021
Never been to school / Not yet graduated from elementary school	2.39	3.61	3.61
SMP (Middle School)	4.72	6.46	6.45
SMA (General High School)	7.87	9.86	9.09
SMK (Vocational High School)	10.36	13.55	11.13
Diploma I/II/III	5.95	8.08	5.87
University	5.64	7.35	5.98

**Table 1.** Open Unemployment Rate by Education Level  
(Central Bureau of Statistics, 2022)

SMKs need to have a graduate quality assurance system, in which there is a process of measuring qualifications and a certification process that students have specialized and have qualifications according to plan. Swanson (2019) explains that vocational assessment includes tests designed to measure work-related characteristics, such as interests, values, personality, skills, abilities, and self-efficacy. This means that to safeguard and ensure that prospective SMK graduates are ready to work, there needs to be measurements that are specific, flexible, and have high relevance to the tasks and expertise of the intended job.

In the regulatory standards of SMK implementation, there is already a quality control system for graduates called UKK (Skill Competency Test). In this UKK, prospective SMK graduates take a work competency test whose quality is guarded by the National Education Standards which leads to a competency certification process based on standards from BNSP (National Professional Certification Agency). Participants who pass this test then obtain a certificate of expertise according to the competency package they are participating in.

Although SMKs already have the UKK mechanism above, the reality shows that there are still many challenges and needs to improve the quality of SMK graduates in the future. Some empirical data from previous studies have also become consideration to

focus the problems that arise. Among them: Putri & Sunarto (2017) discussed the problem of the low quality of practicum exam equipment in SMK, and the lack of seriousness of SMK students in taking the exam; Suranto (2012) raised the problem of not synchronizing the competencies studied at SMK with the needs of the Business and Industrial world, and the problem of the lack of collaboration between schools and graduate users.

One of the many expertise programs opened in SMK is TKJ (Computer and Network Engineering), which is a department where students learn the skills of assembling computers, installing programs, maintaining and repairing computers and computer networks. Students are prepared to have expertise as computer technicians and network administrators in computer stores or services, offices, hotels, banks or ISPs at local and overseas levels. The TKJ department is very representative to be studied because it is one of the majors opened by many vocational schools.

The implementation of UKK TKJ in SMK can be seen using Terry's (1972) management theory, which is a distinct process consisting of planning, organizing, actuating, and controlling, performed to determine and accomplish stated objectives by the use of human beings and other resources. Others, if UKK TKJ is seen as a control mechanism for the quality of vocational graduates, it can also be seen as a PDCA/PDSA cycle of Joseph Juran (Defeo, 2019). Juran (Zamroji, 2020: 10) states that product quality is 'fitness for use' or suitability to meet customer needs and satisfaction. In the context of UKK TKJ in SMK, graduates must have appropriate rates, be skilled to be recruited by employers and industries, efficiently channeled from SMK to those who need graduates, and efficiently supported by SMK, so that the 'fitness for use' condition is achieved.

Finally, the big question here is: what is the planning, organizing, implementing, and evaluating in the implementation of the management of TKJ UKK? Examining the four management functions will allow the discovery of obstacles and then find options for improvement. Here comes the need for research that aims to reveal and discuss how the planning, organization, implementation, evaluation, constraints, solutions, and results of the implementation of the Computer and Network Engineering Competency Test at SMKs to prepare quality and competitive graduates.

As an initial overview, preliminary observations were made of the reality of the field in several SMKs that organize the TKJ UKK. Three of the many SMKs that represent the problem conditions in the Garut Regency area of West Java Province, and all three are very cooperative to be researched, namely SMK Qurrota A'yun, SMK Al Farisi, and SMK Maarif. This research is written based on the findings in these three locations.

## 2. Methodology

This research uses a qualitative approach with descriptive analysis methods to enable researchers to present descriptive data obtained from a phenomenon studied in the field. The research 'Management of competency tests for computer and network engineering skills in improving the quality of graduates' requires qualitative research, which among its characteristics according to experts (Sugiyono, 2019; Moleong, 2017; Lambert & Lambert, 2012) is that it contains natural inquiry without manipulation of variables, there is a role of the researcher as a key instrument, inductive and deductive data analysis is carried out, participant meaning, and uses various data sources. need to describe the data thoroughly and accurately. The type of case study was chosen considering Creswell (2007:73) that case studies allow researchers describes a case as 'a bounded system' (for one case) or 'multiple bounded systems' (for more than one). It means that case study research is compatible for research that has clear focus and boundaries to conduct in-depth exploration.

