

The Relationship Between Learning Disciplines and Learning Outcome in Food Presentation

Wiken Zelmiyas¹, Elida, Wiwik¹, Gusnita, Nurhasanah¹

¹Bachelor of Family Welfare Education Study Program, Department of Family Welfare Science, Faculty of Tourism and Hospitality, Universitas Negeri Padang, Indonesia

Corresponding Author: Wiken Zelmiyas

Email: 11111961@fpp.unp.ac.id

Article Info

Article History:

Received June 25, 2026

Revised July 7, 2026

Accepted: July 28, 2026

Keywords:

Learning Discipline, Learning Outcomes, Vocational Education.

Abstract

Learning discipline is considered one of the essential internal factors influencing students' academic achievement, particularly in vocational education, where both theoretical understanding and practical competencies are required. This study aimed to examine the relationship between learning discipline and students' learning outcomes in the Food Service subject among Grade XI Culinary Arts students at SMK Negeri 1 Ampek Angkek, Indonesia. A quantitative research design employing a correlational approach was adopted. The study involved the entire population of 44 Grade XI Culinary Arts students using a total sampling technique. Primary data on learning discipline were collected through a validated 42-item Likert-scale questionnaire, while secondary data on learning outcomes were obtained from students' official summative assessment records. Prior to hypothesis testing, instrument validity and reliability were established, and data were analyzed using descriptive statistics, normality and linearity tests, and Pearson Product-Moment correlation analysis with IBM SPSS Statistics. The findings revealed that students' learning discipline was generally at a very high level, whereas their learning outcomes were classified as moderate. Assumption testing confirmed that the data were normally distributed and that the relationship between the variables was linear. Pearson correlation analysis demonstrated a positive and statistically significant relationship between learning discipline and learning outcomes ($r = 0.845$, $p < 0.001$), indicating a very strong correlation. Furthermore, the coefficient of determination showed that learning discipline explained 71.4% of the variance in students' learning outcomes, while the remaining 28.6% was attributable to other factors not examined in this study. These findings highlight the importance of strengthening students' learning discipline through effective instructional strategies and supportive learning environments to enhance academic achievement and promote competency development in vocational education.

Introduction

Education is a crucial human need because it is responsible for preparing human resources for national and state development. Advances in science and technology (IPTEK) result in increasingly complex changes and growth. This creates social problems and new, unpredictable demands. Consequently, education consistently faces challenges due to the gap between expectations and the results achieved through the educational process (Abedi, 2024; Chand,

2024; Usri et al., 2025). To address these issues, the role of education is crucial. Education demands the attention and participation of all parties. Education can develop students' intelligence and shape them into whole human beings, individuals devoted to God Almighty.

Vocational High Schools (SMK) are workplace-oriented schools, one of the goals of which is to prepare and equip students with the skills necessary to become skilled middle-level workers with the required skills. Teaching and learning activities at the vocational high school level are aimed at developing students' abilities to develop their learning outcomes, including knowledge, skills, and values, attitudes, and character, to support their potential development (Rachmawati et al., 2023; Jalinus et al., 2023; Herlambang, 2024; Agustin et al., 2025). Vocational education is secondary education that prepares students for work in specific fields. The curriculum at vocational high schools (SMK) expects students enrolled in vocational high schools to be ready for immediate employment.

The Culinary Expertise Program is designed to provide learning that emphasizes a balance between theory and practice, so that students develop competencies in processing, presenting, and managing culinary businesses that meet industry standards. Furthermore, learning in the culinary expertise program is also aimed at fostering students' discipline, creativity, and entrepreneurial spirit. Vocational education must produce graduates who are not only technically skilled but also possess work-readiness and independence (Nurjanah & Ana, 2022; Inderanata & Sukardi, 2023; Wahyuningsih et al., 2025). Therefore, the Culinary Expertise Program at SMK Negeri 1 Ampek Angkek is expected to produce competent, competitive graduates who are ready to face the challenges of the workplace and the business world. In the Regulation of the Minister of National Education Number 22 of 2006 concerning content standards, the subjects taught in vocational schools are divided into 3 program groups, namely productive, adaptive and normative programs.

The subject of Catering is a vocational subject that demands a balance between theoretical understanding and practical skills. In learning Catering, students are required to master various competencies, such as knowledge of menus, table setting, service etiquette, the sequence of service, and a professional attitude in serving guests. Effective learning in Catering requires a strong learning discipline, as most competencies can only be mastered through repeated practice, perseverance, and dedication to practice. Without strong learning discipline, students will struggle to achieve the desired competencies, which will impact their learning outcomes (Trinova et al., 2022; Attakhidijah, 2022; Pradja, 2025).

