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Enhancing Students' Work Readiness through Soft Skills Development: A Pre-test-Post-test Evaluation

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ABSTRACT

Competition in the business and industrial sectors requires Vocational High School (SMK) graduates to master not only technical skills (hard skills) but also non-technical skills (soft skills). SMK Mambaul Ulum Pandaan, as a relatively new vocational school, faces challenges in preparing students for workforce entry, particularly in recruitment processes and Curriculum Vitae (CV) preparation. This Community Service program aimed to enhance students' work readiness through integrated training in three core soft skills: time management, professional communication, and CV preparation. The activity used a participatory training approach involving lectures, discussions, simulations, and hands-on practice, evaluated using a one-group pre-test–post-test design. A total of 25 students from Grade XI and Grade XII participated in the activity. The results showed an increase in the average scores of both groups, with Grade XI improving from 2.86 to 3.05 and Grade XII from 3.05 to 3.22. The N-Gain scores were 16.7% and 17.9%, respectively. The Wilcoxon signed-rank test yielded an Asymp. Sig. (2-tailed) value of 0.036, indicating a statistically significant difference between the pre-test and post-test scores. Overall, the findings indicate a positive change in students' work-readiness scores following the training, although the relatively modest N-Gain values suggest that the magnitude of improvement was limited.

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INTRODUCTION

Vocational education plays a strategic role in preparing competent human resources who are ready to enter the business and industrial sectors. Vocational high schools are expected to produce graduates who possess not only hard skills but also soft skills key indicators in the workforce recruitment process. As the industrial landscape becomes increasingly competitive, companies no longer consider only a candidate's technical abilities; they also evaluate skills such as time management, effective communication, teamwork, critical thinking, adaptability, and the ability to present oneself professionally through application documents like the CV. Consequently, strengthening soft skills is crucial for enhancing the workforce readiness of vocational education graduates.

Various studies indicate that a graduate's success in entering the workforce is influenced not only by academic competence but also by non-technical skills. The communication, teamwork, leadership, and interpersonal skills have a positive and significant impact on the workforce readiness of vocational high school students, contributing 58.2% to their readiness levels (Kamila & Pahlevi, 2025). These findings suggest that vocational education curricula must strike a balance between mastering technical competencies and developing soft skills to ensure graduates are more competitive.

Empirically, this situation remains a challenge for many vocational schools, particularly those in the early stages of development. One such example is SMK Mambaul Ulum Pandaan, a relatively

newly established vocational high school. At the time this community service activity was conducted, the school had not yet produced any graduates who had entered the workforce; consequently, its experience in preparing students for recruitment processes, building alumni networks, and gathering feedback from employers was extremely limited. As a result, students lacked a clear understanding of the competencies required by the industry, the workforce selection process, and the non-technical skills they needed to cultivate prior to graduation.

If this situation is not addressed proactively, there is a risk of a widening gap between the competencies possessed by students and the actual needs of the industry. This gap illustrates the disparity between the actual situation, which is students with limited experience and understanding regarding work readiness and the desired outcome: vocational graduates who are competitive, professional, and capable of effective communication, efficient time management, and the preparation of industry-standard job application documents. Consequently, a support initiative is required to bridge this gap through structured education and training activities.

One relevant form of intervention is soft skills development focused on three core competencies: time management, communication, and CV preparation. Time management is a fundamental competency that fosters individual discipline, responsibility, and productivity. In a workplace setting, the ability to manage time is closely linked to meeting work targets, completing tasks according to priorities, and maintaining professionalism. Meanwhile, communication skills are essential for job interviews, presentations, teamwork, and interactions with customers and colleagues. Furthermore, the ability to craft a CV is a crucial first step in securing an opportunity to proceed to the next stage of the selection process, as the CV serves as the primary medium for companies to assess a prospective employee's competencies and potential.