Data collection was conducted using observation, interviews, and documentation that supports field realities, such as: meeting resumes, assessment administration, decision letters, and video documentation, to activity reports. Primary data were obtained from the Head of the TKJ Department, the Exam Committee, and UKK assessors; secondary data were obtained from school documents, theoretical studies, and scientific articles. The locations of this research are three vocational schools in Garut Regency, West Java Province, namely SMK Qurrota A'yun, SMK Al Farisi, and SMK Maarif.

Data analysis uses descriptive qualitative analysis techniques interactive model (Miles, Huberman and Saldana, 2014), which analyzes data with three steps: data condensation, data display, and verification. Data validity testing was conducted using member check, source triangulation and technique triangulation.

### **3. Result And Discussion**

#### **3.1. Planning**

The initial planning of the Management of Competency Test for Computer and Network Engineering Skills (UKK TKJ) was conducted in a meeting with the school committee at the beginning of the academic year. The results of this meeting resulted in the formulation of an Annual Work Plan and a Medium-Term Work Plan, where the UKK TKJ is included in the School Activity Plan and Budget. This process, in Juran's management theory (Defeo, 2019), is the initial phase of Juran's trilogy and is the right step, i.e. management needs to start quality planning from the beginning, so that it will support quality control and quality improvement.

The objectives of the UKK TKJ activities at the three SMKs studied have been harmonized with Permendikbud Number 34 of 2018 concerning National Education Standards for SMK / MAK, namely to: (1) Know the level of achievement of learning outcomes/competencies of students; (2) Know the growth and development of students; (3) Diagnose students' learning difficulties; (4) Know the effectiveness of the learning process; and (5) Know the achievement of the curriculum.

More specific and detailed planning is then carried out in the second semester, by the UKK TKJ committee team. The activities include: 1) Designing a competency test program proposal; 2) MoU to be submitted to the LSP (Professional certification bodies) or assessors from business and industry; 3) Determination of assessment instruments; 4) Preparation of schedules and series of implementation; 5) Estimation of assessor needs.

The UKK TKJ assessor component has been planned to consist of internal and external examiners. Internal examiners are teachers of relevant productive content subjects who meet the qualifications set by BNSP (National Professional Certification Agency) and written in standard UKK Verification Instrument. External examiners may come from Professional Associations, from business and industry, or persons who have competency certificates and relevant work experience in the field of TKJ.

Also included in the planning of UKK TKJ in SMK is the determination of competency standards to be tested. The government through BNSP has provided a package of TKJ vocational exam questions in the National Competency Standards, which measure the dimensions of attitude, knowledge and skills. There are three choices of TKJ UKK question packages, the contents of which are concentrated on measuring competencies in the field of Computer Network Installation and configuration. The competency standard planning mechanism carried out by SMK is by analyzing and selecting one of the three choices of UKK TKJ instrument packages provided by BNSP.

Planning the qualifications of prospective graduates held by SMK is a process that in Juran's management theory (Defeo, 2019) is called Quality by Design, which refers to a process that is initiated by planning the development of products or services in the organization, which in this case is the TKJ skill competency. The planning process held early on, will allow SMK to design innovative design features in the form of skill standards that will be carried by graduates to respond to work needs, along with the features of the education process that SMK will use to realize the graduate design.

Consideration of the TUK (Competency Test Site) eligibility standards is carried out using instruments available in the question package from BNSP, This runs smoothly because it has been anticipated, namely the selected question package has been adjusted to the curriculum and the availability of practicum facilities at SMK. Determination of TUK eligibility is carried out through an audit by the school

supervisor. The results of the audit explained that the three SMKs studied had been assessed as feasible and were allowed to organize the UKK independently in the school environment, but were still advised to make minor facility improvements.

In the findings of the planning process, there are a number of planning indicators which include: (1) Formulation of goals, both vision, mission and objectives of the UKK activities, both long-term and annual goals; (2) Producing decisions and designs of actions and activities that will be implemented to conduct UKK according to predetermined standards; (3) There are details of the resources required and their sources of acquisition; (4) There is an implementation design related to scheduling and indicators to measure its achievement.

UKK planning with the components as detailed above can be considered to have met good planning standards and to have anticipated obstacles. However, the author did not see any involvement of external partners in the planning. Shermon (2005) states that the context of competence is essential in the initial process of selection and recruitment systems such as employee planning and placement; salary/wage payment; and employee quality and career development. In the context of this study, UKK planning is indeed the absolute right of schools not to be intervened by external institutions, but if SMKs are willing to open themselves up and involve partner institutions from the initial planning phase, it is possible to establish a more visionary partnership for the future of graduates.