In the eleventh grade of Catering, only 21 out of 44 students achieved the Minimum Completion Criteria (KKM), while 23 students failed to meet this standard. This indicates that some students still struggle to achieve the desired learning outcomes. Learning outcomes are inseparable from influencing factors. Burke et al. (2024), also explains that internal and external factors influence student learning outcomes. Internal factors originate from within the individual, including intelligence/ability, interests, learning motivation, study habits, and discipline. External factors originate from outside the individual, namely the educational environment, including family, school, and community (Rusli et al., 2023; Chamidy et al., 2023). Based on these factors influencing learning outcomes, one internal factor that plays a significant role in student learning outcomes is discipline.

Based on the researchers' observations during the Field Work Experience (PLK) in the July-December 2025 semester and interviews with subject teachers, some students still lack discipline in participating in the Food and Beverages (Coffee Arts) learning process. This is evident in the habit of arriving late, not bringing practical equipment, paying little attention to

teacher instructions, and being disorganized in maintaining the cleanliness and tidiness of the work area. This subject, however, requires precision, punctuality, and adherence to service procedures. Furthermore, students lack consistency in completing assignments. Assignments are often submitted past the deadline, and practical work results do not meet established service standards. These conditions indicate a lack of discipline in learning, which can impact student learning outcomes (Nachtigall et al., 2022; Refliana & Pertiwi, 2023; Meng et al., 2025).

Previous research conducted by Muda et al. (2024) & Karno (2023) with the title "The Relationship between Learning Discipline and Student Learning Outcomes in the Productive Subject of Hairdressing at SMK Negeri 6 Padang in the 2014/2015 Academic Year" the results of this study showed that student discipline in productive subjects was in the low category with a respondent achievement level of 57%, this percentage was in the range of 55% - 64%. Learning outcomes are in the Moderate category, based on the Minimum Completion Criteria (KKM), it is known that there are 18 (39%) students who have a score $\geq$ KKM 80 and there are 28 (61%) students who have a score $\leq$ KKM 80. Research also conducted by Rahmawati (2022) with the title "The Relationship between Learning Habits and Learning Outcomes of Class X Students at SMA Negeri 1 Ampek Angkek" The results of this study indicate that there is a positive relationship between learning habits and learning outcomes with a correlation coefficient of 0.304 and a contribution of 9.2% (low but significant). Based on this background, the author is interested in conducting research entitled "The Relationship between Learning Discipline and Learning Outcomes of the Tableware Subject for Class XI of SMK Negeri 1 Ampek Angkek".

Method

Research Design

This study employed a quantitative research design using a correlational approach to examine the relationship between students' learning discipline and their learning outcomes in the Food Service subject. Quantitative research is appropriate for testing hypotheses through statistical analysis and examining relationships among measurable variables. According to Sugiyono (2020), quantitative research is grounded in the positivist paradigm and utilizes structured research instruments to collect numerical data for hypothesis testing. The correlational approach was selected because the study did not seek to manipulate variables but rather to determine the strength and direction of the relationship between learning discipline (independent variable) and learning outcomes (dependent variable). This design enables researchers to identify whether students with higher levels of learning discipline also tend to achieve better academic performance in Food Service learning.

Research Setting and Participants

The research was conducted at SMK Negeri 1 Ampek Angkek, located on Jalan Raya Panca, Batu Taba, Ampek Angkek District, Agam Regency, West Sumatra, Indonesia. Data collection was carried out from May to June 2026 during the second semester of the 2025/2026 academic year. The population consisted of all Grade XI students enrolled in the Culinary Arts program. The population included two classes, namely XI Culinary Arts 1 and XI Culinary Arts 2, each consisting of 22 students, resulting in a total population of 44 students. Because the population size was relatively small and manageable, this study employed a total sampling technique, in which all members of the population were included as research participants. Total sampling was considered appropriate because it eliminates sampling error and provides a comprehensive representation of the target population, thereby increasing the accuracy of the research findings.

Research Variables

This study involved two research variables. The independent variable (X) was students' learning discipline, while the dependent variable (Y) was students' learning outcomes in the Food Service subject. Learning discipline refers to students' consistency in complying with learning regulations, completing assignments on time, participating actively in classroom activities, preparing learning materials, managing study time effectively, and demonstrating responsibility throughout the learning process. Meanwhile, learning outcomes refer to students' academic achievement as reflected in their official summative assessment scores in the Food Service subject obtained from school records.

Data Sources and Data Collection Procedures

The study utilized both primary and secondary data sources. Primary data were collected directly from respondents through a structured questionnaire designed to measure students' learning discipline. Secondary data consisted of students' official summative assessment scores in the Food Service subject, which were obtained from the subject teacher with permission from the school administration. Data collection was conducted using two techniques: questionnaires and documentation. The questionnaire was administered to all 44 respondents to obtain information regarding their learning discipline. Prior to administration, participants received explanations regarding the purpose of the study and were assured that their responses would remain confidential and would be used solely for research purposes. The documentation technique was employed to obtain supporting information, including student identities, class enrollment, and official learning outcome scores. Combining questionnaire and documentation techniques allowed the researcher to collect objective academic data while simultaneously measuring students' behavioral characteristics related to learning discipline.

