



## ANALYSIS OF LEARNING EFFECTIVENESS IN THE 6+6 PROGRAM OF BATAM TOURISM POLYTECHNIC ON INTERNSHIP READINESS IN INDUSTRY

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### Abstract

This study aims to analyze the effectiveness of theoretical and practical learning during the first six months of the 6+6 program at Batam Tourism Polytechnic on the readiness of Culinary Management Study Program students to undergo internships in the industry. The approach used is a mixed method, with a quantitative method in the form of a pre-test and post-test using multiple-choice questions analyzed using N-Gain, as well as a closed questionnaire. The qualitative method was carried out through an open questionnaire that was analyzed thematically. The results showed that all students experienced a significant increase in scores, with an average N-Gain of 0.72 (high category), which indicates effective learning in forming technical competencies. In addition, students and lecturers assessed that the curriculum, facilities, and integration of theory-practice had run well. However, there are still gaps in soft skills aspects such as professional communication, stress management, and mental readiness. Therefore, it is necessary to strengthen simulation-based learning and case studies so that graduates are not only technically ready, but also adaptive to industry challenges. This study contributes to the development of a vocational education curriculum based on work experience and becomes a reference for tourism education institutions in improving industrial internship programs.

**Keywords:** Vocational Education; Work Readiness; Practical Learning; Culinary Industry; 6+6 Program

### Abstrak

Penelitian ini bertujuan untuk menganalisis efektivitas pembelajaran teori dan praktik selama enam bulan pertama program 6+6 di Politeknik Pariwisata Batam terhadap kesiapan mahasiswa Program Studi Manajemen Kuliner menjalani magang di industri. Pendekatan yang digunakan adalah metode campuran, dengan metode kuantitatif berupa pre-test dan post-test menggunakan soal pilihan ganda yang dianalisis menggunakan N-Gain, serta angket tertutup. Metode kualitatif dilakukan melalui angket terbuka yang dianalisis secara tematik. Hasil penelitian menunjukkan bahwa seluruh mahasiswa mengalami peningkatan nilai yang signifikan, dengan rata-rata N-Gain sebesar 0,72 (kategori tinggi), yang menunjukkan pembelajaran efektif dalam membentuk kompetensi teknis. Selain itu, mahasiswa dan dosen menilai kurikulum, fasilitas, dan integrasi teori-praktik telah berjalan dengan baik. Namun, masih terdapat kesenjangan pada aspek soft skills seperti komunikasi profesional, manajemen stres, dan kesiapan mental. Oleh karena itu, perlu dilakukan penguatan pembelajaran berbasis simulasi dan studi kasus agar lulusan tidak hanya siap secara teknis, tetapi juga adaptif terhadap tantangan industri. Penelitian ini memberikan kontribusi terhadap pengembangan kurikulum pendidikan vokasi berbasis pengalaman kerja dan menjadi acuan bagi lembaga pendidikan pariwisata dalam meningkatkan program magang industri.

**Kata Kunci:** Pendidikan Kejuruan; Kesiapan Kerja; Pembelajaran Praktis; Industri Kuliner; Program 6+6.

## INTRODUCTION

The tourism and hospitality industry, including the culinary sector, has become a strategic economic sector with an increasing contribution to the gross domestic product (GDP) of many countries, including Indonesia. This development drives the need for professional workers who are not only technically skilled, but also adaptive to change, able to work under pressure, and have good communication skills (Handayani, 2024). In this context, vocational education has an important role as a provider of human resources (HR) ready to work through a structured and experience-based learning process. Vocational education must be able to bridge the gap between the world of education and the world of industry through an integrative learning model between theory, practice, and real work experience (R. Sari et al., 2024). Improving the quality of vocational education is highly dependent on the success of the integrated learning system which plays a key role in preparing students for the industrial world. (Armizi, 2020). Hospitality knowledge is also important to teach in order to produce students who become professional hoteliers, who not only master technical skills, but are also able to adapt to the dynamics of the ever-developing industry (Lubis, Supardi, et al., 2024).

Previous studies have shown that skills acquired through conventional classroom-based learning methods are insufficient to meet the needs of the complex and dynamic hospitality industry (Yohanes Martono Widagdo, 2024). Therefore, a learning model based on direct practice and industry involvement is considered the most relevant approach in the context of vocational education. Intensive and practice-based training plays an important role in improving students' understanding and skills in the tourism sector, especially in facing the demands of a dynamic industry (Lubis et al., 2025). According to (Kolb, 1984), direct experience in the learning process will encourage the formation of deep understanding and application skills through the experiential learning cycle. In a contemporary study, (Irwanto, 2020) emphasized that the success of vocational learning is largely determined by the integration of theory and practice that is

reflective and contextual.

In practice, several vocational higher education institutions have implemented industry-based learning models such as the 3+1 program, dual system, and the latest is the 6+6 model. The 6+6 program, as implemented by Batam Tourism Polytechnic (BTP), is a form of learning strategy in which students undergo six months of intensive theoretical and practical learning on campus, followed by six months of internship in a partner industry. This model aims to instill work competencies from the start and ensure that students have sufficient provisions before entering the field. However, until now there have been limited studies that systematically evaluate the effectiveness of the first six months as a foundation for students' readiness to undergo industrial internships.

