



Adaptive Pre-PKL Training to Improve Culinary Skill Readiness of Students with Disabilities

Winda Safarina^{1*}; Juhanaini²; Riksmas Nurahmi Rinalti Akhlan³

^{1,2,3}Department of Special Education, Universitas Pendidikan Indonesia, Indonesia

^{1*}Corresponding Email: windasafarina@upi.edu

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Abstract: This study aimed to identify the culinary skill readiness of students with disabilities before participating in Field Work Practice (PKL) through adaptive pre-PKL training. The study employed a descriptive qualitative design with structured performance assessment involving four students with disabilities in a culinary higher education program. Data were collected through direct observation using a 1–5 rating rubric covering size consistency, shape consistency, neatness, work speed, and understanding of vegetable cutting types. The training covered five basic cutting techniques: slice, cube, chopped, julienne, and jardinier. The results showed heterogeneous readiness profiles. FH obtained the highest mean score of 4.6 and was categorized as highly ready, AC and AE each obtained 3.4 and were categorized as moderately ready, while EL obtained 1.8 and was categorized as not yet ready. At the indicator level, work speed had the lowest mean score (3.00), whereas size and shape consistency had the highest means (3.50). Adaptive pre-PKL training can serve as an initial diagnostic assessment and basis for individualized skill reinforcement.

Abstrak: Penelitian ini bertujuan mengidentifikasi kesiapan keterampilan tata boga mahasiswa disabilitas sebelum mengikuti Praktik Kerja Lapangan (PKL) melalui pelatihan adaptif pra-PKL. Penelitian menggunakan desain deskriptif kualitatif dengan asesmen kinerja terstruktur yang melibatkan empat mahasiswa disabilitas pada program pendidikan tinggi tata boga. Data dikumpulkan melalui observasi langsung menggunakan rubrik berskala 1–5 yang mencakup konsistensi ukuran, konsistensi bentuk, kerapian, kecepatan kerja, dan pemahaman jenis potongan sayuran. Pelatihan mencakup lima teknik potongan dasar, yaitu slice, cube, chopped, julienne, dan jardinier. Hasil menunjukkan kesiapan yang heterogen. FH memperoleh skor rata-rata 4,6 dan dikategorikan sangat siap, AC dan AE masing-masing memperoleh 3,4 dan dikategorikan cukup siap, sedangkan EL memperoleh 1,8 dan dikategorikan belum siap. Pada tingkat indikator, kecepatan kerja memiliki rata-rata terendah (3,00), sedangkan konsistensi ukuran dan bentuk memiliki rata-rata tertinggi (3,50). Pelatihan adaptif pra-PKL dapat digunakan sebagai asesmen diagnostik awal dan dasar penguatan keterampilan individual.

A. Introduction

Higher education has a strategic responsibility to prepare graduates who are competent, adaptive, and capable of participating in a labor market characterized by rapid technological, social, and organizational changes. This responsibility is particularly important in vocational higher education, where learning is directed not only toward conceptual understanding but also toward the development of practical competencies, work discipline, professional attitudes, and the ability to perform occupational tasks according to industry standards (Billett, 2011). Vocational education is expected to establish a meaningful connection between academic learning and authentic workplace demands, enabling students to develop competencies that are relevant to employment. One important mechanism for establishing this connection is Field Work Practice (Praktik Kerja Lapangan/PKL), which provides students with opportunities to apply knowledge and skills in authentic work environments. Work-integrated learning (WIL) has been recognized as an important component of employability development because it provides students with opportunities to experience workplace practices and develop employment-related skills (Jackson & Dean, 2023). Empirical evidence from a large-scale study involving 76,261 graduates also indicates that different forms of WIL are associated with perceived employability and skill development across disciplines (Jackson & Dean, 2023). Therefore, students' readiness before entering PKL should be considered an important pedagogical concern rather than merely an administrative requirement.

