



Standard Operating Procedure Planning Product Marketing with Participatory Ergonomic Approach Principles



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Abstract

Candikuning II is part of Baturiti District a tourism village better known as Bedugul, Bali, Indonesia, and what is no less noteworthy is a range of chips produced by MSME groups as mementos after touring, such as Chips: Spinach; Bean; Tempeh. The goal of this study is to create a Standard Operating Procedure (SOP) for Product Marketing by adopting participatory ergonomic concepts from MSME members. Data collection techniques use observation, documentation, interviews, and Focus Discussion Groups. Data analysis techniques using techniques developed by Miles & Huberman, namely analysis including data reduction, data display, and conclusion drawing/verification. The result of this study is the design of Product Marketing SOP by incorporating participatory principles. The conclusion of the study shows that the design of this marketing SOP is considered effective and easy to understand in marketing production products in household industries in Candikuning II Village, Tabanan, Bali.

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1 Introduction

Chip products are snacks that are favored by many people. Products and innovations must go hand in hand to grow and develop products. A product can be defined as something that can be offered to the market for attention, acquisition, use, or consumption and that is likely to satisfy a desire or need (Nurdini et al., 2015), innovation, often falls into several broad categories among them: product, process, organizational positioning and innovation (Baregheh et al., 2012). Successful Home Industries are able to meet the changing needs of consumers by adopting new products, services and unique marketing mixes (Mirzaei et al., 2020). Management (management) for production results in making seasonings is still traditional because it still uses cobek. The packaging used to wrap chips with plastic, but the level of thickness is still lacking. The plastic lip cover or safety uses a stepler, so it is easy to sluggish because there is air entering through the plastic hole that is not tight. For marketing, it is still around the Candikuning market, Tabanan-Bali or marketing its products at street stalls towards Candikuning Tabanan Bali. One group markets its chips through vegetable vendors who sell to the city of Denpasar every day. Some MSMEs in Candikuning Tabanan Bali do not yet have an Industrial License (P-IRT), so the production of chips has not been able to enter a wider market such as: mini marts; supermarkets, Souvenir Shop, and others.

To help standardize the production and marketing of production results from MSMEs, it is vital to have a Standard Operating Procedure (SOP). SOP is a guide for performing tasks, and flowcharts can be used to apply it. A flowchart is a type of graphic that uses symbols to depict how data flows and system actions are carried out (Bodnar & Hopwood, 2006). Under the leadership of a housewife, the Home Industry Group in Candikuning II village lacks a standard operating procedure (SOP) for the chip production process (menu), licensing (P-UIRT), and product marketing. As a result, the group faces challenges in managing the introduction of new products that incorporate innovative tastes and products. All family members will find it simpler to finish some work processes with the SOP (Hongdiyanto, 2017; Kasiani & Yusuf, 2019). The two groups do not yet have standard operating procedures (SOPs) for the licensing, product marketing, and chip production process (menu). This is because the equipment needed to carry out business activities is still simple and remains out of the reach of modern technology.

Making this SOP needs to be done with a participatory approach from stakeholders, especially MSME drivers in Candikuning II Village. Participatory approach also known as participatory ergonomics is the active involvement of workers in ergonomic knowledge and procedures in the workplace and is supported by suppliers and managers with the aim of improving working conditions and good product quality (Haines, 1998). In the participatory ergonomics approach, a framework is called the Participatory Ergonomics Framework (Hansen et al., 2023; Burgess-Limerick, 2018). The framework highlights dimension ratings on the importance of worker engagement. The most important dimensions are decision-making consultation and employee involvement at all levels of the organization (de Macedo Guimarães et al., 2015; Punnett et al., 2013). For this reason, a participatory approach is very suitable to be applied to the design of product manufacturing SOPs and product marketing SOPs in this study. Several previous studies have also applied this SOP to small and medium enterprises (Arief et al., 2022; Ridawati & Alsuhendra, 2022). However, no one has been found that applies participatory ergonomic principles. Using SOPs will make the work process more optimal. Optimal work processes will increase workers' work productivity (Santosa et al., 2021; Yusuf et al., 2021), and for home industry workers it will give them more time for their families at home because work can be completed more quickly (Yusuf et al., 2018).

The purpose of this study is to design product marketing SOPs by incorporating participatory ergonomic principles. The limitation of this research problem is only carried out on the product marketing part. The most basic issue that needs to be raised, how is the design of product Marketing SOPs. While the problem approach (frame of mind) explains the relationship and relationship between research variables. A good problem approach is organized around five elements (Pelosi et al., 2001; Sekaran & Bougie, 2016). To answer the above problems, it is necessary to approach the problem based on reference sources. This can be shown in the following figure.