Research by (Yoantari et al., 2023) shows that intensive practice adapted to industry realities can increase work readiness by up to 35% compared to conventional teaching methods. Similar findings were reported by (Agustin et al., 2023), who emphasized the importance of cross-functional skills, such as team collaboration, customer communication, and work time management, which are often not optimally taught in the classroom. In addition, a study by (Agustian et al., 2024) revealed that the mismatch between the material taught on campus and the needs of industry work is still a major obstacle in vocational education. Therefore, an evaluative approach is needed to learning models such as the 6+6 program to determine how much it contributes to bridging the gap.

Not only in terms of technical skills, soft skills are also a determining factor in the success of students undergoing internships and entering the workforce. (Junianto et al., 2024) in their research showed that vocational graduates who are not equipped with communication skills, work ethics, and stress management tend to have difficulty adapting to the industrial work environment. This is reinforced by the findings of (Husnita & Suparno, 2020), which state that mental readiness and work character are aspects that are often overlooked in vocational learning, even though they are the main determinants of long-term career success.

Based on the theoretical study and field facts, this study was conducted to answer three main focuses, namely: (1) analyzing the effectiveness of theoretical and practical learning in the first six months of the 6+6 program at Batam Tourism Polytechnic on students' readiness to undergo industrial internships, (2) identifying the gap between the competencies taught on campus and the skills needed by the industry, and (3) explaining the factors that influence students' readiness to participate in industrial internship programs. This study focused on students of the Culinary Management Study Program who received scholarships from the Bintan Regency Government, with a mixed method approach through pre-post test analysis, questionnaires, and qualitative reflection.

The structure of this article begins with a discussion of relevant theories and literature related to vocational education and work readiness, followed by research methods, presentation of results, discussion of findings based on previous theories and research, and ends with conclusions and practical suggestions for the development of vocational curricula in the future. It is hoped that this article will not only provide scientific contributions in the realm of vocational education management but also become the basis for considering learning policies and practices in industry-based vocational institutions.

## **RESEARCH METHOD**

This study uses a mixed-methods approach, which is a combination of complementary quantitative and qualitative approaches to provide a comprehensive picture of the effectiveness of the first six months of learning in the 6+6 program at Batam Tourism Polytechnic. This approach was chosen to capture numerical data related to measurable improvements in student competency, as well as to explore their perceptions and experiences in more depth through exploratory techniques.

Quantitatively, this research design implements a pre-test and post-test model by providing a 15-item multiple-choice question instrument that has been developed based on core competencies in culinary and kitchen practice courses. The questions were tested at the beginning and end of the first six-month learning

program. The results of this test were analyzed using the N-Gain (Normalized Gain) technique to determine the level of learning effectiveness based on the increase in scores. As explained by (Coletta & Steinert, 2020), normalized gain can provide a more accurate picture of how much understanding has been achieved, without being influenced by prescore bias. Thus, this N-Gain analysis is better able to describe the effectiveness of the learning program implemented in the 6+6 program. In addition, additional quantitative data were obtained through a closed questionnaire in the form of a Likert scale distributed to students and lecturers/instructors in charge of the program. This questionnaire covers aspects of learning effectiveness, internship readiness, and perceptions of the learning process, with five levels of assessment scale (1 = strongly disagree to 5 = strongly agree). The Likert scale was used in this study to measure students' and teachers' perceptions of the effectiveness of learning in the 6+6 program. This scale is very popular because it is easy to use, flexible, and can be applied to measure various research variables, making it the main choice in various disciplines (Sugiyono, 2020).

Meanwhile, qualitatively, data were obtained through an open-ended questionnaire that allowed respondents—both students and lecturers—to provide in-depth feedback on challenges, experiences, and suggestions for the implementation of the 6+6 program. The presence of researchers in this context was as active observers, especially in the process of distributing instruments and collecting reflections from respondents. Key informants in this study consisted of four students participating in the 6+6 program from the Culinary Management Study Program as well as two lecturers and two practice instructors who were directly involved in the learning process. This research was conducted in the Batam Tourism Polytechnic environment for a period of six months in the odd semester of the current academic year.

The research instruments used consisted of cognitive test questions (pre-post-test), closed questionnaires, and open questionnaires. Cognitive abilities play an important role in the learning process because they have been proven to be the

basis for developing other competencies that are greatly needed in facing the challenges of today's work world, especially in vocational education (Gustalia & Setiyawati, 2023). The validity of the content of the question instrument was developed by referring to semester learning achievements and validated by expert lecturers in the culinary field. To ensure the validity of qualitative data, triangulation of sources and techniques was carried out, namely comparing data from students and lecturers/instructors, as well as between test results, questionnaire results, and open reflections. Quantitative data analysis techniques were carried out through N-Gain calculations and visualization in the form of graphs using Microsoft Excel and Python software. Meanwhile, qualitative data analysis was carried out through the stages of thematic coding, response classification, and drawing narrative conclusions based on the tendency of the answer content.