In Culinary Arts education, work readiness is closely associated with the ability to perform practical tasks accurately, consistently, hygienically, and efficiently. Professional kitchen environments require students to follow procedures, maintain product quality, manage time, and perform tasks under workplace conditions. Basic vegetable-cutting skills represent foundational culinary competencies because cutting accuracy and consistency influence cooking processes, texture, presentation, portion control, and the quality of food products (Gisslen, 2018). Techniques such as slice, cube, chopped, julienne, and jardiner require not only knowledge of culinary terminology but also appropriate knife control, size and shape consistency, neatness, and work efficiency. Recent research on practice-based culinary education for deaf students similarly emphasizes the importance of developing concrete vocational competencies while connecting culinary learning with school-to-work transition and career preparation (Suherman et al., 2026). Consequently, preparation before PKL should extend beyond general orientation concerning workplace rules and administrative procedures. It should also provide opportunities to assess students' task-specific culinary competencies and identify skills that require further reinforcement before they enter an industrial kitchen.

The need for task-specific preparation becomes more significant for students with disabilities in vocational higher education. Inclusive education emphasizes the removal of barriers that restrict students' participation and learning opportunities (Ainscow, 2020; UNESCO, 2020). However, providing equal access to vocational learning does not necessarily result in equal levels of readiness. Students with disabilities may require

individualized instruction, repeated demonstrations, additional practice opportunities, modified learning environments, appropriate feedback, and reasonable adjustments according to their functional and learning needs (Friend & Bursuck, 2019). In the Indonesian context, the International Labour Organization has emphasized the importance of institutional readiness and reasonable adjustments to improve the participation of persons with disabilities in vocational higher education and support their progression toward inclusive workplaces (ILO, 2023; McCormick et al., 2021). Research on WIL also demonstrates that students with disabilities can encounter barriers related to accessibility, acceptance of disability, accommodation, and the interaction between individual needs and workplace environments (Dollinger et al., 2023; Rahajeng et al., 2024; Wall et al., 2026). These findings indicate that inclusive vocational education should consider not only students' access to practical learning and internship opportunities but also their preparedness to participate meaningfully in authentic workplace settings.

In practical implementation, pre-PKL preparation may still emphasize general orientation, administrative procedures, workplace ethics, and placement information rather than systematic assessment of specific occupational competencies. Such preparation can create a mismatch between students' academic progression and their actual readiness to perform workplace tasks. A student may have completed relevant coursework but still experience difficulties when required to demonstrate a practical skill under time, accuracy, and quality demands. For students with disabilities, this mismatch may become more pronounced when individual learning needs have not been systematically considered during preparation. Previous research indicates that students with disabilities value WIL because it provides real-world experience and opportunities to improve future employment prospects, but they may simultaneously encounter concerns related to accessibility, accommodation, and workplace acceptance (Mogaji & Nguyen, 2022; Wall et al., 2026; Dollinger et al., 2023). Consequently, PKL should not be the first setting in which students and supervisors discover important competency gaps. Instead, institutions need an earlier preparation stage through which students' task-specific readiness can be identified and appropriate support can be planned before workplace placement.

Previous studies have examined work-integrated learning, employability development, vocational education, inclusive education, and the transition of students with disabilities into employment. These studies demonstrate the importance of authentic workplace experience, career preparation, reasonable accommodation, and institutional support in facilitating students' transition toward employment (Jackson & Dean, 2023; Lindsay et al., 2018; Dollinger et al., 2023; Wall et al., 2026; Khasawneh, 2025). However, comparatively limited attention has been given to adaptive pre-PKL preparation as a structured diagnostic process for identifying task-specific vocational competencies before students with disabilities enter the workplace. Existing WIL studies involving students with disabilities have largely focused on access, placement experiences, barriers, accommodations, and workplace participation rather than detailed assessment of concrete psychomotor competencies before placement (Dollinger et al., 2023; Jackson et al., 2025; Wall

et al., 2026). Similarly, studies of vocational education have emphasized broader employability and transition outcomes, while task-level readiness in Culinary Arts education has received comparatively less empirical attention. Although recent practice-based culinary research has demonstrated the relevance of practical culinary competencies to vocational development and school-to-work transition, the use of structured pre-PKL assessment to identify individual readiness profiles among students with disabilities remains insufficiently explored (Suherman et al., 2026). This gap indicates the need for research that connects inclusive vocational preparation with direct assessment of occupationally relevant culinary skills before PKL placement.

