

Welding a Beginner's Metal Box: Crafting Simplicity and Functionality

Donald C. Salvador

Faculty, College of Technology,
Surigao del Norte State University, Surigao City, Philippines

Abstract: *This study explores the transformative impact of hands-on learning in welding, focusing on the creation of a basic metal box as an introductory project for novice welders. The significance of starting with simple projects to foster skill development is examined, supported by the outcomes of the welding process. Challenges encountered during the project are discussed alongside their solutions, revealing the dynamic nature of practical problem-solving. The learning outcomes for beginner welders are analyzed, emphasizing improved welding skills and the acquisition of fundamental techniques. By addressing design choices and their influence on the final product, this study showcases the multifaceted nature of welding projects. Furthermore, the comparative advantages of hands-on learning over theoretical approaches are highlighted. Ultimately, this study underscores the value of simplicity as a conduit for building competence and confidence among novice welders, paving the way for a fulfilling journey into the world of welding.*

Keywords: Welding, Beginner, Metal

REFERENCES

- [1]. American Welding Society. (2020). Welding Fundamentals and Processes. AWS.
- [2]. Goldemberg, R. D., & Gale, W. A. (2002). Factors that influence the successful transfer of learned skills from welding classes to the workplace. *Welding Journal*, 81(12), 146s-151s.
- [3]. Salas, E., Tannenbaum, S. I., Kraiger, K., & Smith-Jentsch, K. A. (2012). The science of training and development in organizations: What matters in practice. *Psychological Science in the Public Interest*, 13(2), 74-101.
- [4]. Jeffus, L. (2011). *Welding: Principles and Applications*. Cengage Learning.
- [5]. Blaine, T. (2015). *Learn to Weld: Beginning MIG Welding and Metal Fabrication Basics*. Quarry Books.
- [6]. Brown, S. D., & Lent, R. W. (1996). A social cognitive framework for career choice counseling. *The Career Development Quarterly*, 44(4), 354-366.
- [7]. Cohen, A., & Lotan, R. A. (2014). *Designing Groupwork: Strategies for the Heterogeneous Classroom*. Teachers College Press.
- [8]. Hicks, J. F. (2002). *Welded Joint Design*. Industrial Press Inc.
- [9]. Jeffus, L. (2011). *Welding: Principles and Applications*. Cengage Learning.
- [10]. Sacks, A. (2002). Teaching welding: Is hands-on enough? *Journal of Industrial Teacher Education*, 39(3), 53-69.
- [11]. Seames, W. (2007). *Welding For Dummies*. Wiley Publishing.
- [12]. Smith, E. D., & Gonzales, L. M. (2016). *Welding Basics: An Introduction to Practical & Ornamental Welding*. Design Originals.