### 3.2. Organizing

The principal acts as a general responsible person who oversees the entire management of the UKK TKJ. The role as chief executive is held by the head of the TKJ expertise program, his duties range from planning, implementing, to reporting activities. The officers under him are the UKK implementation committee consisting of several productive teachers in the field of TKJ. The organization of the roles and leadership of the UKK TKJ in SMK has been running, as seen from the understanding of the entire committee in their roles and duties, this is supported by their experience in holding UKK TKJ every year.

The selection of internal examiners is based on the following two things: (1) In accordance with the field of study taught by each TKJ productive teacher in class XII TKJ, and (2) Teachers who have held the title of TKJ competency test assessor, or school staff who have obtained a TKJ assessor certificate issued from BNSP.

Based on the provisions of the Directorate of Vocational Development, internal examiners are relevant productive teachers with a minimum teaching experience of 5 years and have work / internship experience in the industrial world and must have a competency test certificate / competency certificate from BNSP.

Regarding the presence/absence of partnerships with external parties in UKK, the authors found that the three SMKs studied had established MoUs with external parties. They mentioned that the condition of 'lack of teachers certified as UKK TKJ assessors' is still a description of the condition of SMK in general. This is the background for partnerships in the UKK, where SMKs make MoUs with external partners, especially to bring in assessors who are competent and authorized to issue TKJ skill certificates. There are differences in the partnership schemes chosen by the schools studied. SMK Qurrota A'yun and SMK Al Farisi have a partnership with the Second Party Professional Certification Agency (LSP-P2), namely with the industry from PT Integrasi Data Nusantara (ID-N); SMK Maarif has a partnership with LSP-P1. The different UKK Partnership schemes are allowed by the government, under the auspices of the Minister of Education Regulation No. 34/2018 on National Standards for Vocational/MAK Education and the Guidelines for the Implementation of UKK SMK 2023 published by the Directorate of Vocational and Vocational Education, where there are 6 options for UKK Implementation schemes. It is stated that in the implementation of the UKK, SMKs can choose one of the following 6 schemes: (1) Examination through the certification system of workplace partners or Professional Associations; (2) Examination through the First Party LSP (LSP-P1); (3) Examination through the Second Party LSP (LSP-P2); (4) Examination through the Third Party LSP (LSP-P3) or Skills Certification Institution (LSK); (5) Examination through the Competency Test Technical Committee (PTUK) according to regulations issued by BNSP; (6) Independent UKK.

The delegation of authority to partners from LSP-P1 is carried out through an MoU that has been prepared from the beginning and its contents contain the responsibilities, authority, and limits of partners in carrying out work. This has the impact of establishing a good working relationship between SMK and partner institutions, as Dessler (2017) states that activities will be carried out optimally if it is first outlined what each resource must do, how to do it, and under what conditions the work is done.

In the cooperation between SMK and the assessor from Industry (PT IDN), the industry acts as an external testing agency that assesses prospective SMK graduates, both through theory and practicum. The competency standards tested still refer to a package of questions that the SMK has chosen from the National Standards compiled by the central government. The IDN also issues a Pass or Competent certificate as the legality of the participants' graduation from the exam process tested by the IDN.

Preparation of examinees is also part of the organizing process carried out by SMK. The head of the TKJ department conducts socialization to students, including the technical series of activities to the implementation calendar. The certification body from the LSP or industry then opens registration for prospective assessors. This is not



much different from previous research (Setiawan, Widiyanti, and Sunomo, 2018) which explains that the preparation of the expertise competency test starts from the coordination meeting of all exam administrators, determining assessors through coordination with other LSP, duplicating Competency Test Materials (MUK), and verifying Competency Test Sites (TUK).

The entire series of organizing the UKK TKJ as above can be considered to have followed the BNSP guidelines No. 301 of 2013 concerning Guidelines for Implementing Competency Assessment which explains that personnel are individuals, internal or external, from certification bodies or institutions that carry out certification activities for these bodies or institutions. The indication is the formation of the UKK implementation team, the preparation of assessment tools, the preparation of examination venues and facilities, and the assignment of internal and external competency assessors.

The organizing management carried out by SMK in the management of the TKJ competency test above, starting from establishing a memorandum of understanding, mapping the committee, assigning assessors, and setting the authority of LSP and INDUSTRY, are all in line with Terry's management (1972) that organizing principles include managing the objective, departmentation, assigning the personnel, setting authority and responsibility, and delegation of authority.

### 3.3. Actuating

The principal led the opening of the UKK event, then supervised the course of the activity, until finally closing the UKK TKJ series. The head of the TKJ department led the committee in carrying out the entire series of UKK TKJ implementation and ensured that everything went according to plan. The entire committee has worked from preparation to making activity reports.