The novelty of this study lies in positioning adaptive pre-PKL training as a structured diagnostic and individualized reinforcement process rather than merely as a general internship orientation. Unlike approaches that primarily emphasize access to WIL, workplace accommodation, or general employability, this study focuses on task-specific culinary readiness before students with disabilities enter the workplace. The study examines observable performance through five indicators: size consistency, shape consistency, neatness, work speed, and understanding of cutting types. These indicators provide a concrete basis for identifying individual readiness profiles and determining which competencies require further reinforcement. The adaptive perspective is reflected in the use of assessment findings to inform differentiated preparation according to students' individual needs rather than assuming that all students require the same form and intensity of training. Thus, this study connects inclusive education, vocational preparation, and practical Culinary Arts competency through a rubric-based pre-PKL assessment framework. The approach is expected to provide a practical basis for institutions to make more informed preparation and placement decisions while strengthening the transition from higher education to authentic workplace learning.

Based on the identified research gap and novelty, this study addresses three research questions: (1) What is the level of readiness with disabilities in basic culinary cutting skills following adaptive pre-PKL training? (2) Which culinary skill aspects require further reinforcement before the students enter Field Work Practice? (3) How can the identified readiness profiles inform individualized pre-PKL preparation for students with disabilities in Culinary Arts education? Accordingly, this study aims to identify the culinary skill readiness of students with disabilities, analyze the specific competency aspects that require reinforcement, and formulate practical implications for developing structured and individualized pre-PKL preparation. The study is expected to contribute to inclusive vocational education by providing an evidence-based approach for identifying task-specific readiness before students transition from higher education to authentic workplace learning.

B. Method

This study employed a descriptive qualitative design supported by structured performance assessment (Creswell & Poth, 2018). The design was selected to describe the culinary skill readiness of students with disabilities, identify differences in individual

performance profiles, and determine specific competencies requiring further reinforcement before Field Work Practice (PKL). The study was not designed as a quasi-experimental study because it did not involve a control group, random assignment, or pretest-posttest comparison. Therefore, the findings were interpreted as a diagnostic description of students' readiness following structured pre-PKL preparation rather than as evidence of causal improvement.

The participants were four students with disabilities enrolled in a Culinary Arts higher education program. To maintain confidentiality, the participants were identified using the initials FH, AC, AE, and EL. The study was conducted during a pre-PKL preparation session in a culinary practice room at a higher education institution in Indonesia. All participants were preparing to undertake PKL and therefore required an assessment of their basic culinary competencies before entering the workplace. Individual learning needs were considered during the training, while personal identities and other potentially identifying information were not disclosed.

The adaptive pre-PKL training focused on five basic vegetable-cutting techniques: slice, cube, chopped, julienne, and jardiner. The training consisted of five activities: explanation of task standards and safety procedures, instructor demonstration, guided practice, individualized feedback and correction, and performance assessment. The competency targets and assessment criteria were maintained consistently across participants, while instructional support was adjusted according to observed learning needs. Adaptive support included repeated demonstrations, step-by-step guidance, additional practice opportunities, and individualized feedback. This approach was intended to provide equitable opportunities for participants to demonstrate their culinary competencies while maintaining comparable assessment standards.

Data were collected through direct observation using a structured performance assessment rubric with a five-point scale, ranging from 1 (very low performance) to 5 (very high performance). The rubric assessed five indicators: size consistency, shape consistency, neatness, work speed, and understanding of cutting types. The instrument was reviewed by three experts with relevant expertise in Culinary Arts and inclusive education. The validation process examined the relevance, clarity, and suitability of each assessment indicator for evaluating students' culinary performance. The assessment rubric was considered valid based on expert judgment. Reliability was established through consistent observation procedures and the use of clearly defined scoring criteria. The reliability of the instrument was categorized as reliable, indicating that the rubric provided consistent criteria for assessing participants' performance.

Data analysis combined numerical descriptive analysis and qualitative interpretation. Mean scores were calculated for each participant and each assessment indicator to identify individual readiness profiles and common competency patterns. Readiness was categorized as highly ready (4.21–5.00), ready (3.41–4.20), moderately ready (2.61–3.40), less ready (1.81–2.60), and not yet ready (1.00–1.80). Observation notes were analyzed through data reduction, data display, and conclusion drawing to explain

differences in performance and identify individual reinforcement needs. The analysis was descriptive and was not intended to test statistical significance or causal effects. Participant identities were protected throughout data collection, analysis, and reporting.