This method was chosen because it is able to combine the strength of objective measurement with the contextual explanation needed in evaluating vocational learning. The selection of mixed methods in research on vocational learning allows the integration of qualitative and quantitative data to obtain a more comprehensive understanding of the effectiveness of learning methods, as well as provide stronger explanations and reduce weaknesses that may arise from a single approach (Yam, 2022). Thus, the results of the study are expected to be not only statistically valid, but also interpretatively rich in explaining the dynamics of students' readiness to face the world of work in the culinary industry.

## **RESULTS AND DISCUSSION**

### ***Result***

This study aims to determine the effectiveness of the first six months of learning in the 6+6 program on the internship readiness of students of the Culinary Management Study Program at Batam Tourism Polytechnic. The 6+6 program is a vocational learning model designed by Batam Tourism Polytechnic with a scheme for the first six months of students undergoing intensive theoretical and

practical learning on campus, which includes basic culinary skills, hygiene and sanitation, guest service, and professional work ethics. This learning is facilitated by academic lecturers and instructors who have extensive experience in the hospitality and culinary industries, with a focus on standardization of cleanliness and sanitation as a fundamental aspect (Supardi et al., 2024). It is important to implement cleanliness standardization consistently, as well as provide opportunities for students to directly apply these principles in practice (Lubis, Rais, et al., 2024). This ensures that students not only understand the theory of cleanliness, but are also ready to apply it in the context of the real world of work. This program aims to ensure that students have technical readiness and a professional work attitude before entering the world of work.

The main findings in this study are presented through pre-test and post-test data that measure the increase in students' understanding and competence, accompanied by student questionnaire results regarding perceptions of the learning process, and evaluations from lecturers and instructors involved in the implementation of the program. This analysis is used to assess the extent to which the learning process on campus has succeeded in forming students' work readiness before participating in the industrial internship phase.

### ***Pre-Test and Post-Test Results***

To objectively measure the improvement of students' competencies during the first six months of learning process, the researcher conducted an initial test (pre-test) and a final test (post-test) on four students who were the subjects of the study, all of whom came from the Culinary Management Study Program and participated in the full 6+6 program. The pre-test and post-test play an important role in measuring changes in students' understanding, where the pre-test provides an initial overview of the knowledge possessed by students, while the post-test allows for an evaluation of the extent to which this understanding has increased after participating in learning, as seen from the significant differences between the experimental and control classes in this study (Adri, 2020). This test was designed to see the extent to which students' understanding and skills have changed after



participating in intensive theoretical and practical learning on campus. Each student was asked to complete 15 multiple-choice questions that had been compiled based on the learning achievements of the study program and were reviewed for validity by a team of expert lecturers. These questions cover aspects of technical skills in food processing, the application of hygiene and sanitation principles according to industry standards, and an introduction to basic soft skills such as time management, teamwork, and professional communication. The results of the pre-test and post-test are used to calculate the improvement value using N-Gain analysis, which provides a quantitative picture of the effectiveness of the learning that has been implemented. Details of the score results of each student can be seen in the following table:

**Table 1. N-Gain Score Calculation Result Data**

<b>Student Name</b>	<b>Pre-Test</b>	<b>Post-Test</b>	<b>N-Gain Formula</b>	<b>N-Gain</b>	<b>Category</b>
<b>Student A</b>	7	13	$(13-7)/(15-7) = 6/8$	0.75	High
<b>Student B</b>	6	12	$(12-6)/(15-6) = 6/9$	0.67	Average
<b>Student C</b>	5	11	$(11-5)/(15-5) = 6/10$	0.60	Average
<b>Student D</b>	8	14	$(14-8)/(15-8) = 6/7$	0.86	High

The table shows that all students who were the subjects of the study experienced a significant increase in scores from the pre-test to the post-test, reflecting a positive change in their mastery of the material and basic skills taught during the first six months of the 6+6 program. The N-Gain value analysis used to measure the level of improvement showed high effectiveness for all respondents, ranging from 0.60 to 0.86. The average N-Gain of 0.72 indicates that most students managed to experience a substantial jump in understanding after undergoing intensive theoretical and practical learning. This increase reflects the success of the vocational learning approach that emphasizes direct experience, theory-practice integration, and guidance by competent and experienced teaching staff in the culinary industry.



Furthermore, these findings support the research results (Rahmanto & Gunadi, 2022) which confirm that the practice-based vocational learning model has proven effective in increasing students' work readiness in a measurable manner, especially when supported by adequate practice facilities and a curriculum that is tailored to the needs of the industrial world. These findings strengthen the belief that the initial phase of learning in the 6+6 program can be a strong foundation for students to face the challenges of the world of work, both technically and in terms of professional attitudes. Soft skills and hard skills have a positive and significant influence on students' work readiness, which means that improving technical skills and character development can simultaneously increase students' readiness to enter the world of work (C. N. I. Sari & Manunggal, 2023). Internships have been shown to be an effective practical means of improving student competencies, especially in the context of the 6+6 program. As part of vocational learning based on work experience, internships allow students to apply technical skills and strengthen their soft skills in a real industrial environment (Tanjung et al., 2023). Based on the results of this study, the internship program integrated with theoretical and practical learning has had a significant impact on improving students' readiness to adapt and succeed in the culinary and hospitality industry. Visualization of the increase in each student's score recorded during the pre-test and post-test process is presented in the following graph as reinforcement of the effectiveness of the learning that has been implemented.

