

Development Of Mining Safety Program For Pt Putra Perkasa Abadi Based On Safety Culture Maturity Assessment

Alifal Hamdan¹, Hanum Elok Larasati², Ardhiansyah Ridwan Lindrianto³
Departemen Safety Health and Environment, PT Putra Perkasa Abadi^{1,2,3}

ARTICLE INFO

Keywords:

Accidents, Safety Culture
Maturity Level, Objectives
Targets and Programs

ABSTRACT

Accidents and disasters can be caused by cultural and safety factors, as suggested by Barry Turner in his pioneering work 'Man-Made Disasters.' The implementation of safety culture is one of the crucial aspects that should be applied, especially in the workplace safety. The term safety culture began to be widely used since the Chernobyl nuclear disaster in 1986, and interest in safety culture has continued to grow, including in Indonesia. This explanation is supported by the issuance of the Director General of Mineral and Coal Decision Number 10.K/MB.01/DJB.T/2023 (Kepdirjen Minerba 10 Year 2023) concerning Technical Guidelines for the Assessment of Mining Safety Performance, which is one of the tools to measure the maturity level of safety culture. Through Kepdirjen Minerba 10 Year 2023, the measurement of safety culture is more focused on companies engaged in the mining sector. Therefore, PT Putra Perkasa Abadi site PT Bukit Asam Tbk (PPA-BA) uses Kepdirjen Minerba 10 Year 2023 to measure the level of safety culture in Semester 2 in 2023. This measurement aims not only to assess the level of safety culture maturity within the company but also serves as a basis for developing the mining safety program in 2024. The measurement uses data collection methods such as documentation review, questionnaires, interviews, observations, focus group discussions, testing, and data analysis. The results of data collection are then averaged for each indicator and added up to obtain the safety culture maturity level. Based on the analysis, it is known that the safety culture maturity level at PPA-BA is 0.56, indicating a reactive position. The results of this assessment are used as one of the foundations for the development of the mining safety program. Previously, the development of the mining safety program only considered legal regulations.

Email :

alifalhamdan14@gmail.com
hanum.eloklarasati@ppa.co.id
ardhiansyahrl165@gmail.com

Copyright © 2023 Journal Eduhealth. All rights reserved is
Licensed under a Creative Commons Attribution- Non Commercial
4.0 International License (CC BY-NC 4.0)

1. INTRODUCTION

The implementation of good Occupational Health and Safety (OHS) practices can provide benefits in the advancement of human resources, economy, social, and environmental development. Conversely, neglecting OHS can lead to workplace accidents and work-related illnesses, resulting in fatalities, injuries, and deaths. Ignoring OHS can also lead to a decrease in work productivity, property damage, and business disruption. Based on Government Regulation Number 50 of 2012 regarding the Implementation of Occupational Health and Safety Management Systems (SMK3), OHS encompasses all activities to ensure and protect the safety and health of workers through efforts to prevent work accidents and work-related illnesses.

The implementation of OHS in Indonesia began in 1970 with the enactment of Law Number 1 of 1970. In its development, OHS implementation increasingly emphasizes the continuous cultural aspects of OHS [1]. However, in its implementation, the number of workers experiencing work accidents and work-related illnesses from 2019 to 2021 has increased. In 2019, there were 210,789 cases, in 2020, there were 221,740 cases, and in 2021, there were 234,370 cases. The highest number of work accidents and work-related illnesses occurred in the miscellaneous industrial sector, totaling

148,617 cases from 2019 to 2021. The sector with the most significant increase was the mining sector, with 3,131 cases in 2020 and 6,565 cases in 2021.

Work accidents and work-related illnesses can affect anyone, anywhere, without prediction. However, they can be minimized and their severity reduced through control and monitoring of hazards and risks. Control and monitoring are necessary to realize good OHS implementation in a company. Furthermore, the implementation of a safety culture in the workplace is also crucial. As stated [2], OHS programs should begin with the fundamental step of forming a safety culture. Safety culture is based on employee perceptions, beliefs in the right priorities for safety performance given to the organization, measured as an early warning of the potential failure of the OHS system [3]. According to [4], safety culture is related to the organization, employees, and the job. Through the relationship of these three aspects, it can be said that safety culture must be implemented by all resources and levels, not just employees. Safety culture can be assessed based on indicators such as management commitment, rules and procedures, communication, employee involvement, competence, and the work environment.

According to [5], there are five levels of safety culture maturity: pathological, reactive, calculative, proactive, and generative.



Figure 1. Safety Culture Maturity Level Source [5]

Through the theories presented, it can be concluded that safety culture is a crucial aspect in supporting the implementation of good OHS in the workplace. The implementation of OHS in Indonesia has developed, as seen from the application of the Occupational Health and Safety Management System (SMK3) regulated by Government Regulation Number 20 of 2012. Additionally, activities in the mining sector have been developed through the Director General of Mineral and Coal Decision Number 10 of 2023 regarding Technical Guidelines for the Assessment of Mining Safety Performance. The purpose of these guidelines is to provide guidance in assessing the level of achievement of mining safety performance.

Based on Director General of Mineral and Coal Decision Number 10 of 2023, the assessment of mining safety performance is based on four indicators. The first indicator is worker participation, which measures the active role of workers in managing OHS in mining locations. The second indicator is the responsibility of unit work leaders, measuring the achievement of unit leaders' tasks related to OHS in the workplace. The third indicator is the analysis and statistics of mining safety, which indicates the company's responsibility for monitoring and measuring the performance of OHS management in the workplace based on final result indicators, analysis, evaluation, and follow-up. The fourth indicator measures the implementation of risk management efforts and mining safety programs in the workplace, relevant to the company's operational characteristics.