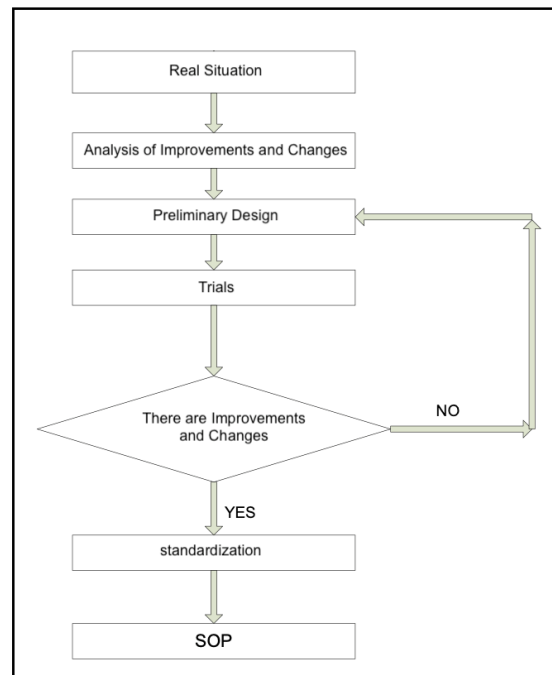


Figure 1. Problem Approach

This research produced an SOP document so that it can be used as a guideline and guide for MSME Groups in Candikuning II Village, Tabanan, Bali.

2 Materials and Methods

Research design

This research is *qualitative research*. Qualitative research is: "*qualitative research is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem*" (Creswell & Creswell, 2017), which means the process of exploring and understanding the meaning of individual and group behavior, describing social problems or humanitarian problems. Similarly, qualitative methods are broken down into five: *phenomenological research, grounded theory, ethnography, case study, and narrative research* (Creswell & Creswell, 2017). Research was conducted in the Home Industry Group (*Home Industry Club*) Bedugul Baturiti Tabanan Bali which is classified as an MSME group. This research is a case study research on MSMEs in Candikuning II Village, Tabanan, Bali, Indonesia. The sequence of research activities can be known from Figure 2 below.

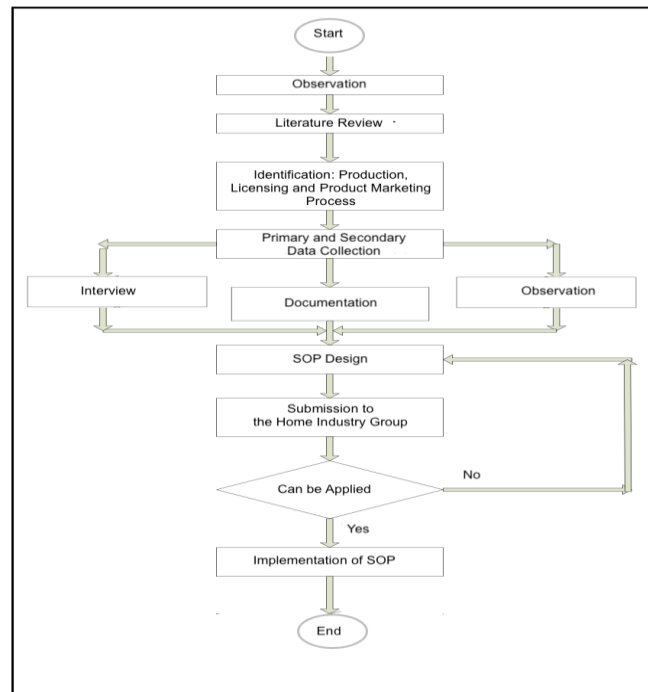


Figure 2. Research design

This research activity began with observations in the Home Industry (IRT) group. In this activity, researchers made observations and interviews with MSME group leaders about the chip production process, as well as product marketing. The next activity of the researcher conducts literature studies and empirical studies, researchers begin to make research proposals and reviews based on theories that have something to do with the problem under study and predecessor research. Furthermore, identify the production process (menu) and product marketing in the IRT Group which can be used as a research case. Then this activity continued with finding *List* problems and determining the focus of research based on preliminary studies that have benefits: "If man is not aware of not has been learned in history, it is said he is bound to repeat the experiences" (Gibson & Mitchell, 2007). That is: the educational problems we find today are not entirely new, or it can be said that old problems often reappear in the uniqueness of other experiences and references. This research in its implementation uses interviews, documentation, and observation. The next activity is designing SOPs using flowcharts. Next, the draft SOP was submitted to the two IRT groups. If approved (YES) can be used and if not approved (NO) then the SOP is revised. The final activity is the result of the design and conclusions that can be used as recommendations to the IRT group.