Research Instruments

The primary research instrument for measuring learning discipline was a structured questionnaire developed based on indicators of disciplined learning behavior identified in the educational literature. The questionnaire consisted of 42 statements representing various dimensions of learning discipline, including punctuality, compliance with classroom rules, responsibility in completing assignments, learning consistency, preparation for learning activities, and effective time management. Responses were measured using a five-point Likert scale following Sugiyono (2020), consisting of Always (5), Often (4), Sometimes (3), Rarely (2), and Never (1) for positive statements, with reverse scoring applied to negative statements. Higher scores indicated stronger learning discipline. The dependent variable, students' learning outcomes, was measured using the official summative assessment scores for the Food Service subject. These scores represented students' academic achievement based on standardized classroom assessments conducted by the subject teacher according to the school's evaluation procedures.

Instrument Validity and Reliability

Before the main data collection, the questionnaire underwent pilot testing to evaluate its validity and reliability. Since the entire population of the target school was included in the study, the pilot test was conducted outside the research population using 30 Grade XI Culinary Arts students at SMK Negeri 2 Bukittinggi, who possessed educational characteristics similar

to those of the research participants. The pilot questionnaire was distributed electronically using Google Forms to facilitate data collection and ensure efficient administration. Item validity was assessed using the Pearson Product-Moment correlation coefficient with the assistance of IBM SPSS Statistics. At a significance level of 5%, questionnaire items were considered valid when the calculated correlation coefficient (r-count) exceeded the critical value (r-table). Items failing to meet this criterion were excluded or revised before the final questionnaire was administered. Instrument reliability was evaluated using Cronbach's Alpha coefficient. A reliability coefficient of 0.70 or higher was considered acceptable, indicating satisfactory internal consistency and demonstrating that the instrument consistently measured students' learning discipline.

Data Analysis

Data analysis was conducted using IBM SPSS Statistics through several stages. Descriptive statistical analysis was performed to summarize the characteristics of the data by calculating frequencies, percentages, means, standard deviations, minimum values, and maximum values. These statistics were used to describe the levels of students' learning discipline and learning outcomes. Assumption testing was conducted before hypothesis testing. The normality of the data distribution was assessed using the Shapiro Wilk test, where a significance value greater than 0.05 indicated that the data were normally distributed. Subsequently, a linearity test was performed to determine whether the relationship between learning discipline and learning outcomes was linear, which is an essential assumption for Pearson correlation analysis. The research hypothesis was tested using the Pearson Product-Moment correlation analysis to determine the strength and direction of the relationship between learning discipline and learning outcomes. The statistical significance of the correlation coefficient was evaluated at the 5% significance level ($\alpha = 0.05$). The magnitude of the relationship was interpreted according to standard correlation coefficient criteria, ranging from very weak to very strong. In addition, the coefficient of determination (R^2) was calculated to estimate the proportion of variance in students' learning outcomes that could be explained by learning discipline.

Result and Discussion

Descriptive Analysis of the Discipline of Learning Cookery

This study analyzes descriptive statistics on the learning discipline of class XI Culinary students of SMK Negeri 1 Ampek Angkek obtained from 44 students as respondents with a questionnaire totaling 42 items with a scale of 1-5. After data collection, a description of the data on the measure of central tendency, namely the mean (M), median (Me), and mode (Mo), as well as the range, standard deviation, minimum and maximum can be presented in the following table:

Table 1. Descriptive Statistics of Learning Discipline

Statistic	Value
Valid N	44
Missing	0
Mean	171.80
Std. Error of Mean	2.670
Median	174.50
Mode	175
Std. Deviation	17.709
Variance	313.608

Range	79
Minimum	128
Maximum	207
Sum	7559

Based on table 1 above, it is known that the mean = 171; median = 174; mode = 175; standard deviation = 17.70; range = 79; lowest score = 128; and highest score = 207. In order to determine the average tendency of the learning discipline score variable, a categorization of the ideal score that should be obtained was carried out. The number of items used for the learning discipline variable was 42 items with a score scale of 1-5 so that the lowest score was 128 and the highest score was 207.

