

**Workplace safety awareness and its influence on carpentry skill acquisition
among junior high school students**

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ABSTRACT

This study determined the workplace safety awareness and its influence on carpentry skill acquisition among Grade 8–10 learners in Alicia Vocational School during the School Year 2025–2026. Specifically, it assessed the respondents' profile, the level of workplace safety awareness, the level of carpentry skill acquisition, the significant relationship between the two variables, and proposed an instructional and safety enhancement plan. The study employed a descriptive-correlational research design involving 51 junior high school learners enrolled in carpentry classes. A researcher-made, validated questionnaire served as the primary data-gathering instrument. Frequency, percentage, weighted mean, and Pearson Product-Moment Correlation Coefficient were used to analyze the data. Findings revealed that both female and male respondents exhibited a very high level of workplace safety awareness and very high carpentry skill acquisition. Female learners rated workshop discipline highest, while male learners ranked the use of personal protective equipment highest. In terms of carpentry skills, females excelled in accuracy and workmanship, whereas males ranked highest in task completion. Correlation analysis yielded $r = -0.150$ with a p-value of 0.632, indicating no significant relationship between workplace safety awareness and carpentry skill acquisition. An instructional and safety enhancement plan was proposed to strengthen safety practices and improve technical competencies. The study concludes that although workplace safety awareness and carpentry skill acquisition are both highly evident, technical competence is influenced by multiple instructional and environmental factors beyond safety awareness alone.

Keywords: Workplace safety awareness, carpentry skill acquisition, technical-vocational education, junior high school learners, descriptive-correlational research.

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INTRODUCTION

This study examined the workplace safety awareness and its influence on carpentry skill acquisition among Grade 8–10 learners in Alicia Vocational School. Workplace safety is an essential component of technical–vocational education because it promotes learners' protection, discipline, and responsible work habits while developing technical competencies. The study sought to determine the respondents' profile, assess their level of workplace safety awareness and carpentry skill acquisition, determine whether a significant relationship exists

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between the two variables, and propose an instructional and safety enhancement plan based on the findings.

Statement of the problem

This study aimed to determine the workplace safety awareness and its influence on carpentry skill acquisition among Grade 8 to Grade 10 learners enrolled in carpentry classes at Alicia Vocational School during the School Year 2025–2026.

Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in terms of grade level, sex, and length of exposure to carpentry instruction?
2. What is the level of workplace safety awareness among the respondents in terms of the use of personal protective equipment, workshop discipline, proper handling of tools and equipment, and hazard prevention and risk avoidance?
3. What is the level of carpentry skill acquisition among the respondents in terms of accuracy and workmanship, task completion, tool proficiency, and independent performance of carpentry tasks?
4. Is there a significant relationship between the respondents' level of workplace safety awareness and their level of carpentry skill acquisition?
5. Based on the findings of the study, what instructional and safety enhancement plan may be proposed to strengthen workplace safety practices and improve carpentry skill acquisition among junior high school learners?

METHODOLOGY

The study employed a descriptive–correlational research design to determine the level of workplace safety awareness and carpentry skill acquisition and to examine the relationship between these variables. The respondents were 51 Grade 8–10 learners enrolled in carpentry classes at Alicia Vocational School during School Year 2025–2026. Data were collected using a researcher-made, expert-validated questionnaire consisting of three parts: respondents' profile, workplace safety awareness, and carpentry skill acquisition. A pilot test was conducted to establish the reliability of the instrument before its administration.

The collected data were analyzed using frequency and percentage to describe the respondents' profile, weighted mean to determine the levels of workplace safety awareness and carpentry skill acquisition, and the Pearson Product-Moment Correlation Coefficient (Pearson r) to determine the significant relationship between the variables at the 0.05 level of significance.

This study strictly observed ethical principles throughout the conduct of the research to protect the rights, welfare, and dignity of all respondents. Prior to data collection, approval to conduct the study was obtained from the school head of Alicia Vocational School. The respondents were informed of the purpose, objectives, and procedures of the study, and their participation was entirely voluntary. They were assured that they could decline participation or withdraw from the study at any time without any negative consequences. Since the respondents were junior high school learners, appropriate coordination with the school authorities and adherence to institutional research protocols were observed. These procedures are consistent with the ethical principles embodied in the Republic Act No. 10173 (Data Privacy Act of 2012) and the Republic Act No. 10533, which promote the protection of learners' rights and welfare within educational settings.

RESULTS AND DISCUSSION

The findings revealed that most female respondents were Grade 10 learners, while most male respondents were Grade 9 learners. The majority of both female and male respondents had less than one year of exposure to carpentry instruction.