The competency test venue has been prepared by the committee. Starting from a comfortable room for participants, to seating that is arranged so that participants undergo UKK activities without any significant disturbances. The committee has also ensured that all examination tools and materials can be used and are in good condition.

The UKK implementation in the three research locations took place between March and April, not on the same date. This date difference is still in line with the provisions of the time for the implementation of the Expertise Competency Test (UKK) regulated by the government through the Guidelines for the Implementation of the Expertise Competency Test for Vocational High Schools for the 2022/2023 academic year, that the Independent UKK can be held between March 1, 2023 and the end of the 2022/2023 academic year. In principle, the date of the UKK implementation is planned so that students can obtain a certificate recognized by the business world right when needed,

which includes facilitating the employment interests mentioned above, while remaining in line with the provisions of the Expertise Competency Test held in the Garut Branch XI Service area as a substitute for the National Examination which will no longer be held.

Differences were also found in the question packets used. In locus one, the question package used was package 1, while the other two loci took package 2. This differentiation occurs based on the internal considerations of each SMK, namely the condition of the SMK organizing the exam, especially the condition of the available equipment.

The assessment by the assessor was carried out with the following steps: 1) managing the assessment environment; 2) collecting quality evidence in the implementation of the assessment both from observation and from the written test results of test participants; 3) completing the assessment administration; 4) providing feedback to the assessor; 5) making competency assessment decisions, and; 6) reporting the results of assessment activities. Using Joseph Juran's management theory (Defeo, 2019), the implementation of assessment in the UKK is a form of quality control, specifically control in the form of inspection of existing conditions (detection control), and supported by "reliability" control where quality tests are applied through measurement.

### **3.4. Controlling**

Controlling in the Management of Computer and Network Engineering Expertise Competency Test at SMK has been carried out through internal supervision by the Principal and Kaprog, and external control by the Education Office through the Supervisor. Likewise, partner institutions as assessors also supervise and evaluate the implementation and partnership in UKK. The aspects evaluated generally include discipline in attendance, punctuality, completeness of competency test instruments, and reports on the completion of the UKK implementation.

The scope of the evaluation of the UKK TKJ in SMK consists of an evaluation of the series of UKK implementation, and an evaluation of partnership cooperation. The evaluation mechanism refers to government guidelines on the Vocational Competency Certification Test, stating that supervision and monitoring are carried out by: 1) The Directorate of Vocational Development and provincial education offices carry out monitoring of the implementation of vocational student certification at LSP SMK and the LSP SMK network; 2) Monitoring the implementation of SMK student certification at LSP SMK and the LSP SMK Network may involve BNSP and/or related institutions; 3) The Directorate of Vocational Development evaluates and establishes a follow-up program for the SMK student certification program at LSP SMK and the LSP SMK Network.

Evaluation of the planning has ensured that there is a neat design of activities and scheduling for implementation that runs systematically and purposefully, but there is no planning for cooperation in guaranteeing exam results, and improvements need to be made in the planning of the Expertise Competency Test next year.

The organizing process is considered to have worked. The implementation of the UKK partnership has fulfilled the provisions of the Ministry of Education; that is, it is still within the scope of the scheme options determined by the government. Similarly, the implementation of the MoU has run very smoothly, among the supporting factors is good cooperation with the executive committee under the head of the expertise program and productive teachers of computer and network engineering. The UKK Implementation Evaluation Meeting was held immediately after the UKK event was completed, the results of which were outlined in the activity report.

The minutes of the UKK implementation have also been prepared by the assessor and LSP, including containing the basis for determining the graduation of participants with the title of graduation: moderately competent, competent, or highly competent. This predicate is then indicated on the UKK certificate. As a whole, the LSP carries out its evaluation function in the form of a certification plenary meeting. The plenary meeting discussed, among others: 1) submission of the assessment process review by the assessor; 2) obstacles that occur and their solutions; 3) reporting of test results from each TUK chairman; 4) competency decision by the LSP chairman.

### 3.5. Constraints

The date of the UKK TKJ implementation has been scheduled following the Education Office calendar, but the official schedule is not possible to realize. The implementation of the UKK TKJ in the field experienced problems with the limited number of assessors.

Some other obstacles found are: (1) In the planning phase, there was no scheduling of pre-UKK technical guidance events by partners. Cooperation was only established for the UKK implementation without any supervision of UKK planning and preparation; (2) Assessment standards and assessment instruments fully use government standards, without any integration with the standards of the industry present as assessors; (3) Teachers are difficult to motivate to improve their competence independently, the cost of training UKK assessors is still considered unaffordable, not proportional to its use which is only once at the end of each year; (4) The standard UKK venue set in the planning, in the implementation of UKK experienced limited waiting space, this caused queues of students in certain spots.