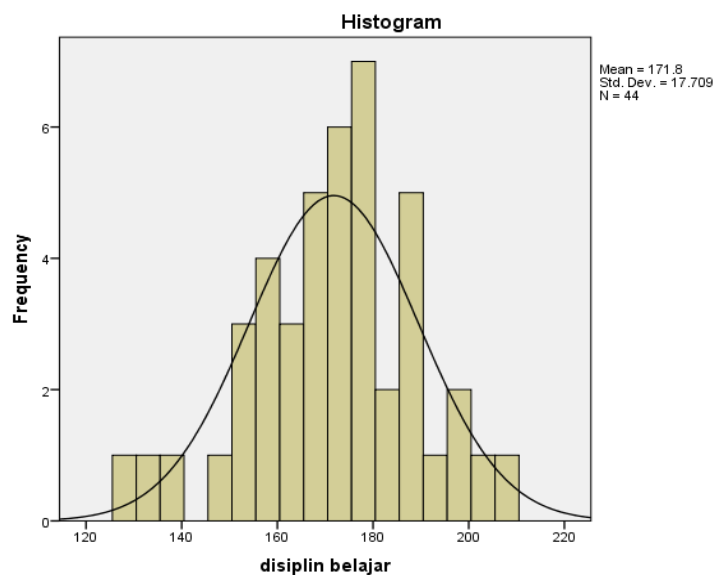


Figure 1. Histogram of Learning Discipline of Class XI Culinary Students

Based on the histogram of the learning discipline variable in Figure 1, the data distribution tends to form a bell-shaped curve and is relatively symmetrical. The mean score for learning discipline was 171.8 with a standard deviation of 17.709 across 44 respondents. Most scores fell within the 160–190 range, with the highest frequency occurring around 170–180. The frequency distribution of the learning discipline categories can be seen in the following table:

Table 2. Total Student Learning Discipline Categories

Category	Frequency	Percentage
Very High	28	63,64%
High	13	29,25%
Medium	3	6,82%
Low	0	0,00%
Very Low	0	0,00%
Total	44	100%

Based on Table 2 above, categorized using the Ideal Mean and Ideal Standard Deviation, the majority of respondents were in the very high category (28 respondents (63.64%). Furthermore, 13 respondents (29.55%) were in the high category and 3 respondents (6.82%) were in the

moderate category. There were no respondents in the low or very low categories. Thus, the level of student learning discipline is generally in the very high category.

Descriptive Analysis of Learning Outcomes of Culinary Arts Students of Class XI

This study analyzes descriptively the statistical learning outcomes of students of SMK Negeri 1 Ampek Angkek which are known by using the technique of documenting the report card grades of class XI Culinary students of SMK Negeri 1 Ampek Angkek, namely by asking permission from the teachers at the school to take information about the report card grades in the content of the subject of Food Service. After data collection, a description of the data on the measure of central tendency, namely the mean (M), median (Me), and mode (Mo), as well as the range of standard deviation, minimum and maximum can be presented in the following table:

Table 3. Descriptive Statistics of Table Service Learning Outcomes

Statistic	Value
Valid N	44
Missing	0
Mean	77.30
Std. Error of Mean	0.783
Median	77.00
Mode	73
Std. Deviation	5.197
Variance	27.004
Range	20
Minimum	68
Maximum	88
Sum	3401

Based on table 3 above, it is known that the mean = 77.30; median = 77; mode = 73; standard deviation = 5.197; range = 20; lowest score = 68; and highest score = 88. In order to determine the average tendency of the learning outcome score variable, a categorization of the ideal score that should be obtained was carried out. The learning outcomes taken based on the values obtained were the lowest score of 68 and the highest score of 8.

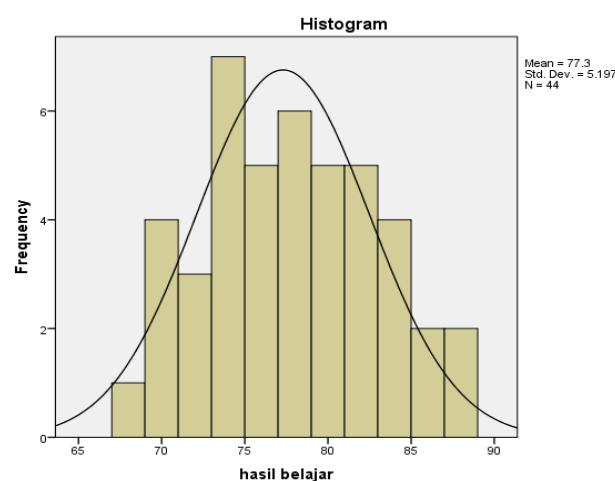


Figure 2. Histogram of Cooking Learning Results

The histogram of learning outcomes in Figure 4.2 shows that the data has a distribution close to normal, with a mean of 77.3 and a standard deviation of 5.197. Most respondents scored in the 74–79 range, so the data is concentrated around the mean, forming a curve pattern resembling a normal distribution. The frequency distribution of learning outcome categories can be seen in the following table:

Table 4. Category of Total Student Tableware Learning Outcomes

Value Interval	Frequency	Percentage
68–71	8	18,18%
72–75	10	22,73%
76–79	11	25,00%
80–83	9	20,45%
84–88	6	13,64%
Total	44	100%%

From Table 4 above, it is known that the majority of students are in the medium category, as many as 11 students (25%). Furthermore, the low category is 10 students (22.73%), and the high category is 9 students (20.45%). The very low category is 8 students (18.18%), while the very high category is 6 students (13.64%). Thus, student learning outcomes are generally in the medium category.