The respondents demonstrated a very high level of workplace safety awareness, with female learners obtaining a grand average weighted mean of 4.81 and male learners obtaining 4.76, both verbally interpreted as Strongly Agree. Female respondents ranked Workshop Discipline highest, whereas male respondents ranked Use of Personal Protective Equipment highest.

Similarly, the respondents demonstrated a very high level of carpentry skill acquisition. Female learners obtained a grand average weighted mean of 4.69, while male learners obtained 4.72, both interpreted as Strongly Agree. Female respondents ranked Accuracy and Workmanship highest, whereas male respondents ranked Task Completion highest.

The Pearson Product-Moment Correlation analysis yielded an r -value of -0.150 and a p -value of 0.632, which is greater than the 0.05 level of significance. Thus, the null hypothesis was accepted, indicating no significant relationship between workplace safety awareness and carpentry skill acquisition among the respondents.

Based on the findings, an instructional and safety enhancement plan was proposed to strengthen workplace safety practices and further improve learners' carpentry competencies.

The findings indicate that learners possess a strong awareness of workplace safety and demonstrate a high level of technical competence in carpentry. Their consistent adherence to workshop rules, proper use of personal protective equipment, and responsible tool handling suggest that safety practices have become part of their learning experiences. Likewise, their high ratings in carpentry skill acquisition reflect the effectiveness of practical instruction and workshop activities in developing essential technical competencies.

Although both workplace safety awareness and carpentry skill acquisition were rated very highly, the absence of a significant relationship suggests that safety awareness alone does not directly determine learners' technical performance. Carpentry skill acquisition appears to be influenced by multiple factors, including instructional quality, teacher guidance, workshop resources, learner motivation, frequency of practical activities, and opportunities for experiential learning. Workplace safety remains an essential prerequisite for effective technical instruction because it creates an environment where learners can participate confidently and responsibly, even if it does not independently predict technical competence.

The findings emphasize the importance of maintaining strong safety programs while simultaneously strengthening instructional strategies that promote technical mastery. The proposed instructional and safety enhancement plan provides practical interventions that may further improve both safety practices and carpentry competencies among learners. Future studies may explore additional variables affecting skill acquisition to provide a broader understanding of learners' performance in technical–vocational education.

CONCLUSION

This study concluded that Grade 8–10 learners of Alicia Vocational School demonstrated a very high level of workplace safety awareness and very high carpentry skill acquisition, indicating that they consistently practiced appropriate safety measures while exhibiting competence in performing fundamental carpentry tasks. The findings suggest that

the school's technical-vocational program effectively promotes safe workshop practices and develops learners' practical skills necessary for carpentry education.

The study further concluded that although workplace safety awareness and carpentry skill acquisition were both highly evident among the respondents, no significant relationship existed between the two variables. The acceptance of the null hypothesis indicates that workplace safety awareness alone does not significantly influence learners' carpentry skill acquisition. This implies that technical competence is shaped by multiple factors, including instructional strategies, teacher guidance, workshop facilities and equipment, learner motivation, prior learning experiences, and opportunities for continuous hands-on practice.

Overall, the study affirms the importance of sustaining workplace safety education as a fundamental component of technical-vocational instruction while continuously enhancing the quality of carpentry teaching and learning. The proposed Instructional and Safety Enhancement Plan provides practical interventions that may strengthen both safety awareness and technical competence among learners. The findings also contribute to the improvement of carpentry instruction in Alicia Vocational School and may serve as a valuable reference for school administrators, teachers, curriculum planners, and future researchers in promoting safe, effective, and competency-based technical-vocational education.

REFERENCES

- Ahmed, R. (2025). Safety routines and vocational learners' readiness for industry practice. *International Journal of Technical Education*, 14(1), 33–45.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice Hall.
- Bautista, M. L. (2021). Workshop safety compliance and technical skill performance of junior high school learners. *Philippine Journal of Technical Education*, 6(2), 41–55.
- Brown, T., & Stevens, J. (2023). Safety climate and practical skill development in vocational schools. *Journal of Vocational Learning*, 11(3), 102–118.
- Delgado, R. P. (2025). Workplace safety awareness and carpentry competence of public secondary school students. *Asia Pacific Journal of TVET*, 9(1), 66–79.
- Dela Cruz, A. R. (2024). Hazard prevention and independent task performance among junior high school learners. *Philippine Education Review*, 8(2), 58–72.
- Department of Education. (2019). *Policy guidelines on the K to 12 Basic Education Program*. Department of Education.
- Department of Education. (n.d.). *Technical–Vocational–Livelihood (TVL) Program Guidelines*. Department of Education.
- Flores, J. T., & Ramirez, S. L. (2022). Teacher supervision and safety compliance in woodworking classes. *Philippine Journal of School Instruction*, 5(1), 24–39.
- Garcia, L. M. (2023). Availability of safety equipment and learners' productivity in carpentry workshops. *Journal of Philippine Technical Studies*, 7(2), 44–60.