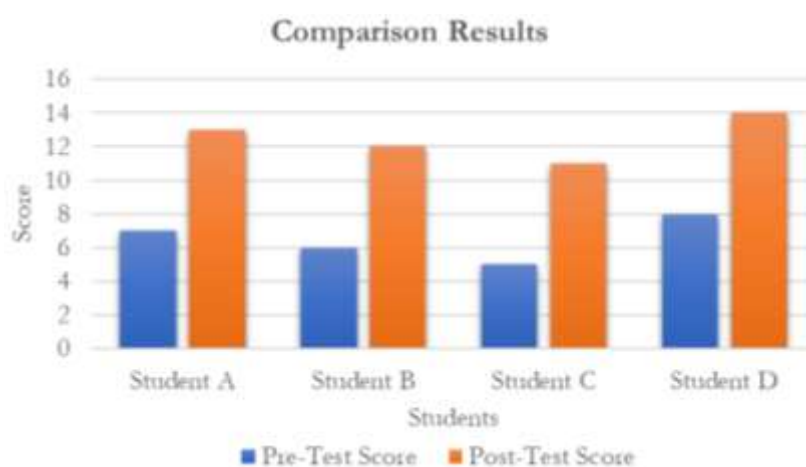


Figure 1. Comparison of Pre-Test and Post-Test Results for Each Student

The graphs presented show a consistent and positive upward trend in all study participants, namely four students who took the 6+6 program. The increase in scores achieved from pre-test to post-test occurred in all individuals, with two students—Student C and Student D—showing the highest jump in scores, each experiencing an increase of 6 points. The practice-based learning method applied in the 6+6 program has proven to be more effective in improving students' technical competence compared to a purely theoretical approach that relies more on lectures, as seen in the significant increase in pre-test and post-test scores (Hapsari et al., 2023). This indicates that the learning process that took place during the first six months had a real impact on strengthening students' conceptual understanding and practical skills. In particular, this increase reflects the success of the intensive practice-based learning approach that is the hallmark of the 6+6 program, where students not only gain theory in the classroom but are also actively involved in professional campus kitchen activities that simulate real industrial working conditions.

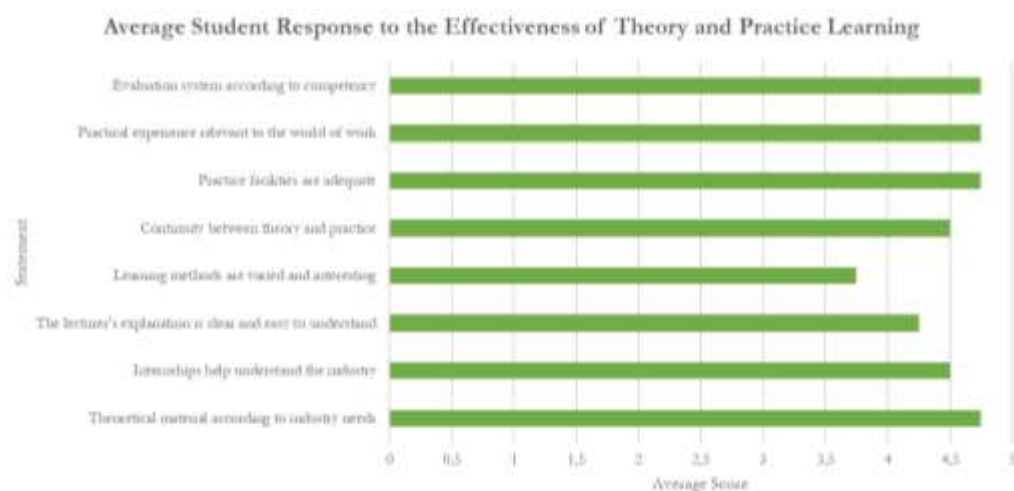
Technical aspects such as cooking methods, processing of raw materials, implementation of kitchen hygiene and sanitation standards, to the workflow in the hotel kitchen team are the main focus of learning and have been proven to be better mastered by students after the learning process has taken place. This confirms that programs that place practice as the main axis of learning are able to encourage the transfer of knowledge and skills more effectively than a purely theoretical approach. The increase in scores recorded visually in the graph not only illustrates individual progress, but also confirms the success of the curriculum design and the active role of lecturers and instructors in creating a contextual and applicable learning environment.

### ***Student Questionnaire Results***

To support and complement the quantitative findings obtained through the pre-test and post-test instruments, the researcher also distributed a questionnaire to students as a tool to obtain a subjective picture of their perception of the

effectiveness of the learning that has been undertaken and their level of readiness in facing industrial internships. This questionnaire is designed in a structured manner to measure aspects of learning that cannot be fully explained through numbers, especially those related to learning experiences, student involvement, and perceptions of the curriculum, instructors, and facilities. Through this questionnaire, students are given space to assess various dimensions in the learning process and reflect their personal readiness before entering the world of work.