Previous studies have addressed various soft skills, including communication, teamwork, leadership, problem-solving, self-confidence, adaptability, work ethics, and time management, through different learning contexts and interventions (Jumadin et al., 2026; Putra & Dianastiti, 2026; Risyda et al., 2026; Yasra et al., 2026). The implementation of soft skills and job interview training resulted in an N-Gain score of 0.73, indicating an improvement in students' competencies following the intervention (Risyda et al., 2026), while speaking training significantly improved the communication skills of vocational hospitality students, with $p < 0.001$ (Christina et al., 2025). Furthermore, experiential learning through workplace simulations also improved students' soft skills, particularly adaptability and self-confidence (Jumadin et al., 2026), while a one-group pre-test–post-test intervention demonstrated an increase in employability related among vocational students (Yasra et al., 2026). However, these interventions have generally focused on specific competencies or learning contexts, such as communication, adaptability, workplace simulation, project-based learning, or job interview skills.

Moreover, increase in post-test scores alone do not necessarily indicate statistically significant difference between pre-test and post-test results, highlighting the importance of appropriate statistical evaluation of training outcomes (Widiana et al., 2025). Although previous studies have addressed various soft skills and employability competencies, comparatively limited attention has been given to integrating time management, professional communication, and curriculum vitae (CV) preparation into a single work-readiness training program within the school context. In response to this gap, a community service initiative at SMK Mambaul Ulum Pandaan implemented an integrated work-readiness training program encompassing time management, professional communication, and CV preparation for Grade XI and XII students. Utilizing a one-group pre-test–post-test design, this study aims to evaluate changes in students' work readiness before and after the training and to determine whether these differences are statistically significant.

METHOD

This community service activity employed a quantitative approach with a one-group pre-test–post-test design to measure changes in students' understanding before and after soft skills training. The training focused on time management, communication, and CV, which are important competencies for vocational students preparing to enter the workforce (Turistiati & Ramadhan, 2019). A practice-based approach was used to provide participants with direct experience in

applying the training materials (Effendi et al., 2026). The activity was conducted at SMK Mambaul Ulum Pandaan through six stages: preparation, pre-test, training, practice and mentoring, post-test, and evaluation. The training covered time management, professional communication, and CV preparation. Pre-test and post-test instruments were developed based on these three topics to measure changes in participants' understanding before and after the training (Widiana et al., 2025).

Figure 1 illustrates the procedure began with the preparation stage, including the development of training materials and evaluation instruments, followed by a pre-test to assess students' initial understanding. The soft skills training was then conducted through interactive lectures, discussions, and hands-on practice with mentoring, focusing on time management, communication, and CV preparation. After completing the training, students participated in a post-test to measure changes in their understanding.



Figure 1 Procedure for Implementing the Activity

This study employed a one-group pre-test–post-test design to evaluate changes in participants' abilities before and after the training program. At the initial stage, participants were administered a pre-test to assess their level of ability prior to the intervention. Subsequently, participants took part in a training program consisting of material delivery and practical activities in accordance with the objectives of the training. After the entire training program was completed, participants were administered a post-test using the same instrument to measure changes in their abilities following the intervention. Thus, changes in participants' abilities were evaluated based on the difference between the pre-test and post-test scores.

$$\boldsymbol{O_1 \rightarrow X \rightarrow O_2} \qquad (1)$$

Equation (1) represents a one group pre-test-post test design, in which O_1 denotes the pre-test measurement conducted before the training intervention (X), and O_2 denotes the post-test measurement conducted after the intervention. The difference between O_1 and O_2 was used to assess changes in students' knowledge following the training.

The study participants were students of SMK Mambaul Ulum Pandaan who participated in the training program. Total sampling was employed, with the inclusion criterion being participants who attended the training program and completed both the *pre-test* and *post-test*. Participants who did not complete one of the evaluation stages or had incomplete measurement data were excluded from the analysis. A total of 25 participants met the study criteria and were included in the final analysis. The participants comprised 13 Grade XI students (52%) and 12 Grade XII students (48%).