- Garcia, P., & Lopez, R. (2024). Integrating safety routines into carpentry instruction. *International Journal of Skills Development*, 13(2), 91–106.
- Harper, D., & Mills, S. (2021). Safety-oriented environments and learner engagement in vocational education. *Journal of Career and Technical Education*, 36(1), 15–29.
- Keller, A., & Brown, C. (2024). Occupational safety habits and technical competence among secondary students. *European Journal of Vocational Training*, 18(3), 77–92.
- Kim, J., & Park, S. (2021). Safety awareness and tool proficiency in vocational learning environments. *Asian Journal of Technical Education*, 10(2), 54–69.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.
- Li, H., & Chen, Y. (2024). Hazard awareness and psychomotor development in carpentry training. *Journal of Applied Vocational Studies*, 12(1), 48–62.
- Martinez, R., & Gomez, L. (2022). Safety instruction and learners' confidence in woodworking activities. *International Review of Technical Education*, 9(4), 88–101.
- Mendoza, K. P. (2025). Safety consciousness and technical skill acquisition of junior high school learners. *Philippine Journal of Vocational Research*, 10(1), 27–42.
- Navarro, E. D. (2021). Workshop discipline and project accuracy among TVL learners. *Philippine Journal of Secondary Education*, 4(2), 35–49.
- Nguyen, T., & Tran, M. (2022). Safety awareness and task efficiency in vocational classrooms. *Asian Vocational Education Journal*, 11(2), 63–78.
- Patel, R. (2023). Safety-integrated instruction and task completion in carpentry education. *Journal of Technical Pedagogy*, 15(1), 21–36.

Perez, A. J., & Lim, C. R. (2022). Safety reminders and learner engagement in carpentry classes. *Philippine Educational Practice Journal*, 6(1), 19–34.

Rahman, M. (2025). Early safety exposure and learner self-efficacy in technical education. *International Journal of Workforce Preparation*, 17(2), 59–73.

Republic Act No. 10173. (2012). Data Privacy Act of 2012. *Official Gazette of the Republic of the Philippines*.

Republic Act No. 10533. (2013). An Act Enhancing the Philippine Basic Education System by Strengthening Its Curriculum and Increasing the Number of Years for Basic Education, Appropriating Funds Therefor and for Other Purposes. *Official Gazette of the Republic of the Philippines*.

Republic Act No. 11058. (2018). An Act Strengthening Compliance with Occupational Safety and Health Standards and Providing Penalties for Violations Thereof. *Official Gazette of the Republic of the Philippines*.

Salandanan, G. G. (2012). *Teaching approaches and strategies*. Lorimar Publishing.

Santiago, R. L. (2025). Workplace safety awareness and carpentry performance of junior high school learners. *Journal of Philippine TVET Studies*, 9(2), 71–86.

Santos, P. A. (2024). Hazard awareness and independent performance in woodworking classes. *Philippine Journal of Educational Development*, 7(1), 46–61.

Technical Education and Skills Development Authority. (2020). *Training Regulations: Carpentry NC II*. Technical Education and Skills Development Authority.

Thompson, E., & Reed, J. (2022). Safety training and psychomotor skill development in vocational education. *Journal of Skills Training*, 14(3), 95–110.

Torres, M. E. (2023). Safety equipment availability and student workmanship in carpentry workshops. *Philippine Technical Education Quarterly*, 5(2), 52–67.

UNESCO. (2016). *Strategy for Technical and Vocational Education and Training (TVET) 2016–2021*. UNESCO Publishing.

Villanueva, H. S. (2024). Learners' hazard prevention practices and carpentry outputs. *Philippine Journal of Applied Education*, 8(1), 38–53.

Wilson, P., & Carter, G. (2021). Safety orientation and project accuracy among vocational learners. *International Journal of Career Education*, 13(2), 44–58.

World Health Organization. (2017). Protecting workers' health. World Health Organization.

Yamnill, S., & McLean, G. N. (2001). Theories supporting transfer of training. *Human Resource Development Quarterly*, 12(2), 195–208.

Zhang, L. (2023). Safety culture and learner independence in technical education. *Journal of Asian Vocational Studies*, 10(3), 84–99.

Zohar, D., & Luria, G. (2005). A multilevel model of safety climate. *Journal of Applied Psychology*, 90(4), 616–628.