In general, the questionnaire is divided into two main parts, each containing different but complementary indicators. The first part (Part B) focuses on the effectiveness of theoretical and practical learning, which includes students' perceptions of the suitability of the curriculum to industry needs, the integration of theory and practice, learning activities in the classroom and kitchen, and the availability and adequacy of learning facilities. Meanwhile, the second part (Part C) is directed at measuring students' readiness to face industrial internships, which includes understanding of work procedures, technical and mental readiness, ability to deal with pressure, and confidence in applying competencies that have been acquired during campus learning. Both parts of the questionnaire provide complementary data in explaining how the learning process of the first six months in the 6+6 program contributes to the formation of students' work readiness.



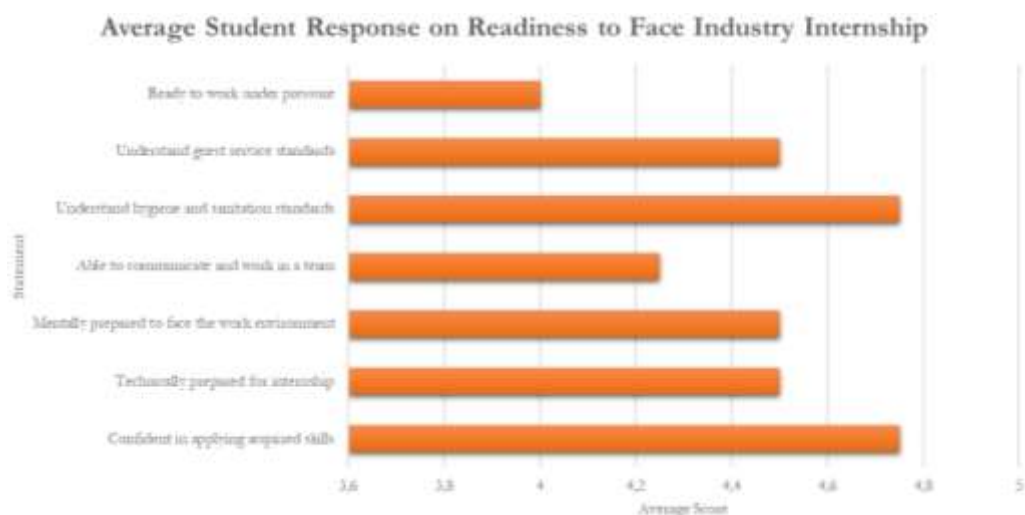
**Figure 2. Average Student Response to the Effectiveness of Theory and**

### **Practice Learning (Part B)**

In Part B of the questionnaire, students gave a very positive assessment of the quality and learning experience they received during the first six months of the 6+6 program. This assessment reflects a high level of satisfaction with the teaching and learning process, especially in the context of practice-oriented vocational learning. The question with the highest average score was given to the aspect of adequate practice facilities (with an average score of 4.75), followed by questions regarding practical experiences that were considered relevant to the current needs of the culinary industry (average 4.75). Adequate learning facilities have been shown to have a significant influence on student satisfaction levels (Imelda et al., 2024), as reflected in the results of the questionnaire which showed a positive perception of the quality of the practical facilities provided. Students considered that these facilities made a major contribution to supporting contextual and industrially relevant learning. This shows that students feel supported by adequate facilities and infrastructure and gain contextual learning experiences, in accordance with the operational realities of professional kitchens that they will face in the world of work. This achievement can be interpreted as the institution's success in providing a realistic and representative learning environment for real industrial conditions, which is a key element in vocational education.

However, not all aspects of learning were considered optimal by students. The question with the lowest average score (3.75) was found in the aspect of the diversity of theoretical learning methods, which indicates that the teaching approach is still considered less varied or has not been fully able to encourage active student involvement in theoretical sessions. This condition indicates the need to develop more dynamic instructional strategies, such as the use of active learning methods, case study-based discussions, interactive simulations, or flipped classroom approaches to increase student participation and understanding. These results are in line with the findings of (Rizqiyana et al., 2023), which emphasize that vocational learning will be more effective if the theory is delivered through a contextual and participatory approach, so that students not only understand the

concept, but are also able to relate it directly to work practices in the field. Therefore, although in general learning on campus has been assessed as good, there is still room for improvement, especially in the aspect of theoretical teaching methodology to make it more applicable and student-centered.



**Figure 3. Average Student Response on Readiness to Face Internship  
(Section C)**

In Part C of the questionnaire, which focused on students' perceptions of their readiness for industrial internships, the results showed that the majority of respondents felt that they were prepared both technically and mentally. The average score obtained was above 4.5 in almost all assessment indicators, which included important aspects in the industrial work world such as understanding kitchen hygiene and sanitation, guest service standards, and the ability to work in a team. This achievement illustrates that the learning that took place during the first six months has succeeded in instilling basic competencies that are crucial in culinary industry operations. Students feel able to follow standard work procedures, maintain food hygiene and safety, and carry out communication and coordination functions within the work team well. This indicates that the foundation of vocational learning implemented through the 6+6 model has succeeded in creating solid initial readiness for students to enter a professional work environment.