Research informants

This study uses resource persons from the chairman and members of MSMEs as samples, in addition to other families as the objects studied, can be known from Table 1 below.

Table 1
Research sample

No.	Part	Sum
1	Head of MSME	1
2	Head of Production	1
3	Common Division	1
4	Marketing	4
5	Member	12

Sampling techniques using purposive sampling are sampling techniques with certain considerations. The sampling technique above combined with snowball sampling, in-depth interviews are conducted more and more developed so that more and more samples.

Data collection techniques

Three methods were employed in this study: One method for determining degrees of accuracy when drawing judgments and conclusions about people you have watched is observation (Sharma, 2020). While conducting an interview, a researcher or someone employed by the researcher will ask an interviewee (a research participant) questions as a means of gathering data (Creswell & Creswell, 2017). That is: the interview is a data collection technique where the interviewer (researcher or who is given the task of collecting data) in collecting data asks a question to the interviewee. Furthermore, using documentation techniques, namely techniques for collecting data through existing documents such as: menu lists, and bid proposals at the IRT Candikuning II Baturiti Tabanan Bali group.

Data

Both primary and secondary data were used in this investigation. Primary data about the raw materials utilized in the production process, bid proposals, production procedures, and marketing processes is directly gathered by means of observations and interviews with respondents. Secondary data was obtained from references and research results of others.

Data analysis techniques

The data analysis techniques used are qualitative descriptive, namely: "The most frequent form of display data for qualitative research data in the post has been narrative text" (Creswell & Creswell, 2017). That is: the most often used to present data in qualitative research is with texts that are narrative in nature. In addition, it is also said that activities in qualitative data analysis are carried out interactively and take place continuously until complete so that the data is saturated. This can be seen in the following figure.

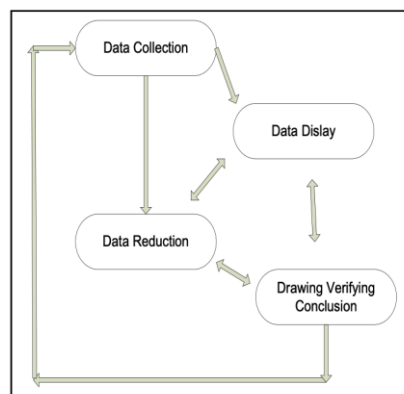


Figure 3. Miles & Huberman data analysis techniques
Source: (Miles et al., 2014)

Data reduction, data presentation (data display), and conclusion formulation/verification are all activities in analysis.

3 Results and Discussions

There are several kinds of business procedures. 1. An operational activity's control mechanism is the management process. A process that consists of a core business is called an operational process. Examples of such processes include purchasing, manufacturing, advertising, marketing, and sales. 3. Supporting processes, which support fundamental

operations, such as recruitment, accounting. This business process should also be applied to small industries managed by households. To facilitate production procedures and marketing procedures, it is necessary to apply standard operating procedures (SOPs) to small industries and home industries including those in Candikuning II Village, Tabanan, Bali, Indonesia (Tosun, 2000; Mudra, 2016; Chitra & Shobana, 2017).

Production process (menu) of chips

Since many customers wanted chip products like spinach chips, tempeh, and peanut brittle, the design SOP for the chip production process (menu) was created. These two IRT groups are always coming up with new products that highlight how the industrialization process is an investment in facilities, technology, and equipment with the goal of maximizing production output, improving quality, and minimizing labor resources (Warszawski, 2019). So that the design of the new production process (menu) through observation and interviews, can be depicted in the following picture.