Normality Test

The results of this study are considered normal if the Asymp. Sig. value obtained is > 0.05 , whereas if the results obtained are < 0.05 , it is not normally distributed. The following are the results of the normality test of the research data on the relationship between learning discipline and student learning outcomes in the Culinary Arts subject of class XI of SMK Negeri 1 Ampek Angkek:

Table 5. Summary of Normality Test Results

Variable	Kolmogorov–SmirnovStatistic	df	Sig.	Shapiro–WilkStatistic	df	Sig.	Decision
Learning Discipline	0.073	44	0.200	0.982	44	0.701	Normally distributed
Learning Outcomes	0.080	44	0.200	0.979	44	0.575	Normally distributed

Table 5 above shows the results of the statistical analysis of the normality test conducted using the Shapiro-Wilk test. The results of the normality test for learning discipline were obtained with an Asymp.Sig (2-tailed) value of $0.701 > 0.05$. This data can be concluded that the data is normally distributed. The results of the normality test for learning outcomes with an Asymp.Sig (2-tailed) value of $0.575 > 0.05$. This data can be concluded that the data is normally distributed.

Linearity Test

Linearity testing was performed using the linearity test with SPSS. The criteria are: if the linearity sig. value is below 0.05 and the deviation sig. value is above 0.05, the variables are said to have a linear relationship. Conversely, if the linearity sig. value is above 0.05 and the deviation sig. value is above 0.05, the variables are said to have a non-linear relationship. The results of the linearity test can be seen in the following table:

Table 6. Summary of Linearity Test Results

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups (Combined)	954.159	33	28.914	1.397	0.296
Linearity	830.056	1	830.056	40.099	0.000
Deviation from Linearity	124.103	32	3.878	0.187	1.000
Within Groups	207.000	10	20.700	—	—
Total	1161.159	43	—	—	—

Based on the statistical results in table 6 above, the relationship between learning discipline (X) and learning outcomes (Y) obtained a significance value of $1.000 > 0.05$. Therefore, the relationship between learning discipline and learning outcomes can be said to be linear.

Correlation Coefficient Analysis

The data analysis used aims to calculate the correlation coefficient between the variables of learning discipline (X) and learning outcomes (Y) using Pearson correlation. The results of the analysis can be seen in the following table:

Table 7. Pearson Correlation Analysis

Variables	1	2
Learning Discipline	1	0.845
Learning Outcomes	0.845	1

Based on the results of the Pearson correlation test, the correlation coefficient (r) value was obtained at 0.845 with a significance value (Sig.) of 0.000. Because the significance value is less than 0.05 ($0.000 < 0.05$), H_0 is rejected and H_a is accepted. This indicates that there is a significant relationship between variable X and variable Y. The correlation coefficient value of 0.845 indicates that the relationship between the two variables is included in the very strong category and has a positive relationship direction. Thus, the higher the variable X, the higher the variable Y.

Correlation Coefficient Test

Based on the results of data analysis using the Product Moment correlation test, a correlation coefficient (r) value of 0.845 was obtained. This value indicates that there is a positive and very strong relationship between the variable of learning discipline and student learning outcomes. Furthermore, to test the significance of this relationship, a t-test was conducted. Based on the calculation, the calculated t value was 10.26, while the t-table value at a significance level of 0.05 with degrees of freedom (df) = 42 was 2.018. Thus, it is known that the calculated $t > t$ table ($10.26 > 2.018$). This indicates that H_0 is rejected and H_a is accepted, so it can be concluded that there is a significant relationship between learning discipline and student learning outcomes. Based on the correlation coefficient value of 0.845, a coefficient of determination of 71.4% was obtained. This shows that variable X has a relationship of 71.4% to variable Y, while the remaining 28.6% is influenced by other factors not examined in this study. This answers that the hypothesis in this study is accepted.

Learning Discipline as a Determinant of Academic Achievement in Vocational Education

The findings of this study demonstrate that learning discipline constitutes a fundamental determinant of academic achievement among vocational high school students, particularly in the Food Service subject. Vocational education differs from general education because it combines theoretical understanding with practical competency development, requiring

students to consistently demonstrate responsibility, punctuality, and adherence to standardized operational procedures. In this context, learning discipline extends beyond compliance with school regulations and becomes an essential behavioral competency that facilitates both cognitive and psychomotor learning. Students who consistently prepare for lessons, actively participate in classroom and laboratory activities, complete assignments punctually, and effectively manage their learning schedules are more likely to achieve the competencies expected in vocational education (Van et al., 2023; Kolil & Achuthan, 2024; Zafeer et al., 2025).

The importance of learning discipline can also be explained through the perspective of self-regulated learning theory, which emphasizes students' ability to independently regulate their learning behavior. Self-regulated learners are capable of planning learning activities, monitoring their own progress, controlling distractions, and evaluating learning outcomes to improve future performance. Such behaviors enable students to engage more deeply with instructional materials and practical exercises, resulting in better mastery of both theoretical concepts and technical skills. Since Food Service learning requires repeated practice, procedural accuracy, and professional attitudes, disciplined students naturally possess greater opportunities to strengthen their competencies through continuous engagement in the learning process.