However, there is one indicator that scored slightly lower, namely readiness to work under pressure, with an average score of 4.0. This score indicates that although students feel quite confident technically, they realize that dealing with work pressure—such as long working hours, high customer demand, or multitasking demands—is still a challenge. Mental readiness to act quickly and stay calm in stressful situations requires more specific training and is oriented towards real simulations in the industry. This finding is in line with the results of research (Indirasari & Mulyana, 2024), which states that work readiness cannot be built only through technical mastery, but also through the process of forming work character, getting used to dealing with stressful situations, and intensive training to manage pressure and dynamics of industrial work. Therefore, these results provide an important signal for vocational education institutions to add elements of work pressure simulation-based learning and mental training as an integral part of the initial learning curriculum before students enter the real world of internships.

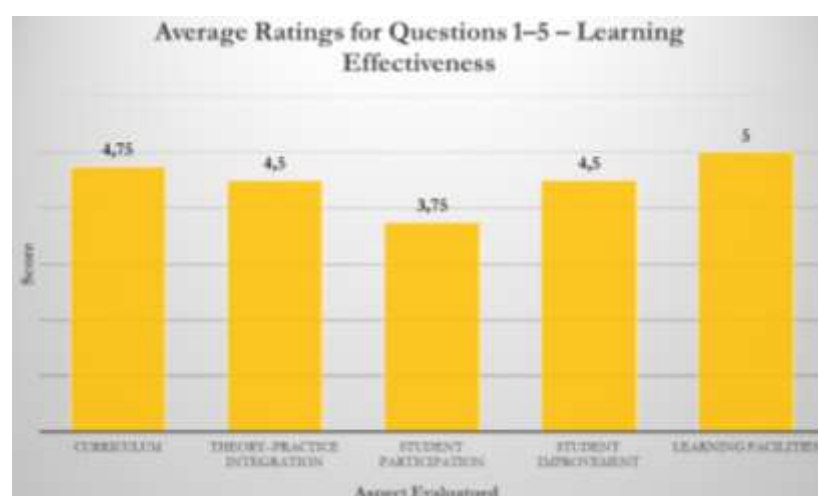
### ***Lecturer and Instructor Questionnaire Results***

To obtain professional views and perspectives from the lecturers on the learning outcomes that have been implemented during the first six months of the 6+6 program, the researcher also distributed questionnaires to two academic lecturers and two practicum instructors who were directly involved in the student learning process. These lecturers have solid backgrounds, both in terms of pedagogy and work experience in the culinary industry, so their opinions are considered credible in evaluating the success of the curriculum and the learning process implemented. The questionnaires submitted included an assessment of the quality of the curriculum, the adequacy of learning facilities, the integration between theory and practice, student participation, and the technical and professional readiness of students approaching the industrial internship period.

The evaluation results show that the curriculum, practical facilities, and integration of theory and practice aspects received very good ratings from all respondents, with an average score above 4.5. This assessment reflects that from

the teacher's perspective, the 6+6 program has been designed with a learning structure that is relevant to industry needs and is run with the support of adequate infrastructure. Kitchen facilities that meet industry standards, applicable teaching materials, and a hands-on practical approach are considered to have been able to support the transfer of knowledge and skills well.

However, in the indicator of active student participation during theoretical learning, the score obtained was relatively lower than other indicators, with an average of 3.75. This figure indicates that there are still challenges in creating a truly participatory learning atmosphere, especially in conceptual or discursive class sessions. The instructors observed that some students tended to be passive, asked less questions, or showed less initiative during the theoretical learning process, even though they performed well in practice. This leads to the need to develop more interactive learning methods, such as group discussions, real-life case simulations, or blended learning approaches to increase student enthusiasm and involvement in understanding the basic concepts that underlie industrial practice. This tendency also reinforces the importance of continuous pedagogical training for instructors to be able to create learning strategies that are more adaptive to the characteristics of vocational students. The visualization of the results of this assessment is shown in the graph below, which shows a comparison of scores between indicators from the four respondents.



**Figure 4. Average Ratings for Questions 1–5 About Learning Effectiveness**



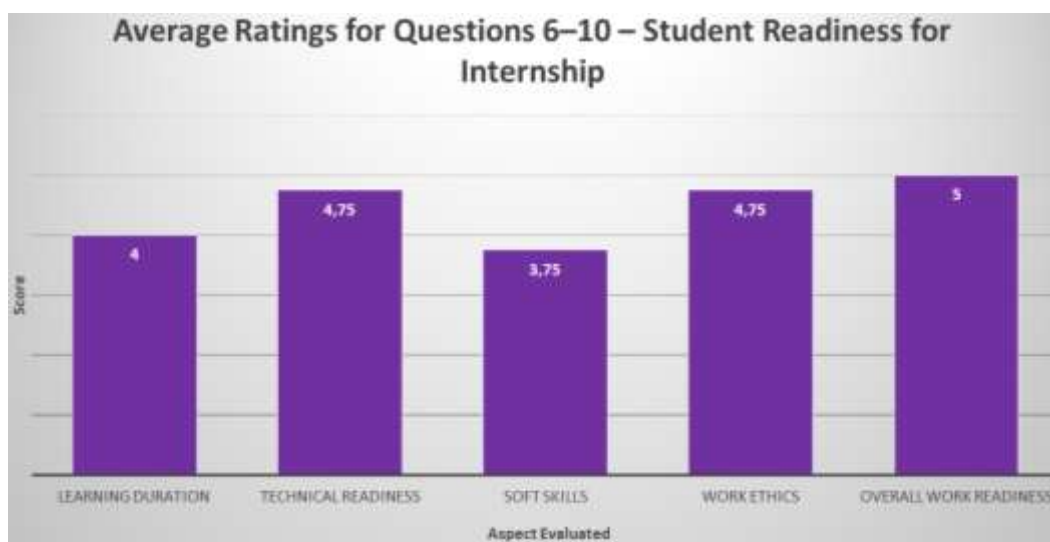
In the section that measures students' readiness to undergo industrial internships, lecturers and instructors gave high marks to the technical competencies and work attitudes demonstrated by students, especially in terms of understanding professional work ethics and the ability to follow industry standard operating procedures (SOPs) applicable in the hospitality and culinary world. The instructors stated that students have understood values such as discipline, responsibility, and compliance with work procedures quite well, and they have demonstrated work attitudes that reflect readiness to interact in a professional environment.