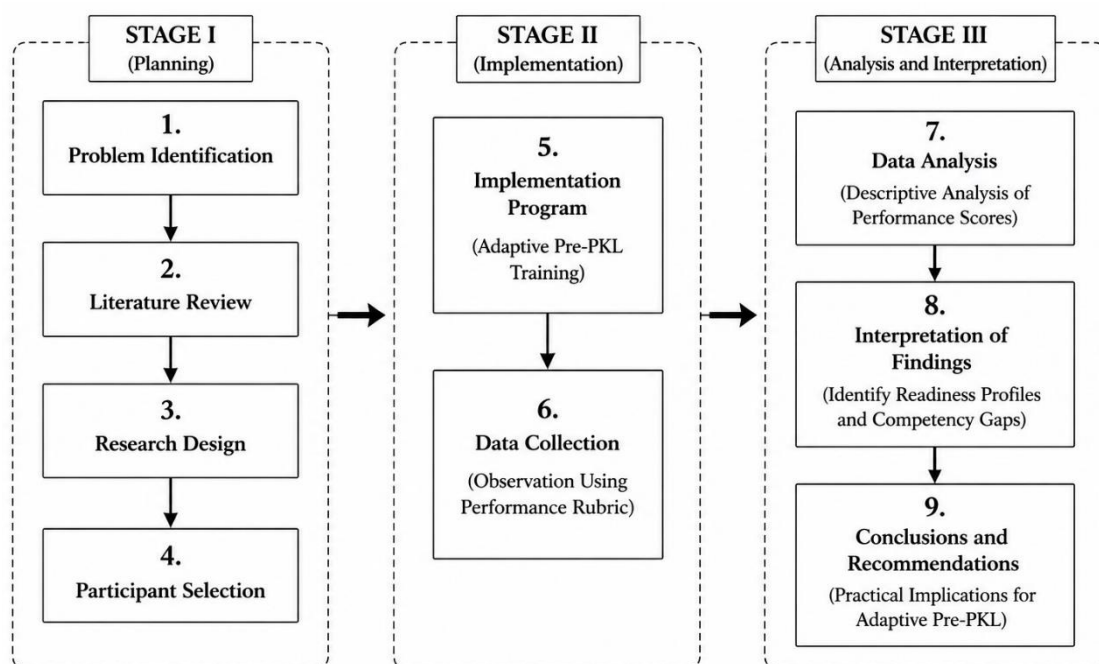


Figure 1. Research Flow

C. Result

Instrument Validity and Reliability

Before being used for performance assessment, the culinary skill readiness rubric was reviewed by three experts with relevant expertise in Culinary Arts and inclusive education. The validation focused on the relevance, clarity, and suitability of the five assessment indicators: size consistency, shape consistency, neatness, work speed, and understanding of cutting types. The content validity analysis produced a coefficient of 0.882, indicating that the assessment rubric was valid and appropriate for assessing the targeted culinary competencies. The reliability analysis produced a coefficient of 0.77, which was categorized as good. These results indicate that the assessment instrument demonstrated adequate validity and good reliability for assessing students' culinary skill performance during the pre-PKL training.

Table 2. Instrument Validity and Reliability Results

Assessment Component	Coefficient	Category
Content validity	0.882	Valid
Reliability	0.77	Good

Students' Culinary Skill Readiness

The adaptive pre-PKL training was implemented in one structured practical session focusing on five basic vegetable-cutting techniques: slice, cube, chopped, julienne, and jardiner. The participants received task explanations, demonstrations, guided practice, feedback, and performance assessment. All participants were assessed using the same five performance indicators and scoring criteria. Readiness categories were determined as follows: 4.21–5.00 = highly ready, 3.41–4.20 = ready, 2.61–3.40 = moderately ready, 1.81–2.60 = less ready, and 1.00–1.80 = not yet ready.

Table 3. Assessment Results of Students' Culinary Skill Readiness

Participant	SC	ShC	N	WS	UC	M	Category
FH	5	5	5	3	5	4.6	Highly Ready
AC	4	4	3	3	3	3.4	Moderately Ready
AE	3	3	3	4	4	3.4	Moderately Ready
EL	2	2	2	2	1	1.8	Not Yet Ready

Note. SC = Size Consistency; ShC = Shape Consistency; N = Neatness; WS = Work Speed; UC = Understanding of Cutting Types; M = Mean.