The training program was conducted at SMK Mambaul Ulum Pandaan on June 20, 2026, with a total duration of 6 hours. The training consisted of several stages, including the administration of the pre-test, delivery of training materials, practical activities and/or discussions, and administration of the post-test. The pre-test was administered before the delivery of the training materials to obtain an initial assessment of the participants' abilities. The training materials were then delivered, followed by practical activities and/or discussions. After the training program was completed, the post-test was administered to evaluate changes in the participants' abilities. The same procedures were applied to all participants to maintain consistency throughout the intervention. The research instrument was a questionnaire used to measure participants' knowledge related to the training materials. The instrument consisted of 15 items, using a four-point Likert scale ranging from 1 to 4.

Prior to data collection, the measurement instrument underwent validity and reliability testing to evaluate its accuracy and overall suitability. Item validity was assessed using Pearson's product-moment correlation coefficient ($r_{calculate}$), comparing each item's score with the total score. Meanwhile, internal consistency was evaluated using Cronbach's alpha. An item was considered valid if its calculated correlation exceeded the critical table value (r_{table})at a 5% significance level, and the instrument was deemed reliable if Cronbach's alpha exceeded 0.60. The validity results for all 15 items are presented in Table 1.

Table 1. Pearson Product-Moment Validity Test Results

Item	$r_{calculated}$	Category	Item	$r_{calculated}$	Category	Item	$r_{calculated}$	Category
Item 1	0.672	Valid	Item 6	0.738	Valid	Item 11	0.533	Valid
Item 2	0.666	Valid	Item 7	0.617	Valid	Item 12	0.724	Valid
Item 3	0.654	Valid	Item 8	0.464	Valid	Item 13	0.503	Valid
Item 4	0.590	Valid	Item 9	0.819	Valid	Item 14	0.733	Valid
Item 5	0.544	Valid	Item 10	0.534	Valid	Item 15	0.607	Valid

Validity criteria were established by comparing the calculated r-value ($\boldsymbol{r}_{\text{calculated}}$) with the critical r-value ($\boldsymbol{r}_{\text{table}}$). Based on $\boldsymbol{N = 25}$ respondents at a 5% significance level ($\boldsymbol{\alpha = 0.05}$), the critical table value was $\boldsymbol{r}_{\text{table}} = \boldsymbol{0.396}$. An item was declared valid if $\boldsymbol{r}_{\text{calculated}} > \boldsymbol{0.396}$, whereas items with $\boldsymbol{r}_{\text{calculated}} \leq \boldsymbol{0.396}$ were considered invalid. As detailed in Table 1, calculated r-values for all 15 items ranged from 0.464 to 0.819, indicating that every item met the validity threshold ($\boldsymbol{r} > \boldsymbol{0.396}$). Following the validity assessment, instrument reliability was evaluated, with the results summarized in Table 2.

Table 2. Cronbach's Alpha Reliability Test Results

N of Items	Cronbach's Alpha	Category
15	0.888	Reliable

As shown in Table 2, the reliability analysis for the 15 valid items yielded a Cronbach's alpha coefficient of 0.888. Because this value substantially exceeds the established threshold of 0.60, the instrument demonstrates high internal consistency and is confirmed to be highly reliable for research data collection.

To evaluate the activity, data analysis was conducted using both descriptive and inferential statistics to examine changes in participants' abilities following the training. Descriptive analysis was used to summarize the pre-test and post-test scores, including the minimum, maximum, mean, and standard deviation. Subsequently, a difference score ($\boldsymbol{D_i}$) between the post-test and pre-test was calculated for each participant using the formula $\boldsymbol{D_i} = \text{Post-test}_{\boldsymbol{i}} - \text{Pre-test}_{\boldsymbol{i}}$. A normality test was performed on the difference scores using the Kolmogorov–Smirnov test at a 5% significance level. If the data were normally distributed, a paired-sample t-test was applied; otherwise, the Wilcoxon Signed-Rank Test was used.

RESULTS AND DISCUSSION

In order to evaluate the effectiveness of the community service activities, all participants took a pre-test prior to the delivery of the material and a post-test after the entire series of sessions was completed. The pre-test aimed to identify the participants' initial level of knowledge regarding career readiness, particularly concerning time management, effective communication, and CV writing. Meanwhile, the post-test was used to assess the increase in participants' understanding after receiving the training material, participating in discussions, and gaining tips on crafting an appealing CV.