However, in line with the results of the student questionnaire, the lecturers also highlighted that mastery of soft skills aspects—such as interpersonal communication, the ability to express opinions confidently, the ability to resolve conflicts in teams, and managing work stress—still needs further attention in the curriculum. Several students were considered not yet fully able to demonstrate flexibility and speed of thinking in dealing with unexpected work situations, especially when having to complete tasks under time pressure or dealing with customers with various characters.

The lecturers and instructors also said that the six-month duration of theoretical and practical learning on campus is sufficient to deliver basic material, but they suggested reinforcement through case study sessions, real case study-based training, and work pressure simulations as a form of mental and situational preparation for students before entering the industrial world directly. These additional sessions are considered important to build psychological resilience, problem-solving skills, and quick decision-making needed in a real work environment, especially in hotel or restaurant kitchens that have a high work rhythm.

Overall, the feedback from the instructors reinforced that the 6+6 program was on the right track in equipping students, but would be more optimal if complemented with a learning approach that encourages character building and responsiveness in a real-world work context. A visual depiction of the instructors'

assessment of students' internship readiness can be seen in the following graph, which shows a tendency towards positive assessments of technical competencies, but with critical notes on non-technical aspects that need to be strengthened.



**Figure 5. Average Ratings for Questions 6–10 About Student Readiness for Internship**

Data obtained from the pre-test and post-test results, student questionnaires, and evaluations from lecturers and instructors consistently show that the 6+6 program implemented at Batam Tourism Polytechnic has proven effective in significantly improving students' technical competencies, while preparing them professionally to undergo internships in industrial work environments. The high increase in N-Gain values from cognitive test results indicates that the theoretical and practical learning process during the first six months was able to provide an in-depth understanding of basic culinary skills, hygiene and sanitation, as well as professional workflows that are in accordance with hotel and food industry standards. In addition, the positive perception given by students towards learning facilities, the relevance of practical materials, and the role of lecturers and instructors, further emphasizes that the learning approach used has met the principles of contextual and applicable vocational education.

However, although the technical achievements are quite strong, the analysis results also show that there are still indications of weaknesses in non-

technical aspects, especially soft skills, which include effective communication skills, team leadership, stress management, quick decision-making, and resilience under pressure. Both students and teachers identified that this dimension has not received a balanced portion of training compared to technical skills. In fact, in the context of the dynamic hospitality industry, the success of a workforce is not only determined by technical skills alone, but also by mental readiness, work ethic, and social skills that are able to bridge the dynamics of work and customer interactions professionally. Therefore, the learning structure in the 6+6 program ideally needs to be strengthened with a holistic approach that not only emphasizes practical skills, but also integrates work character development through work pressure simulations, customer service case studies, and interpersonal training as an integral part of the curriculum. In this way, students are not only technically prepared, but also have the resilience, flexibility, and self-confidence needed to succeed in the highly competitive and challenging culinary and hospitality industry.

### ***Discussion***

The results of this study indicate that theoretical and practical learning during the first six months of the 6+6 program at Batam Tourism Polytechnic has been effective in improving students' readiness to undergo internships in the culinary and hospitality industry. This is evidenced by a significant increase in scores on the pre-test and post-test results, with an average N-Gain value of 0.72, which is in the high category. These findings are reinforced by the results of the questionnaire, which describe positive perceptions from both students and teachers regarding the quality of learning that has been implemented. The quality of learning in the 6+6 program can be improved through thorough teaching preparation from lecturers and instructors, which includes structured planning and pedagogical skills that are in accordance with industry needs (Ahmadi & Hadi, 2023).

This improvement reflects that the practice-based learning approach that is the hallmark of the 6+6 program is able to provide a real contribution in significantly increasing students' mastery of basic competencies, especially in

terms of technical skills and understanding of standard industrial work procedures. Overall, this finding also answers the formulation of the problem in the study, namely, how effective is early learning in preparing students to face the industrial internship period professionally and competently.