As presented in Table 3, the four participants demonstrated heterogeneous levels of culinary skill readiness. FH obtained the highest mean score of 4.6 and was categorized as highly ready. FH obtained a score of 5 for size consistency, shape consistency, neatness, and understanding of cutting types, while work speed received a score of 3.

AC and AE both obtained a mean score of 3.4 and were categorized as moderately ready. However, their performance profiles differed across the five indicators. AC obtained scores of 4 for size consistency and shape consistency, while neatness, work speed, and understanding of cutting types each received a score of 3. In contrast, AE obtained scores of 3 for size consistency, shape consistency, and neatness, while work speed and understanding of cutting types received scores of 4.

EL obtained the lowest mean score of 1.8 and was categorized as not yet ready. EL obtained scores of 2 for size consistency, shape consistency, neatness, and work speed, while understanding of cutting types received a score of 1. Thus, EL recorded the lowest scores across all five assessment indicators compared with the other participants.

Readiness by Assessment Indicator

To identify the overall competency pattern across participants, mean scores were calculated for each assessment indicator. The results are presented in Table 4.

Table 4. Mean Score by Assessment Indicator

No.	Assessment Indicator	Mean Score	Category
1	Size consistency	3.50	Ready
2	Shape consistency	3.50	Ready

No.	Assessment Indicator	Mean Score	Category
3	Neatness	3.25	Moderately Ready
4	Work speed	3.00	Moderately Ready
5	Understanding of cutting types	3.25	Moderately Ready

The indicator-level results show that size consistency and shape consistency obtained the highest mean scores, both at 3.50, and were categorized as ready. Neatness and understanding of cutting types each obtained a mean score of 3.25 and were categorized as moderately ready. Work speed obtained the lowest mean score at 3.00 and was also categorized as moderately ready.

The overall mean score across the five indicators and four participants was 3.30, which falls within the moderately ready category. This overall score indicates that the group, as a whole, demonstrated a moderate level of readiness in the assessed basic culinary skills. The individual readiness profiles are presented visually in Figure 2.

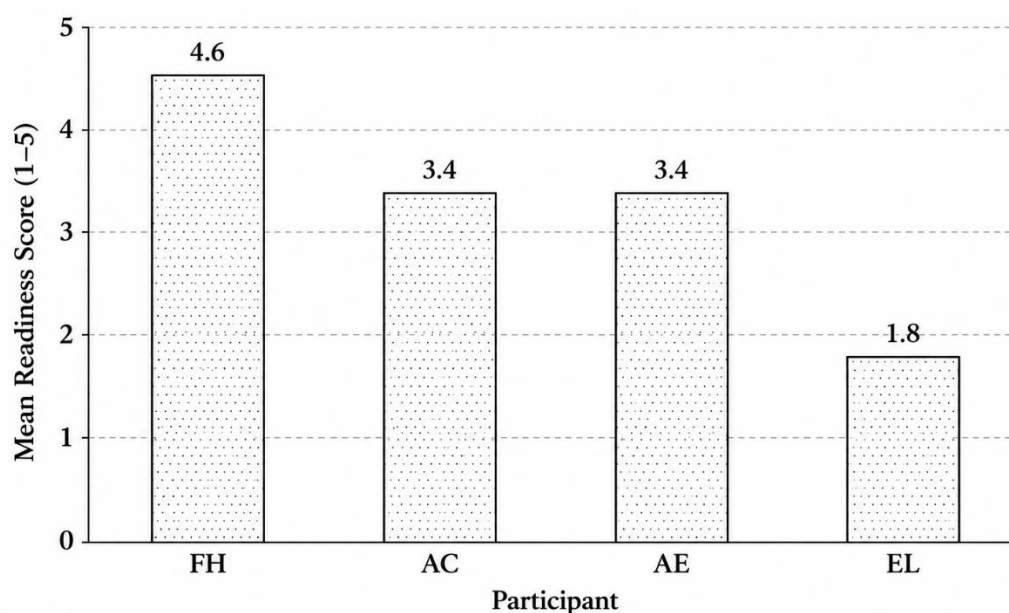


Figure 2. Average Readiness Score by Participant

Figure 2 shows a clear variation in the average readiness scores of the four participants. FH recorded the highest mean score at 4.6, followed by AC and AE, both at 3.4. EL recorded the lowest mean score at 1.8. The difference between the highest and lowest participant scores was 2.8 points.