These findings support Tu'u (2004), who argues that discipline is an important educational value that develops responsibility, persistence, and self-control, thereby contributing to improved academic achievement. Similarly, educational psychology recognizes discipline as an internal characteristic that influences students' readiness to learn and their commitment to academic goals. Within vocational education, disciplined learning behaviors also reflect the work ethics expected in professional hospitality settings, including punctuality, accountability, teamwork, and adherence to service standards. Consequently, cultivating learning discipline contributes not only to improved classroom performance but also to the development of employability skills required in the hospitality industry.

The Contribution of Learning Discipline to Students' Learning Outcomes

The correlation analysis revealed that learning discipline has a very strong positive association with students' learning outcomes. This finding indicates that disciplined learning behaviors substantially contribute to students' academic success in Food Service learning. Students who consistently allocate time for study, follow teachers' instructions, complete practical assignments according to established procedures, and demonstrate responsibility throughout classroom activities tend to perform better academically than students with lower levels of learning discipline. These behavioral patterns enable students to maximize learning opportunities, minimize learning disruptions, and reinforce competency development through repeated practice (Hasanah et al., 2024; Lane et al., 2025).

The strong statistical relationship identified in this study further indicates that behavioral factors play a central role in determining students' achievement in vocational education. Unlike theoretical subjects that rely primarily on conceptual understanding, Food Service learning requires students to repeatedly perform practical tasks while simultaneously applying theoretical knowledge. Therefore, disciplined learning behavior contributes to competency development by ensuring that students consistently engage in practical activities, maintain procedural accuracy, and actively participate throughout the instructional process. These learning experiences collectively strengthen students' mastery of vocational competencies and ultimately improve academic performance.

Although learning discipline explains a substantial proportion of students' learning outcomes, the findings also indicate that academic achievement remains a multidimensional phenomenon. The remaining unexplained variation suggests that additional variables including learning motivation, cognitive ability, instructional quality, parental support, learning facilities, classroom climate, peer collaboration, and prior academic preparation may also influence students' performance. Therefore, improving students' learning outcomes requires a comprehensive educational approach that combines the development of disciplined learning behaviors with instructional innovations and supportive learning environments. This interpretation is consistent with Slameto (2013), who emphasizes that learning outcomes emerge from the interaction of internal and external factors rather than from a single determinant.

Comparison with Previous Studies

The present findings are consistent with numerous previous studies reporting positive relationships between learning discipline and academic achievement across various educational contexts. Handayani & Subakti (2021) found that students with stronger learning discipline demonstrated significantly higher learning outcomes because disciplined learners were more responsible, organized, and actively engaged throughout the instructional process. Likewise, Siregar & Syaputra (2022) concluded that learning discipline positively influences students' academic performance by encouraging regular study habits and greater commitment to completing learning tasks. Similar conclusions were reported by Aslianda et al. (2017), who identified learning discipline as one of the strongest internal factors associated with elementary students' academic achievement.

While these previous studies primarily focused on general education settings, the present study extends the existing literature by examining vocational education, where competency acquisition depends heavily on practical performance. Vocational students are expected not only to understand theoretical concepts but also to demonstrate professional competencies through repeated practical activities that closely resemble workplace situations. Consequently, discipline becomes even more important because students must consistently follow operational procedures, maintain hygiene standards, communicate professionally, and perform technical tasks accurately. This vocational context strengthens the practical significance of learning discipline as an educational factor influencing competency development.

Moreover, the strength of the relationship identified in this study suggests that learning discipline may play an even greater role in vocational education than in general academic settings. The competency-based nature of vocational curricula requires continuous practice, responsibility, and procedural compliance, making disciplined learning behavior indispensable for successful competency attainment. Therefore, the present findings contribute new empirical evidence supporting the integration of behavioral competencies within vocational education research and reinforce the importance of discipline as a foundation for both academic achievement and professional readiness.

Educational Implications for Vocational Schools

The findings of this study have important implications for educational practice, particularly within vocational schools preparing students for employment in the hospitality and food service industries. Since learning discipline demonstrates a strong relationship with academic achievement, educational institutions should view discipline as a competency that can be systematically developed rather than merely enforced through school regulations. Developing

disciplined learning habits should become an integral component of curriculum implementation because such behaviors directly support competency acquisition and professional skill development.

Teachers play a central role in fostering learning discipline by establishing structured learning environments that encourage responsibility, punctuality, active participation, and independent learning. Practical learning activities should be designed to promote consistency, accountability, and adherence to professional standards similar to those expected in the workplace. Constructive feedback, continuous monitoring, reflective learning activities, and authentic assessments may further strengthen students' commitment to disciplined learning behaviors while simultaneously improving their vocational competencies (Ketonen et al., 2025).

School administrators can also contribute by developing institutional policies that support positive learning behaviors through mentoring programs, academic counseling, parental involvement, attendance monitoring, and recognition systems that reward disciplined academic performance. Such comprehensive interventions may improve not only students' academic outcomes but also their work readiness, professional attitudes, and employability upon graduation. Consequently, strengthening learning discipline represents an investment in both educational quality and workforce preparation.