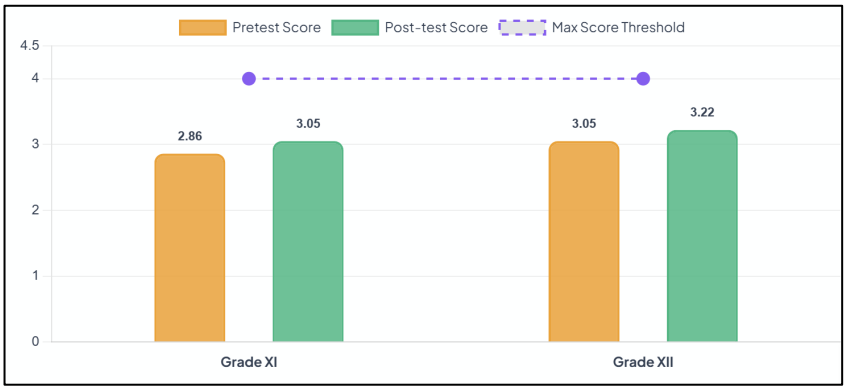


Figure 2 Comparison of Pre-test and Post-test Scores

Based on Figure 2, both classes experienced an increase in average scores from the pre-test to the post-test. Grade XI increased by 0.19 points (71.5% to 76.3%), while Grade XII increased by 0.17 points (76.3% to 80.5%). Grade XII demonstrated higher overall initial and final performance, achieving a mastery level of 80.5% against the maximum score limit of 4.00.

Table 3 Comparison of Pre-test and Post-test Scores with N-Gain Score

Grade	Max Score	Pre-test	Post-test	N-Gain
Grade XI	4	2.86	3.05	16.7%
Grade XII	4	3.05	3.22	17.9%

Based on the Table 3, the results of the activity showed an improvement in the students' scores following the implementation of the training. In Grade XI students at SMK Mambaul Ulum Pandaan, the mean score increased from 2.86 in the pre-test to 3.05 in the post-test, representing an increase of 0.19 points. Meanwhile, Grade XII students showed an increase from 3.05 to 3.22, representing an increase of 0.17 points. These results indicate that the training provided additional understanding regarding the materials presented. Although the increase in the mean score was relatively small, both groups demonstrated a positive change following the activity.

The improvement in students' understanding can be related to the learning approach used during the community service activity. The delivery of material was accompanied by discussions and practical explanations related to situations that students may encounter when preparing to enter the workforce. This approach allowed students to relate the material to their future needs. For vocational students at SMK Mambaul Ulum Pandaan, knowledge of work readiness is particularly relevant because they will face a transition from the school environment to employment, internships, or further education. Therefore, providing career-oriented training before graduation can help students better understand the competencies and preparations required in the workplace.

Hypothesis testing was conducted to determine whether the difference score ($\boldsymbol{D_i}$) between the post-test and pre-test scores were statistically significant. Prior to selecting the hypothesis testing method, a normality test was performed to check whether the data met the assumption of normality.

Table 4 Test of Normality

Score	Kolmogorov-Smirnov		
	Statistic	**N**	**Sig. (p)**
Difference Score ($\boldsymbol{D_i}$)	0.180	25	0.044

Based on the table 4, it can be seen that the difference score ($\boldsymbol{D_i}$) score has a KS value of 0.044; therefore, it can be concluded that the $\boldsymbol{D_i}$ scores are not normally distributed. The assumption of normality is not met, the comparison between the pre-test and post-test scores was subsequently analyzed using the Wilcoxon Signed-Rank test.