Overall, the results demonstrate two main patterns. First, culinary skill readiness varied substantially among the four participants, with readiness categories ranging from highly ready to not yet ready. Second, the indicator-level results showed that size and shape consistency were the strongest assessed dimensions, whereas work speed was the lowest-scoring dimension. These findings provide the empirical basis for the subsequent discussion

of individualized pre-PKL preparation and competency reinforcement for students with disabilities.

D. Discussion

The findings demonstrate that culinary skill readiness among students with disabilities was heterogeneous despite the participants receiving the same pre-PKL preparation and being assessed using the same performance criteria. FH achieved a mean score of 4.6 and was categorized as highly ready, whereas AC and AE each obtained 3.4 and were categorized as moderately ready, and EL obtained 1.8 and was categorized as not yet ready. This variation suggests that disability status alone cannot be used to predict a student's level of vocational readiness. Rather, readiness is shaped by the interaction between individual learning characteristics, previous practical experience, procedural understanding, and the ability to perform occupational tasks consistently. This finding supports the importance of individualized assessment in inclusive vocational education. Mastam & Zaharudin (2024) similarly emphasize that students with learning disabilities may require systematic preparation to develop work readiness skills because they can experience distinctive challenges in demonstrating competencies required by employers. Therefore, pre-PKL preparation should begin with an identification of individual competency profiles rather than assuming that students who have completed the same academic coursework possess equivalent workplace readiness.

An important finding is the difference between technical accuracy and work efficiency. Size consistency and shape consistency obtained the highest indicator-level mean scores (3.50), whereas work speed obtained the lowest mean score (3.00). The individual profiles reinforce this pattern. FH demonstrated strong technical consistency but obtained a lower score for work speed, while AE demonstrated relatively stronger work speed but lower scores for size consistency, shape consistency, and neatness. These results indicate that accuracy and speed do not necessarily develop simultaneously. In Culinary Arts, practical competence requires both product quality and efficient task execution. A student who cuts accurately but works considerably slower than the expected workflow may still require preparation for an industrial kitchen, while a student who works quickly but produces inconsistent cuts may compromise product quality. Thus, culinary readiness should be understood as an integrated performance construct involving accuracy, consistency, neatness, procedural understanding, and efficiency rather than as a single technical ability.

The finding that work speed was the weakest shared indicator is particularly relevant to the transition from classroom-based practice to workplace learning. Culinary work is characterized by time-sensitive production processes in which individual tasks are connected to broader kitchen workflows. Consequently, students need opportunities to develop efficiency after basic technical accuracy has been established. The present results suggest that pre-PKL assessment can identify this distinction before students enter an authentic workplace. This is important because work-integrated learning is generally

intended to connect academic learning with workplace practice and employability development. Jackson & Dean (2023), using data from 76,261 graduates, found that different forms of work-integrated learning were associated with perceived employability and skill development. However, access to WIL alone does not guarantee that all students enter the workplace with the same level of readiness. The present study extends this perspective by emphasizing the value of a task-specific readiness assessment before placement, particularly in a practical field such as Culinary Arts.

The findings are also consistent with research concerning students with disabilities and work-integrated learning. Dollinger et al (2023) reported that students with disabilities can experience unique barriers in WIL, including concerns about acceptance, accessibility, and whether requested accommodations will be supported in the workplace. More recently, Wall et al (2026) found that students with disabilities anticipated WIL as an opportunity to gain real-world experience and improve employment prospects, while also identifying barriers related to disability, workplace accessibility, acceptance, and the availability of support. These findings reinforce the importance of preparing students before workplace placement. In the present study, adaptive preparation was reflected not in lowering the competency standards, but in recognizing that students may require different forms of instructional support to reach the same practical targets. This distinction is important for inclusive vocational education because equity does not necessarily mean providing identical instruction; rather, it involves providing appropriate support while maintaining meaningful competency expectations.