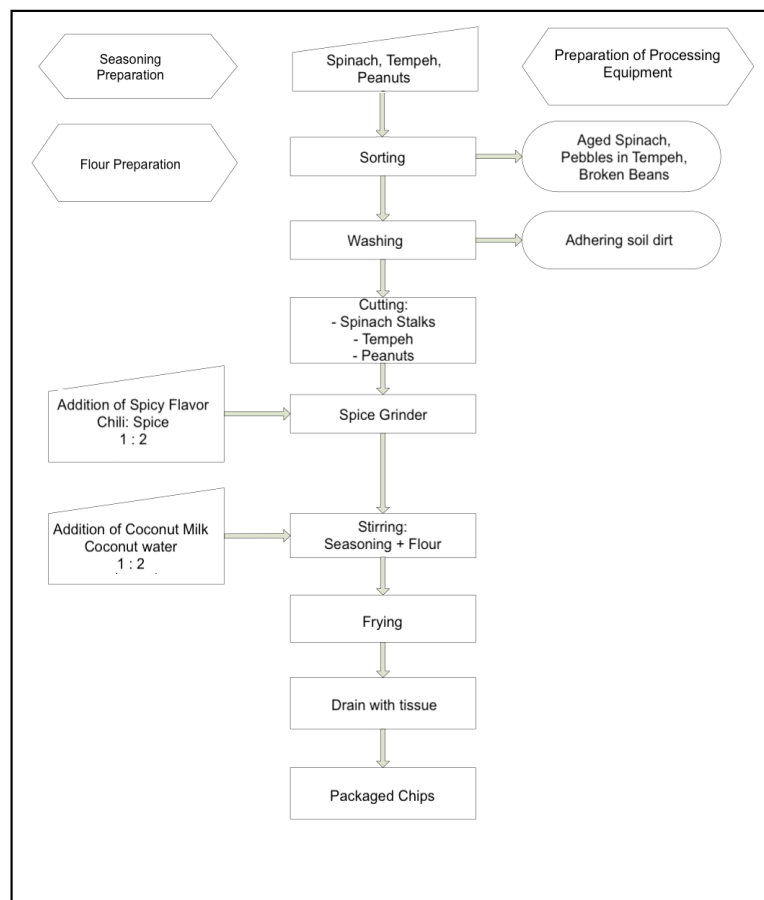


Figure 4. Production process SOP

Figure 4 illustrates the important activities that must be taken into account during the production process. For example, when sorting spinach, there is frequently an alpha in the picking process, meaning that older spinach still needs to be sorted again to ensure that the chips are crispy with young leaves. In a similar vein, when tempeh is purchased, it is possible to find gravel when looking for tempeh chips (Vink & Van Eijk, 2007; Chemmanur & Yan, 2009; Cooper & Kleinschmidt, 1986). Ultimately, sorting is necessary because high-quality peanuts yield high-quality peanuts.

The design of this production process SOP is considered effective in overcoming production problems in the household industry in Candikuning II Village, Tabanan, Bali. This was felt directly by the head of production and the members through live interviews. The use of SOPs in production was also carried out by Schmidt (Schmidt & Pierce, 2016), Hongdiyanto (Hongdiyanto, 2017), which state that SOPs are important in the production process.

Product marketing

Product marketing SOPs are also very urgent considering that products that are packaged completely with P-IRT need broader marketing, this can be seen in Figure 5 below.

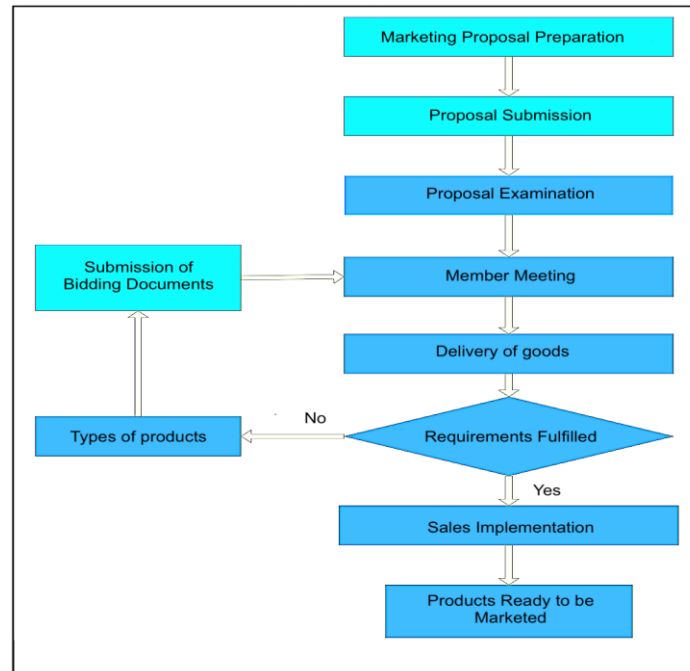


Figure 5. Product marketing SOP

The initial preparation required is to make a bid proposal that is submitted to a wider range of markets. Proposals submitted to mini marts, supermarkets, and souvenir shops conduct proposal examinations. In the member meeting, the offer of goods can be fulfilled if the type of product offered is widely on the market (NO) then the offer document is submitted to the member meeting, whether or not they still want to accept products that are widely circulated in the market (Choobineh et al., 2021; Vink et al., 2006; Sundin et al., 2004). If the requirements are met (YES) both the price, product quality, as well as new product types (product innovation) or process innovation, sales can be made/applied, and the product is ready to be marketed.