In the implementation of the test, two cases were found that could potentially reduce the objectivity of the UKK assessment, namely: (1) Some participants experienced tension and decreased performance during the practical test, internal examiners at that time not only provided motivation but sometimes gave clues to participants; (2) The test should have been stopped when learners exceeded the allotted duration. In practice, there were learners who completed the test by being given additional time beyond the provisions.

### **3.5.1. Improvement and follow-up**

The schools studied have responded to field constraints, including in the form of technical modifications to implementation, adjustments to facilities, and adjustments to the schedule and time of the exam. The follow-up plan has become part of the UKK TKJ. SMK does not conduct a rigid procedure, but always runs dynamically by paying attention to the results of UKK achievements, including holding remedials for participants who have not reached the minimum standard of competence set in the exam with a certain time limit.

The existence of external partners needs to be empowered. Cooperation and awareness will continue to be improved. The competency test process that has been implemented with the concept of valid, reliable, flexible and fair must continue to be implemented, so that in the end the certificate of competence can be used as a provision for finding work by alumni. This is as stated by Shermon (2005: 12) that the competency framework has two interrelated relationships, namely defining things that are important to be successful at work, while stating the level required in the implementation of the job, then the competence of graduates needs to be increasingly directed to meet the standard needs of industry.

Looking at Prosser's argument that vocational education will be effective if the teacher has had successful experience in applying skills and knowledge to operations and work processes to be carried out (Prosser, 1950), SMKs need to hold industrial apprenticeship teacher programs, guest teachers, etc to increase teacher insight into updated industrial conditions. Furthermore, there needs to be a continued partnership after the implementation of the UKK between schools and industry partners who test the UKK so that the partnership continues into the job market program, so that the impact of the UKK certificate can be measured in the workplace of industry.

### **3.5.2. Quality Of Graduates**

The quality of graduates through UKK TKJ is in accordance with the competency standards of graduates. Graduate certification according to the Indonesian National Qualifications Framework level II/III has detailed the independence of graduates, has measured the competence of students as evidenced by graduate certification.

Based on alumni tracer data until 2022, the level of job absorption tends to fluctuate, decreasing and increasing along with the reality of the high number of graduates who hold certificates of expertise competence as a result of the UKK, and the growing number of Business and Industry in the surrounding area who are ready to accommodate graduates. However, the 2022 TKJ graduates in the three SMKs have shown a fairly good level of employment of SMK graduates when compared to the previous two periods.

In the author's perspective, the results of the UKK will be more optimal if the school runs partnerships from the beginning of planning, including synchronizing the curriculum, and after the UKK then continues to the BKK (Special Work Exchange) program which is part of the SMK program structure. Under existing conditions, the quality of graduates cannot be fully measured by the selected package of questions, where there is no alignment or adjustment. This condition implies that the quality of graduates cannot fully meet the standard needs of business and industry.

#### **4. Conclusion**

Planning has been consistently carried out since the beginning of the year and is contained in the Activity Plan and School Budget. Planning includes preparing a partnership MOU, estimating the need for external and internal examiners, making a schedule, determining question packages, and preparing a competency test site.

The organization of UKK TKJ at SMK has been realized in the formation of committees, ratification of partnership MoUs with partner institutions, appointment of internal and external assessors, and verification of participants. There were two partnership schemes found: (1) with LSPs from other vocational schools, and (2) with business and industry which can provide certified assessors. The authority of partner institutions includes: testing, assessing, declaring participant qualifications, and issuing pass or competent certificates.

The implementation of UKK TKJ has taken place in stages: Establishing and maintaining the assessment environment; Testing and collecting quality evidence through practicums and written tests; Carrying out assessment administration; Provide feedback to assesseees; Take competency assessment decisions, and; Reporting activities.

Common obstacles faced include: schedules that cannot be confirmed well in advance, a lack of internal teachers who are qualified as assessors, queues of participants piling up, and consistency of internal assessors in assessing. The weakness in the partnership

is that the scope of the partnership is still limited in supplying assessors, and has not yet developed curriculum integration.

The quality of graduates resulting from UKK TKJ at Vocational Schools is: increased ability of graduates to develop themselves; there is a graduate certification process according to KKNI level II/III; obtained test results detailing graduates' independence qualifications; measurable competency of graduates as proven by Graduate Certification in accordance with the Indonesian National Qualifications Framework and the National Professional Certification Agency

## Declaration and statements

### Ethical Consent

Not required

### Conflict of interest

The authors do not have any conflict of interest.

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