The results can also be interpreted through experiential learning theory. Kolb (2015) conceptualizes learning as a cyclical process involving concrete experience, reflective observation, abstract conceptualization, and active experimentation. The pre-PKL training provided students with concrete experience through direct performance of vegetable-cutting tasks, while demonstrations, feedback, and correction created opportunities for reflection and further experimentation. However, the training in this study was conducted in a single structured session. Therefore, the findings should not be interpreted as evidence that the participants had completed a full experiential learning cycle or achieved stable mastery. Instead, the results suggest that practical readiness requires repeated opportunities to perform, receive feedback, correct errors, and perform the task again. The relatively different profiles of FH, AC, AE, and EL illustrate why repeated practice and feedback may need to be differentiated according to individual performance.

The findings can further be understood through Simpson (1972) psychomotor taxonomy, which emphasizes the progressive development of motor skills from initial perception and guided responses toward more coordinated and complex performance. FH's high scores in size consistency, shape consistency, neatness, and understanding of cutting types indicate a relatively developed level of task control, although work speed remained comparatively lower. AC and AE demonstrated partial mastery with different competency patterns, while EL showed lower performance across the assessed indicators, particularly in understanding cutting types. However, the present study does not provide sufficient

evidence to assign participants to specific psychomotor stages. Simpson's taxonomy is therefore used only as an interpretive framework to explain why differences in motor control, procedural understanding, and task independence may require different forms of instructional support.

The most important contribution of this study is therefore the positioning of pre-PKL preparation as a diagnostic stage between academic learning and workplace placement. Existing WIL research has demonstrated the value of workplace experience for employability, while research on students with disabilities has highlighted the importance of accessibility, accommodation, and institutional support. The present findings add a more task-specific dimension by showing how readiness can be made observable through concrete culinary performance indicators before students enter PKL. The assessment does not merely produce an overall readiness category; it reveals different competency profiles among students who may otherwise be treated as a homogeneous group. This provides a practical basis for designing differentiated preparation. For example, a student with strong technical accuracy but lower speed may require efficiency-oriented practice, whereas a student with relatively good speed but weaker consistency may require precision-focused practice. A student with low scores across indicators may require more foundational instruction before progressing to workplace-level tasks.

These findings have important implications for inclusive vocational preparation. First, institutions should consider incorporating task-specific readiness assessment into pre-PKL preparation rather than relying solely on general orientation or completion of prerequisite courses. Second, assessment results can be used to determine the intensity and type of additional practice required by individual students. Third, the preparation process should be viewed as continuous, involving assessment, guided practice, feedback, reassessment, and, where necessary, further reinforcement before placement. This approach is consistent with the broader principle that inclusive WIL requires institutional and workplace systems capable of responding to diverse student needs (Dollinger et al., 2023; Taylor et al., 2025; Wall et al., 2026). Importantly, the purpose is not to exclude students from PKL based solely on a low score, but to provide evidence that can guide appropriate preparation and support.

At the same time, the findings should be interpreted cautiously. The study involved only four students and assessed performance during a single pre-PKL session. Therefore, the results cannot demonstrate that adaptive pre-PKL training caused an improvement in culinary skills. The findings instead demonstrate that structured assessment can reveal differences in readiness and identify competency dimensions that require further attention. The single-session design also means that observed scores may have been influenced by temporary conditions such as familiarity with the task, confidence, fatigue, or motivation. Future research should therefore examine repeated adaptive training through longitudinal or pretest-posttest designs, involve larger and more diverse participant groups, and incorporate additional indicators of workplace readiness such as food safety,

communication, teamwork, independence, and industry-supervisor evaluations (Megasari et al., 2025).

Overall, the findings suggest that culinary readiness before PKL should be understood as a multidimensional and individualized construct. The combination of technical consistency, neatness, procedural understanding, and work efficiency provides a more informative picture of readiness than a general assumption based on course completion or disability status. Adaptive pre-PKL preparation is consequently valuable not because this study demonstrates a causal training effect, but because it provides a structured mechanism for identifying readiness profiles and informing individualized preparation before students with disabilities enter authentic workplace learning.