Conclusion

This study concludes that learning discipline is a significant determinant of students' academic achievement in the Food Service subject at SMK Negeri 1 Ampek Angkek. The findings reveal a positive and very strong relationship between learning discipline and learning outcomes, indicating that students who consistently demonstrate disciplined learning behaviors such as adhering to classroom rules, managing study time effectively, actively participating in learning activities, and completing assignments responsibly tend to achieve higher academic performance. The substantial contribution of learning discipline to learning outcomes highlights the importance of fostering disciplined learning habits as part of vocational education, where competency development depends on both theoretical understanding and practical performance. These findings underscore the need for teachers and school administrators to implement instructional strategies and supportive learning environments that strengthen students' learning discipline, thereby enhancing academic achievement and preparing graduates with the professional attitudes and competencies required in the hospitality and food service industry. Nevertheless, because learning outcomes are also influenced by other internal and external factors, future research should investigate additional determinants, including learning motivation, self-efficacy, instructional quality, and family support, using broader samples and more diverse research designs to provide a more comprehensive understanding of students' academic success in vocational education.

References

- Abedi, E. A. (2024). Tensions between technology integration practices of teachers and ICT in education policy expectations: implications for change in teacher knowledge, beliefs and teaching practices. *Journal of computers in education*, 11(4), 1215-1234. <https://doi.org/10.1007/s40692-023-00296-6>
- Agustin, H., Saputro, H., & Setiawan, A. H. (2025). Enhancing Learning Outcomes and Motivation in Vocational High School Students through Canvasites Learning Media

Development. *AL-ISHLAH: Jurnal Pendidikan*, 17(1), 683-692.
<https://doi.org/10.35445/alishlah.v17i1.5951>

- Aslianda, Z., Israwati, & Nurhaidiyah. (2017). Hubungan disiplin belajar terhadap hasil belajar siswa kelas IV Sekolah Dasar Negeri 18 Banda Aceh. *Jurnal Ilmiah Pendidikan Guru Sekolah Dasar FKIP Unsyiah*, 2(1), 236–243.
- Attakhidijah, S. (2022). The effect of discipline and learning motivation on student learning outcomes in elementary schools. *Jurnal Ilmiah Sekolah Dasar*, 6(3), 494-500.
<https://doi.org/10.23887/jisd.v6i3.49806>
- Burke, C. M., Montross, L. P., & Dianova, V. G. (2024). Beyond the classroom: An analysis of internal and external factors related to students' love of learning and educational outcomes. *Data*, 9(6), 81. <https://doi.org/10.3390/data9060081>
- Chamidy, T., Yaqin, M. A., & Suhartono, S. (2023, March). The influence of internal and external factors on learning achievement. In *4th Annual International Conference on Language, Literature and Media (AICOLLIM 2022)* (pp. 562-573). Atlantis Press.
- Chand, S. P. (2024). Bridging the gaps in quality education. *The Educational Review, USA*, 8(2). <http://dx.doi.org/10.26855/er.2024.02.001>
- Handayani, E. S., & Subakti, H. (2021). Pengaruh disiplin belajar terhadap hasil belajar Bahasa Indonesia di sekolah dasar. *Jurnal Basicedu*, 5(1), 151–161.
<https://doi.org/10.31004/basicedu.v5i1.633>
- Hasanah, M., Arafat, Y., Barni, M., Raya, A. T., & Aprilianto, A. (2024). Teachers' Strategies for Managing Disruptive Behavior in The Classroom During The Learning Process. *Nazhruna: Jurnal Pendidikan Islam*, 7(3), 628-645.
<https://doi.org/10.31538/nzh.v7i3.7>
- Herlambang, A. D. (2024). The flipped-classroom effect on vocational high school students' learning outcomes. *International Journal of Evaluation and Research in Education*.
- Inderanata, R. N., & Sukardi, T. (2023). Investigation study of integrated vocational guidance on work readiness of mechanical engineering vocational school students. *Heliyon*, 9(2).
- Jalinus, N., Sukardi, S., Wulansari, R. E., Heong, Y. M., & Kiong, T. T. (2023). Teaching activities for supporting students' 4cs skills development in vocational education. *Journal of Engineering Researcher and Lecturer*, 2(2), 70-79.
- Karno, E. (2023). The Relationship of Student Learning Interests and Discipline to Economic Learning Outcomes: Case Study of Students in Class XI Madrasah Aliyah.
<https://doi.org/10.47616/jamres.v5i1.509>
- Ketonen, L., Körkkö, M., & Pöysä, S. (2025). Authentic assessment as a support for student teachers' reflection. *European Journal of Teacher Education*, 48(3), 467-488.
<https://doi.org/10.1080/02619768.2023.2229004>
- Kolil, V. K., & Achuthan, K. (2024). Virtual labs in chemistry education: A novel approach for increasing student's laboratory educational consciousness and skills. *Education and Information Technologies*, 29(18), 25307-25331. <https://doi.org/10.1007/s10639-024-12858-x>