Table 5 Wilcoxon Signed-Rank Test

Post-test – Pre-test	
Z	-2.100[b]
Asymp. Sig. (2-tailed)	0.036

The Wilcoxon Signed-Rank test results are presented in Table 5. The test statistic yielded a negative Z-value, indicating that the pre-test scores were lower than the post-test scores. Since the p-value = 0.036 is less than 0.05, it can be concluded that there is a statistically significant difference between the pre-test and post-test scores. The effect size was calculated using Rosenthal's formula as shown in Equation (2)(Cohen, 1988):

$$\boldsymbol{r = \frac{|Z|}{\sqrt{N}} = \frac{2.100}{\sqrt{25}} = 0.42} \qquad (2)$$

These findings indicate that the soft skills training not only produced a statistically significant change but also demonstrated meaningful practical relevance. An effect size of r = 0.42 suggests that the training intervention reflected a moderate magnitude of the observed pre–post change in students' preparedness. This moderate magnitude aligns with previous research on short-term vocational interventions, which similarly observed that brief soft skills workshops produce moderate improvements in student self-efficacy and career awareness rather than drastic behavioral shifts. However, a critical examination of the learning gain reveals low overall Normalized Gain (N-Gain) values across participants. This low N-Gain can be explained by two main factors. Firstly, the baseline pre-test scores were moderately high, indicating a potential ceiling effect, whereby the upper boundary of the measurement instrument constrained the observable margin of statistical improvement. Secondly, soft skills require prolonged behavioural reinforcement rather than short-term exposure.

Despite these positive trends, several methodological constraints must be explicitly acknowledged to avoid overinterpretation. The use of a one-group pre-test–post-test design without a control group precludes making definitive causal claims, as unobserved confounding factors such as concurrent classroom instruction or natural maturation may have influenced the post-test scores. Furthermore, the small sample size ($\boldsymbol{N = 25}$) restricts the statistical power and generalizability of the findings to broader vocational high school populations, rendering interpretations regarding Grade XI and Grade XII differences, as well as the proposed ceiling effect, speculative and exploratory. Nevertheless, the observed medium effect size ($\boldsymbol{r = 0.42}$) suggests that short-term soft skills training offers meaningful practical utility. School leaders and curriculum developers should consider incorporating continuous, multi-stage soft skills training into vocational curricula, initiating foundational modules in Grade XI and delivering advanced refresher workshops in Grade XII to better equip graduates for industrial demands. Future research should utilize randomized controlled trials with larger, stratified sample sizes and long-term tracking of employment outcomes in order to rigorously validate causal impact.

CONCLUSIONS

The community service activity at SMK Mambaul Ulum Pandaan was designed to support students' work readiness through integrated training in time management, professional communication, and CV preparation. A total of 25 Grade XI and XII students participated in the activity. The results showed an increase in students' average scores following the training, from 2.86 to 3.05 for Grade XI and from 3.05 to 3.22 for Grade XII. The N-Gain scores were 16.7% for Grade XI and 17.9% for Grade XII, indicating a positive but relatively modest increase in students' understanding.

The Wilcoxon signed-rank test yielded an Asymp. Sig. (2-tailed) value of 0.036, indicating a statistically significant difference between the pre-test and post-test scores. The effect size was $\boldsymbol{r = 0.42}$, indicating a moderate magnitude of the observed change. However, the relatively low N-Gain

values suggest that the overall improvement was limited. Therefore, the increase in scores and statistically significant difference should be interpreted as evidence of change following the training rather than as definitive evidence of a causal effect of the program, particularly because the activity employed a one-group pre-test–post-test design without a control group. The small sample size also limits the generalizability of the findings.

Despite the relatively modest improvement, the activity provides a practical approach to supporting vocational students' preparation for the workforce through integrated soft skills training. Future community service activities should incorporate more intensive practice, including individual CV preparation, mock interviews, communication simulations, and time-management exercises, accompanied by follow-up mentoring to support the sustained application of these skills in workplace contexts.

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AUTHOR CONTRIBUTION STATEMENT

MF: conceptualization, coordination of the community service activity, and preparation of the Introduction. MRZ: development of the methodology and description of the activity implementation. SWP and M: data processing, statistical analysis, and preparation of the results. RNR: overall manuscript review, integration of the manuscript components, template adjustment, and coordination of the final manuscript preparation. MF, MRZ, SWP, M, RNR: manuscript review, editing, revision, and approval of the final version for submission.