The design of this marketing SOP is also considered effective and easy to understand in marketing production products in household industries in Candikuning II Village, Tabanan, Bali. This was felt directly by the head of production and the members through live interviews. The use of SOPs in marketing production products is also carried out by Oktriyani (Oktriyani & Hati, 2019), Anjani (Anjani & Hati, 2021), which states that there is a need for SOPs in marketing a product produced by a company or industry even though it is a small industry.

4 Conclusion

The following conclusions can be drawn in light of the findings and discussion.

- a) The design of the SOP for the production process based on participatory principles is considered effective and easy to understand in overcoming production problems in the household industry in Candikuning II Village, Tabanan, Bali.
- b) The design of this marketing SOP is also considered effective and easy to understand in marketing production products in household industries in Candikuning II Village, Tabanan, Bali.

Conflict of interest statement

The authors declared that they have no competing interests.

Statement of authorship

The authors have a responsibility for the conception and design of the study. The authors have approved the final article.

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References

- Anjani, P., & Hati, S. W. (2021). Design of Standard Operating Procedures (Sop) and Implementation At Pt Bsp. *Journal of Applied Business Administration*, 5(1), 105-115.
- Arief, S., Sahid, A., & Rahman, A. A. (2022). Implementation of Standard Operating Procedure (SOP) in Improving Employee Performance in PT Hadji Kalla Daya Branch Makassar. *The 1st Proceeding of The International Conference on Economics and Business*, 20–31.
- Baregheh, A., Rowley, J., Sambrook, S., & Davies, D. (2012). Food sector SMEs and innovation types. *British Food Journal*, 114(11), 1640-1653.
- Bodnar, H. G., & Hopwood, W. S. (2006). *Accounting Information System*. New Jersey: Prentice Hall.
- Burgess-Limerick, R. (2018). Participatory ergonomics: Evidence and implementation lessons. *Applied ergonomics*, 68, 289-293. <https://doi.org/10.1016/j.apergo.2017.12.009>
- Chemmanur, T., & Yan, A. (2009). Product market advertising and new equity issues. *Journal of financial economics*, 92(1), 40-65. <https://doi.org/10.1016/j.jfineco.2008.02.009>
- Chitra, S., & Shobana, E. (2017). A study on customer satisfaction on online marketing in India. *International Research Journal of Management, IT and Social Sciences*, 4(1), 106-113.
- Choobineh, A., Shakerian, M., Faraji, M., Modaresifar, H., Kiani, J., Hatami, M., ... & Kamali, G. (2021). A multilayered ergonomic intervention program on reducing musculoskeletal disorders in an industrial complex: a dynamic participatory approach. *International Journal of Industrial Ergonomics*, 86, 103221. <https://doi.org/10.1016/j.ergon.2021.103221>
- Cooper, R. G., & Kleinschmidt, E. J. (1986). An investigation into the new product process: steps, deficiencies, and impact. *Journal of product innovation management*, 3(2), 71-85. [https://doi.org/10.1016/0737-6782\(86\)90030-5](https://doi.org/10.1016/0737-6782(86)90030-5)
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- de Macedo Guimarães, L. B., Anzanello, M. J., Ribeiro, J. L. D., & Saurin, T. A. (2015). Participatory ergonomics intervention for improving human and production outcomes of a Brazilian furniture company. *International Journal of Industrial Ergonomics*, 49, 97-107. <https://doi.org/10.1016/j.ergon.2015.02.002>
- Gibson, R. L., & Mitchell, M. (2007). *Introduction to Counseling and Guidance* (7th Editio). Pearson.
- Haines, H. (1998). Development of a framework for participatory ergonomics.
- Hansen, A. F., Hasle, P., Caroly, S., Reinhold, K., Jarvis, M., Herrig, A. O., ... & Jensen Stochkendahl, M. (2023). Participatory ergonomics: What works for whom and why? A realist review. *Ergonomics*, 1-21.
- Hongdiyanto, C. (2017, December). The importance of production standard operating procedure in a family business company. In *IOP Conference Series: Materials Science and Engineering* (Vol. 277, No. 1, p. 012024). IOP Publishing.
- Kasiani, K., & Yusuf, M. (2019). Developing Ergonomics-based Practice System to Improve Students' Typing Skills. *International Research Journal of Engineering, IT and Scientific Research*, 5(4), 28-37.
- Miles, M. B., Huberman, AM, & Saldana, J. (2014). *Qualitative Data Analysis: A Methods Sourcebooks*.
- Mirzaei, O., Natcher, D. C., & Micheels, E. T. (2020). Estimating the regional economic impacts of First Nation spending in Saskatchewan, Canada. *Review of Regional Studies*, 50(1), 53-69.
- Mudra, I. W. (2016). The design diversity of ornamental earthenware towards the craft product marketing in bali on global era. *International Research Journal of Management, IT and Social Sciences*, 3(9), 80-87.
- Nurdini, A. L., Nuraida, L., & Suwanto, A. (2015). Microbial growth dynamics during tempe fermentation in two different home industries. *International Food Research Journal*, 22(4), 1668.
- Oktriyani, E., & Hati, S. W. (2019, December). Preparation Of Standard Operating Procedures of Business Management On Smes Safira Handmade Batam. In *1st International Conference on Applied Economics and Social Science (ICAESS 2019)* (pp. 294-298). Atlantis Press.
- Pelosi, M. K., Sandifer, T. M., & Sekaran, U. (2001). *Research and evaluation for business. (No Title)*.
- Punnett, L., Warren, N., Henning, R., Nobrega, S., Cherniack, M., & CPH-New Research Team. (2013). Participatory ergonomics as a model for integrated programs to prevent chronic disease. *Journal of occupational and environmental medicine*, 55, S19-S24.
- Ridawati, R., & Alshuhendra, A. (2022). Implementation Sanitation Standard Operational Procedure in Online Food during Covid-19 Pandemic in East Jakarta. *International Journal of Research in Community Services*, 3(1), 46-53.
- Santosa, I. G., Yusuf, M., Gunung, I. N., & Rimpung, I. K. (2021, November). Application of Forging Hammer to Increases Productivity of Balinese Blacksmith. In *International Conference on Innovation in Science and*