E. Implication

The findings have practical implications for inclusive vocational education, particularly in preparing students with disabilities for Field Work Practice in Culinary Arts. Institutions should position pre-PKL preparation as a structured readiness assessment rather than merely an administrative orientation, using task-specific rubrics to identify individual strengths and competency gaps before workplace placement (Jobir, 2024). The results can also inform differentiated preparation, in which students receive targeted practice based on their assessed needs while maintaining the same competency standards. At the curriculum level, basic culinary skills such as cutting accuracy, consistency, neatness, procedural understanding, and work speed can be integrated into a continuous pre-PKL preparation sequence involving guided practice, feedback, reassessment, and reinforcement. For instructors, the assessment results provide an evidence-based basis for determining the intensity and type of support required by individual students. At the institutional level, the approach can support more inclusive PKL placement decisions and strengthen coordination between vocational programs and industry partners regarding competency expectations and appropriate workplace support. However, these implications should be understood as practical recommendations derived from the observed readiness patterns rather than evidence of the causal effectiveness of the training program.

F. Limitation and Suggestion for Further Research

This study has several limitations that should be considered when interpreting the findings. First, the study involved only four students with disabilities from one Culinary Arts higher education institution, limiting the transferability of the findings to other students, institutions, or vocational contexts. Second, the adaptive pre-PKL training was conducted in a single structured session; therefore, the results represent students' performance at a specific point in time and cannot be interpreted as evidence of stable competence or long-term improvement. Individual conditions such as familiarity with the task, motivation, fatigue, and confidence may also have influenced performance during the assessment. Third, the study relied primarily on direct observation using a structured rubric,

so observer-related bias may still have occurred, particularly when assessing performance dimensions such as neatness and work speed. Finally, the assessment focused specifically on basic vegetable-cutting skills and did not cover other important dimensions of workplace readiness, such as food safety, communication, teamwork, independence, problem-solving, workplace adaptation, and professional attitudes.

Future research should address these limitations by involving larger and more diverse samples from multiple Culinary Arts institutions and by conducting repeated assessments over a longer period. Longitudinal or pretest–posttest designs could be used to examine changes in students' culinary competencies following repeated adaptive training, while comparative or controlled designs could provide stronger evidence regarding training effectiveness. Future studies should also combine performance assessment with interviews, observation of workplace behavior, student self-reflection, and evaluations from industry supervisors to obtain a more comprehensive picture of work readiness. In addition, research should examine a broader range of culinary competencies and investigate how individualized learning plans, assistive technologies, workplace simulations, and collaboration with industry partners can strengthen the transition of students with disabilities from higher education to inclusive workplace environments.

G. Conclusion

This study concludes that adaptive pre-PKL preparation provides a useful diagnostic basis for identifying the culinary skill readiness of students with disabilities before entering Field Work Practice. The assessment revealed heterogeneous readiness profiles, with one student categorized as highly ready, two students as moderately ready, and one student as not yet ready. Among the five assessed indicators, size and shape consistency demonstrated the strongest performance, while work speed represented the lowest shared performance dimension. These findings indicate that culinary readiness should be assessed at the individual level rather than assumed to be uniform among students with disabilities. The study further highlights the importance of task-specific assessment in pre-PKL preparation because it enables instructors to identify specific competency gaps and provide differentiated reinforcement while maintaining common competency standards. Although the findings do not establish a causal effect of the training, they demonstrate that structured and adaptive assessment can provide practical information for designing more responsive preparation before workplace placement. Therefore, pre-PKL preparation in inclusive Culinary Arts education should be continuous, individualized, and aligned with authentic workplace competency demands.

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Author's Biography

	Winda Safarina, S.Sos. She was born in Bandung on January 15, 1980, and pursued higher education in Special Education at Universitas Pendidikan Indonesia. She is interested in inclusive education, individual potential, student-centered learning, and promoting independence and optimal life skills among children with disabilities. Email: windasafarina@upi.edu
	Prof. Dr. Juhanaini, M.Ed.  She is a professor in specific learning disabilities and a lecturer in Special Education at Universitas Pendidikan Indonesia. Her research focuses on inclusive education, differentiated instruction, and supporting children with specific learning difficulties. Email: juhanaini@upi.edu
	Dr. dr. Riksm Nurahmi Rinalti Akhlan, M.Pd.  She is a lecturer and researcher in Special Education at Universitas Pendidikan Indonesia. Her research focuses on inclusive education, cerebral palsy, motor development, assistive technology, and interventions for children with disabilities Email: riksma_akhlan@upi.edu