AI DISCLOSURE STATEMENT

The authors used ChatGPT (OpenAI) during the preparation of this work for language refinement, manuscript organization, and assistance in improving the clarity of the manuscript. After using the tool, the authors thoroughly reviewed and edited the content as needed and take full responsibility for the content of the publication.

REFERENCES

Christina, D., Zain, R. H., & Adha, A. D. (2025). Pemberdayaan Siswa SMK Perhotelan dalam Speaking Bahasa Inggris Front Officers Menggunakan Teknologi Aplikasi Berbasis Python. *JMM (Jurnal Masyarakat Mandiri)*, *9*(6), 7593–7603. https://journal.ummat.ac.id/index.php/jmm

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (Second Edi). Lawrence Erlbaum Associates.

Effendi, R. I. A., Rayeb, A. El, Santoso, C. B., & Widjaja, Y. (2026). Peningkatan Kemampuan Dasar Pemrograman Siswa SMK melalui Pelatihan HTML, JavaScript, dan Python. *Jurnal Penyuluhan Dan Pemberdayaan Masyarakat (JPPM)*, *05*(01), 40–49. https://jurnal.erapublikasi.id/JPPM/article/view/2042/1259

Jumadin, Irawan, I. P. R., Baharuddin, S. R., Bahar, M. M., & Farid, M. (2026). Penguatan Soft Skill untuk Meningkatkan Adaptabilitas Prakerin Siswa SMK Teknik Kendaraam Ringan SMK N 3 Makassar. *Jurnal Pengabdian Teknik Industri*, *5*(1), 42–55. https://ejurnal.ung.ac.id/index.php/jpit/article/view/39116

Kamila, R., & Pahlevi, T. (2025). Pengaruh Kompetensi Softskill dan Hardskill terhadap Kesiapan Kerja Siswa SMK Konsentrasi Keahlian Manajemen Perkantoran di SMKN 1 Surabaya. *Jurnal Edueco*, *8*(2), 561–574. https://www.semanticscholar.org/paper/Pengaruh-Kompetensi-Softskill-Dan-Hardskill-Kerja-1-Kamila Pahlevi/

Putra, R. A., & Dianastiti, Y. (2026). Edukasi Kesiapan Kerja Bagi Siswa SMK Melalui Pelatihan Soft Skills. *Dimastara*, *5*(2), 132–143. https://doi.org/10.29407/dimastara.v5i2.28306

Risyda, F., Betesda, Nuryadi, H., Sinaga, D., & Sultoni, R. M. (2026). Pembekalan Soft Skill dan Teknik Wawancara Kerja Guna Persiapan Terjun ke Dunia Kerja untuk Siswa SMK. *Jurnal Intisimas*, *1*(1), 21–26. https://journal.universitassuryadarma.ac.id/index.php/intisimas/article/view/1201

Turistiati, A. T., & Ramadhan, H. F. A. (2019). Pelatihan Soft Skills dan Pendampingan Siswa-Siswi SMK di Kota Bogor untuk Persiapan Memasuki Dunia Kerja. *Jurnal Komunitas: Jurnal Pengabdian Kepada Masyarakat*, *1*(2), 1–8. https://doi.org/10.31334/jks.v2i1.286

Widiana, D. R., Syafiuddin, Sriwijayasih, I., Aju, I. R., Praharsi, Y., & Novianarenti, E. (2025). The Use of the Wilcoxon Signed Rank test in Analyzing the Difference in Test Score Vefore and After Digital Marketing Training. *Jurnal Teknologi Maritim*, *8*(2), 23–32. https://doi.org/10.35991/jtm.v8i2.73

Yasra, R., Yunesman, Putri, W. L., Amdani, & Asrin. (2026). Penerapan Sintak Employability Skills Learning SMK di Kota Batam untuk Industri 4.0 Energi Hijau. *Edutech: Jurnal Teknologi Pendidikan*, *25*(1), 407–417. https://ejournal.upi.edu/index.php/edutech/article/view/92538/pdf