- Technology (ICIST 2020)* (pp. 195-199). Atlantis Press.
- Schmidt, R. H., & Pierce, P. D. (2016). The use of standard operating procedures (SOPs). In *Handbook of hygiene control in the food industry* (pp. 221-233). Woodhead Publishing. <https://doi.org/10.1016/B978-0-08-100155-4.00016-9>
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.
- Sharma, Y. P. (2020). *Guidance and counselling*. Gajraula: Independently published.
- Sundin, A., Christmansson, M., & Larsson, M. (2004). A different perspective in participatory ergonomics in product development improves assembly work in the automotive industry. *International journal of industrial ergonomics*, 33(1), 1-14. <https://doi.org/10.1016/j.ergon.2003.06.001>
- Tosun, C. (2000). Limits to community participation in the tourism development process in developing countries. *Tourism management*, 21(6), 613-633. [https://doi.org/10.1016/S0261-5177\(00\)00009-1](https://doi.org/10.1016/S0261-5177(00)00009-1)
- Vink, P., & Van Eijk, D. J. (2007). The effect of a participative product design process on user performance. *Safety Science*, 45(5), 567-577. <https://doi.org/10.1016/j.ssci.2007.03.001>
- Vink, P., Koningsveld, E. A., & Molenbroek, J. F. (2006). Positive outcomes of participatory ergonomics in terms of greater comfort and higher productivity. *Applied ergonomics*, 37(4), 537-546. <https://doi.org/10.1016/j.apergo.2006.04.012>
- Warszawski, A. (2019). *Industrialized and Automated Building Systems A Managerial Approach*. USA: Taylor and Francis Ltd.
- Yusuf, M., Irwanti, N. D., & Indonesia, B. (2021, February). Implementation of 5S in the Pantry Housekeeping of Hotels to Increase Work Productivity. In *ICONEBS 2020: Proceedings of the First International Conference on Economics, Business and Social Humanities, ICONEBS 2020, November 4-5, 2020, Madiun, Indonesia* (p. 281). European Alliance for Innovation.
- Yusuf, M., Lokantara, W. D., Santiana, I. M. A., & Sudiasa, I. W. (2018, December). The Effect of Overtime Work On Family Social Aspects. In *International Conference on Science and Technology (ICST 2018)* (pp. 500-503). Atlantis Press.