

Improvement of Construction Workers' Skills in House Construction in Pinrang Regency

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Abstract

Purpose: This community service initiative aims to provide training to construction workers and their assistants in Pinrang Regency, South Sulawesi, addressing the issue of inadequate autodidactic skills. The research is significant for ensuring compliance with construction standards, reducing risks of structural failures.

Method: The study involves structured training sessions focused on proper construction practices, with pre- and post-training assessments to measure skill improvement and participant feedback for refinement.

Practical Applications: The findings have practical implications for the construction industry, enhancing project outcomes and structural integrity in remote areas. This training fosters better management practices and benefits community infrastructure.

Conclusion: The training significantly improves the skills of construction workers, emphasizing the need for formal education to achieve safety and compliance with standards. This initiative promotes long-term benefits for the region's construction sector.



Introduction

Pinrang Regency is one of the second-level regions in South Sulawesi Province, covering an area of 1,961.77 km², with a population of approximately 351,118 people and a population density of 171 people/km² (Web Sulsel, 2019). Pinrang Regency is located at coordinates between 3°10'30" - 3°19'13" North Latitude and 119°26'30" - 119°47'20" East Longitude. The distance from the provincial capital to Pinrang Regency is approximately 173 km. The geographical condition of Pinrang, which is a mix of coastal/lowland and highland areas, leads the majority of the population to work as farmers, fishermen, and construction workers (Riskawati et al., 2020; Rosmaya et al., 2022). Unfortunately, most construction workers in this regency are self-taught. They initially work as assistants in house construction for a certain period before advancing to become skilled workers (Ekawati, 2017).

A key point is that most construction workers rarely receive training in proper building construction according to technical requirements. They tend to work on projects in areas that result in them not being accustomed to working with clear designs, such as those provided in blueprints (Taunaumang, 2019). In fact, some construction workers cannot read building plans. Knowledge about building construction is quite limited among the community. Generally, people consider construction workers to be experts in all aspects of building. This is evident as building owners entrust all stages of construction to the workers, including selecting building materials, purchasing supplies, designing the structure, and executing the construction. In terms of planning, owners usually discuss the building plans with the workers without documenting them in drawings. The lack of documentation leads to underdeveloped designs due to the workers' limited experience. This undocumented design often causes misperceptions between the building owners and the workers, resulting in frequent design changes and leading to rework during construction (Dasar et al., 2022; Lumape & Tumanduk, 2019).

Mistakes in construction execution are common, given the workers' minimal knowledge and lack of experience in well-managed projects. Errors in selecting construction materials result in poor building quality, while mistakes in design and execution lead to increased costs and vulnerability to structural failure risks (Kombih, 2016; Rosmyanto, 2022).

Based on this situational analysis, there is a need for efforts to provide alternative solutions aimed at improving the skills of construction workers, with the hope that they can implement these skills in house construction, particularly in Pinrang Regency. This community service initiative serves as a form of dedication by the implementing team after acquiring knowledge in education. During this community service activity, the team will act as agents of change in the community. The implementers can provide knowledge and technological application experience to guide and help resolve existing issues.

Method

Here are the methods used in this activity:

1. Data collection of construction workers, particularly those in Pinrang Regency, with the aim of determining the number of workers and their assistants, years of experience, types of buildings they have worked on, and other relevant information.
2. Training conducted by experts in the construction field using presentation methods, interviews, and video demonstrations for case studies.
3. Activity evaluation using questionnaires. This aims to assess the benefits of the program, the participants' understanding of the material provided, and the follow-up actions resulting from the activity.

Result

Based on the data collected, there are hundreds of construction workers employed. However, due to limitations in funding and space, not all can be included in this activity. The community partners, in this case the construction workers, have an average work experience ranging from 2 to 20 years. They usually work on local projects, primarily single-story houses, with a smaller portion involving two-story houses, and are compensated on a daily wage basis. None of the partner community members present had ever participated in any training activities. Therefore, it can be concluded that despite their considerable work experience, they have never received training, particularly on how to construct houses correctly according to standards.

Figure 1. Partner Community



All invitees attended the event, with most arriving on time, indicating a high level of enthusiasm among the community partners. Before the event began, participants filled out an attendance list provided by the Community Service team. The activity started with welcoming speeches, followed by the main event. This training featured experts in the construction field who presented materials through PowerPoint. To support the learning process, a video was shown, along with a building evaluation in the form of a case study. This was important to ensure that participants could easily understand the material presented. At the end of the event, a question-and-answer session was well received by the participants.

Finally, an evaluation of the activity was conducted through a questionnaire filled out by the participants. The results indicated that the event was organized smoothly and effectively, was very beneficial, and could enhance the knowledge of the community partners. Participants expressed a strong hope for similar activities to be conducted in the coming years.

Discussion

The community service initiative conducted in Pinrang Regency has demonstrated significant potential in addressing the training needs of construction workers. Through careful analysis of the results obtained from questionnaires and participant feedback, it is evident that the primary goals of the program have been met. Participants reported an enhanced understanding of proper house construction practices, highlighting the immediate benefits of the training.

The initiative has not only educated the workers but has also created a ripple effect within the community. As these workers implement their newfound knowledge and skills, the

quality of construction is expected to improve, leading to safer and more resilient structures. This improvement can positively impact the economic landscape by reducing costs associated with structural failures and rework, thereby contributing to better financial stability for local families and businesses.

However, it is essential to consider the broader consequences of this community service. While the training has provided immediate educational benefits, the long-term effects on the social fabric and environmental landscape of Pinrang must also be evaluated. A more skilled workforce may foster a sense of pride and ownership in the community, encouraging collaboration and further development initiatives. Conversely, if not managed correctly, there may be challenges such as increased competition among workers or environmental impacts from accelerated construction activities.

The sustainability of the community service program is another critical aspect for discussion (El Hasan et al., 2023). The enthusiasm displayed by participants suggests a willingness to continue engagement in such initiatives, but ongoing support and follow-up training will be necessary to maintain momentum. This initiative could serve as a model for replication in other regions facing similar challenges, particularly in remote areas where construction standards are often lacking (Supriyadi et al., 2023).

Lessons learned during the service process include the importance of involving community stakeholders in planning and implementation. Such engagement fosters ownership and accountability, essential for the program's success. For future community service activities, it is recommended to establish a structured follow-up mechanism to evaluate the ongoing application of training and provide additional support as needed.

Challenges faced during the community service, such as funding limitations and participant recruitment, were significant. Addressing these issues may involve seeking partnerships with local government or NGOs to secure resources and broaden outreach efforts.

In conclusion, the contributions of this community service initiative are substantial, and its success underscores the importance of active community involvement. By contrasting these findings with existing research on community service initiatives, it becomes clear that tailored training programs can lead to meaningful change. This discussion not only evaluates the effects of the service rendered but also offers insights and guidelines for future community service efforts, emphasizing the need for continuous learning and adaptation in response to community needs.

Conclusion

The implementation of the community service activity went well, with all invitees present and a high level of enthusiasm among the participants. The results of the questionnaire indicated an increased understanding of proper house construction practices. The implementation of the knowledge and skills acquired by these workers needs to be evaluated and supported to ensure that the houses built meet existing standards.

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