- Lane, K. L., Menzies, H. M., Bruhn, A. L., & Crnobori, M. (2025). *Managing challenging behaviors in schools: Research-based strategies that work*. Guilford Publications.
- Meng, X., Guo, Y., Wang, W., & Yin, H. (2025). Discipline matters: A disciplinary comparison of university students' course experience and learning outcomes in China. *Future in Educational Research*, 3(3), 392-408. <https://doi.org/10.1002/fer3.71>
- Muda, F. F. I. K., Luneto, B., & Yasin, Z. (2024). The Influence of Discipline and Learning Management on Student Learning Outcomes in Islamic Religious Education Subjects at SMP Negeri 12 Gorontalo. *Journal of Asian Multicultural Research for Educational Study*, 5(1), 32-28.
- Nachtigall, V., Shaffer, D. W., & Rummel, N. (2022). Stirring a secret sauce: A literature review on the conditions and effects of authentic learning. *Educational Psychology Review*, 34(3), 1479-1516. <https://doi.org/10.1007/s10648-022-09676-3>
- Nurjanah, I., & Ana, A. (2022, March). Work readiness of TVET graduates in the context of industry 4.0. In *4th International conference on innovation in engineering and vocational education (ICIEVE 2021)* (pp. 34-38). Atlantis Press. <https://doi.org/10.2991/assehr.k.220305.008>
- Pradja, N. S. (2025). The Influence of Teacher Competence on Student Learning Outcomes in Product, Creativity, and Entrepreneurship Subjects with Learning Discipline Mediation. *Jurnal Penelitian Pendidikan IPA*, 11(10), 1036-1043.
- Rachmawati, D., Suharno, S., & Roemintoyo, R. (2023). The effects of learning design on learning activities based on higher order thinking skills in vocational high schools. *Open Education Studies*, 5(1), 20220202.
- Rahmawati, R. (2022). Development of Nara-Media Applications to Improve Reading Ability in Language Education. *CERN European Organization for Nuclear Research-Zenodo*.
- Refliana, F., & Pertiwi, M. (2023). The effect of learning discipline and learning independence on economics learning outcomes of class X students. *Indonesian Journal of Education Research (IJoER)*, 4(3), 58-63.
- Rusli, A., Gusmawati, G., Hendri, W., & Sari, R. T. (2023). Relationship of External Factors Caused Student's Learning Difficulties and Biology Learning Outcomes in Class XI IPA MAN 3 Padang City. *International Journal of Education and Teaching Zone*, 2(1), 105-112. <https://doi.org/10.57092/ijetz.v2i1.57>
- Sari, W. F. (2015). *Hubungan disiplin belajar dengan hasil belajar siswa pada mata pelajaran produktif tata rias rambut di SMK Negeri 6 Padang tahun ajaran 2014/2015*. Universitas Negeri Padang.
- Siregar, D. M., & Syaputra, E. (2022). Pengaruh disiplin belajar terhadap hasil belajar Bahasa Indonesia. *Jurnal Multidisiplin Dehasen (MUDE)*, 1(3), 119–124.
- Slameto. (2013). *Belajar dan faktor-faktor yang mempengaruhinya*. Rineka Cipta.
- Sugiyono. (2020). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.
- Trinova, Z., Astuti, R., Perdana, I., Rahman, Y., Jhony, C., Haris, I., & Arifin, A. (2022). Influence of Interest and Discipline on Student Learning Outcomes. *Journal of Higher Education Theory & Practice*, 22(18).

- Tu'u, T. (2004). *Peran disiplin pada perilaku dan prestasi siswa*. Grasindo.
- Usri, U., Salam, A. M. I., Hasanuddin, M. I., & Badaruddin, S. (2025). Bridging Expectations and Outcomes: A Discrepancy Model Evaluation of Learning Effectiveness in an Islamic Higher Education Context. *AL-ISHLAH: Jurnal Pendidikan*, 17(2), 2058-2069.
- Van den Beemt, A., Groothuijsen, S., Ozkan, L., & Hendrix, W. (2023). Remote labs in higher engineering education: engaging students with active learning pedagogy. *Journal of Computing in Higher Education*, 35(2), 320-340. <https://doi.org/10.1007/s12528-022-09331-4>
- Wahyuningsih, R., Joyoatmojo, S., Wardani, D. K., & Noviani, L. (2025). Work-integrated learning to improve work readiness of vocational education in school and madrasah. *Munaddhomah: Jurnal Manajemen Pendidikan Islam*, 6(4), 586-602. <https://doi.org/10.31538/munaddhomah.v6i4.1928>
- Zafeer, H. M. I., Maqbool, S., Rong, Y., & Maqbool, S. (2025). Impact of Digital Learning Tools on Student's Engagement and Achievement in Middle School Science Classes. *International Journal of Technology in Education and Science*, 9(2), 177-196.