This study found that the learning aspects that contributed most to student readiness included hands-on practice in the kitchen, collaborative teamwork training, and in-depth learning about hygiene, sanitation, and the application of industry operational standards. In addition, previous studies have shown that internships have a positive impact on student professionalism, as they provide hands-on experience in the industry that allows students to develop technical and soft skills that are highly needed in the workplace (Andriyatno et al., 2023). Students felt that hands-on practice allowed them to experience the challenges of the workplace and understand the real context of their work in the culinary industry. This finding is in line with a study by (Afifah et al., 2024) which stated that hands-on learning in a professional kitchen setting can increase students' confidence and performance during field practice. Similar support was also found in a study by (Febriana, 2017) which emphasized that vocational education programs that prioritize intensive competency-based practice tend to produce graduates who adapt more quickly and are better prepared to enter the workforce.

However, this study also revealed gaps that still need attention, namely in the realm of non-technical competencies or soft skills, such as professional communication, stress management, teamwork, and initiative in solving problems. Along with the importance of integrated learning between theory and practice, 4C skills (critical thinking, communication, collaboration, creativity) are also very relevant to be applied in contextual learning in vocational programs (Annisa et al., 2023). This aspect is considered not to have been fully accommodated in the existing learning structure. This finding is reinforced by a study (Firna et al., 2024) which highlights the importance of strengthening soft skills in vocational education as a determining factor for student success in the workplace. Weaknesses in this aspect can hinder students in facing complex work dynamics

that require mental resilience and strong interpersonal skills.

Further interpretation of the questionnaire results from lecturers and students shows that although the transfer of technical and theoretical knowledge has been effective, there is still an urgent need to develop a more integrative and comprehensive learning approach. This includes the development of a curriculum that accommodates explicit soft skills training, such as public speaking training, emotional management, and simulations of stressful work situations. As shown by (Neno, 2024), learning methods based on work pressure simulations and customer service scenarios have proven effective in instilling the values of professionalism, empathy, and responsiveness in students to real situations in the industrial world. In this context, the 6+6 program at BTP already has a strong foundation, but still needs to refine its curriculum to be more contextual, reflective, and relevant to real field conditions. This can be done by integrating industrial case study methods, project-based learning approaches, and simulation training that resembles real work conditions.

Furthermore, the results of this study highlight the importance of direct involvement of instructors and lecturers who have a work background in the industry in the student learning process. The presence of lecturers with field experience is considered to have a positive impact on the formation of work ethic, discipline, and professional attitudes of students. This supports the idea of (Ghalib et al., 2024) that close collaboration between educational institutions and the business world/industry not only strengthens the authenticity of learning materials, but also increases relevance, readiness of graduates to enter the job market and sustainable human resource development. Therefore, an integrative approach that actively involves industry players in the learning process needs to continue to be developed through flexible and adaptive partnership schemes, both in the form of joint project-based learning, guest lectures, and internship guidance.

From a theoretical perspective, the findings of this study do not contradict the theory of Experiential Learning by (Kolb, 1984), but rather strengthen the validity of the theory in the context of vocational education. The cycle of direct

experience (concrete experience), reflection (reflective observation), abstract conceptualization, and active experimentation has been proven to form a deeper understanding and more applicable work skills in vocational students. However, the results of this study also indicate the need to expand the dimensions of the theory, especially by including aspects of character building, emotional intelligence, and social adaptation as an inseparable part of the modern learning process.

Previous studies have also shown that experiential learning models, such as those implemented in the 6+6 program, have proven effective in improving students' work readiness (Hanip et al., 2023). This model received a positive response from students, reflecting the success of integrating theory and practice in preparing students to face the industrial world. This is in line with the results of research (Yoantari et al., 2023) which revealed that direct practice connected to industry needs can significantly improve students' work readiness. Thus, this study contributes to the development of experiential learning theory with a broader scope, especially in responding to the demands of 4C competencies (critical thinking, communication, collaboration, creativity) in the era of society 5.0 (Arsanti et al., 2021).

Overall, this study enriches the discourse on the effectiveness of vocational education in Indonesia, especially those based on industrial internships such as the 6+6 program. This article is expected to be an empirical reference in the formulation of vocational curriculum policies that are more responsive to the needs of future industries, by emphasizing the balance between technical mastery and non-technical skill development. Comparison of the results of this study with findings from national and international accredited journals also strengthens its validity and credibility, and opens up space for replication or expansion of studies in other study programs that have vocational learning characteristics, both in the fields of tourism, services, and other technical vocations.

## CONCLUSION

Based on the results of the research that has been conducted, several things can be concluded as follows. First, theoretical and practical learning in the first six months of the 6+6 program at Batam Tourism Polytechnic has proven effective in equipping students with the basic technical skills needed to face industrial internships, as evidenced by the increase in pre-test to post-test scores and positive responses from students and instructors. Second, although technical competencies have been achieved well, there are still gaps in soft skills aspects such as professional communication, mental readiness, and work pressure management, which have not been fully accommodated in the existing learning structure. Third, student readiness is greatly influenced by the quality of practical teaching, the experience of industrial instructors, and the integration of theory, practice, and simulations that resemble real conditions in the industry. Therefore, it is necessary to strengthen the curriculum that emphasizes more on project-based learning, case studies, and situational training so that graduates are not only technically ready, but also adaptive and professionally competent. This research has prospects for further development, either through expansion to other study programs, longitudinal design to assess post-internship impacts, or direct involvement of industry as evaluators of student competencies. The practical implications of these findings also open up opportunities for improving vocational education curriculum policies and developing more dynamic industry-campus partnership models.

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