Through Director General of Mineral and Coal Decision Number 10 of 2023, it is expected that mining activities can operate safely, thereby reducing significant work accidents and work-related illnesses from 2020 to 2021. The formation of a safety culture through this regulation can be done through OHS programs created by the company. These programs are developed based on the safety culture conditions existing in a company, adjusting to the level of safety culture achievement in a mining company.

PT Putra Pekasa Abadi site PT Bukit Asam Tbk (PPA-BA) also strives to implement Director General of Mineral and Coal Decision Number 10 of 2023 for assessing the level of safety culture

maturity. The improvement of safety culture maturity at PPA-BA is necessary due to the high-risk nature of the work, the project being less than 2 years old, resulting in varied employee understanding of OHS, and to minimize the recurrence of work accidents or near-miss incidents. Additionally, it aims to enhance work productivity and minimize losses due to property damage.

The assessment of safety culture maturity conducted by PPA-BA uses data collection methods such as documentation review, questionnaires, interviews, observations, focus group discussions (FGD), testing, and data analysis. The results of data collection are then averaged for each indicator and added up to obtain the safety culture maturity level. The results of the safety culture maturity assessment conducted by PPA-BA will be used as one of the foundations for developing goals, targets, and programs (TSP) in 2024. Previously, the development of TSP only considered legal regulations. The safety culture maturity assessment based on Director General of Mineral and Coal Decision Number 10 of 2023 is a new activity in Indonesia, as the regulation was only introduced and socialized in July 2023.

2. METHOD

This research employs a descriptive method, used to identify characteristics or properties of a phenomenon. The stages of the descriptive method include data collection, data analysis, and data interpretation [6]. The data used in this research consist of primary and secondary data. Primary data refers to information obtained directly by the researcher, related to variables associated with the specific goals of the research. Data sources include individual respondents, focus groups, and questionnaires [7]. Secondary data refers to information collected through records, company documents, or government publications [7]. Regarding data collection methods, this research utilizes documentation review, questionnaires, interviews, observations, focus group discussions, testing, and data analysis.

Documentation Review

According [8], document review complements the use of observation and interviews in qualitative research. The reliability of qualitative research results is enhanced by including/document review. The reviewed documents include standard procedures for implementing mining safety and work evidence records related to measurement criteria.

Questionnaires

A questionnaire is a data collection method that is carried out by asking respondents to provide written statements or questions to be answered according to the user's request [9]. The questionnaire instrument was created based on the measurement criteria for each variable, regarding questionnaire respondents using samples obtained from sampling results using the Slovin technique with a margin of error of 5%. The samples came from employees of PT Putra Perkasa Abadi and were classified into 3 categories, namely non-staff, staff and management. The results of the number of samples obtained can be seen in table 1.

Table 1. Number of Samples Completing the Questionnaire

Level	Questioner		Total Sample
	Population	Sample	
<i>Management</i>	20	19	436
<i>Staff</i>	194	131	
<i>Non staff</i>	1010	287	

The questionnaire was created using Google Form and consists of 30 questions whose answers are multiple choice. In order to protect the confidentiality of respondents, names were not included on the questionnaire sheet

Interviews

Interviews involve communication and interaction stages [10], with informants given the opportunity to answer questions. The interview questions are based on the measurement of related variables. Interview samples are drawn from PT Putra Perkasa Abadi employees, categorized into three levels: non-staff, staff, and management.

Observation

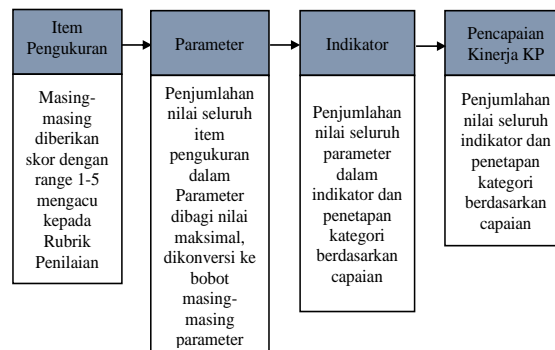
Observation, according to [11], is a fundamental basis for all data collection methods in qualitative research, particularly in the social sciences and human behavior. Observation locations include the Pit Operation, Pitstop, and Workshop areas of PPA-BA, considered high-risk areas.

Focus Group Discussion

Focus group discussion, according to [12], involves studying a specific problem/phenomenon through the collective discussion of a group focusing on shared activities to reach a common agreement. The discussion is led by a moderator from the assessment team, and participants are key informants from PPA-BA employees, including management, staff, and non-staff. Testing is conducted to obtain information about the work attitudes, skills, and knowledge of PPA-BA employees through written and oral methods. Data analysis is performed based on the collected data and is developed through the data reduction, data display, and conclusion drawing or verification processes.

a. Data Processing and Analysis Techniques

Data processing uses a quantitative approach. The data processing and analysis techniques can be seen in Figure 2.



Regarding safety performance achievement values, they are then categorized into the total achievement for all indicators and the achievement for each indicator. The determination of achievement level categories is based on the following 5 classifications:

Table 2. Determination of Achievement Level Categories

Variable	Mark	Achievement
Achievement Category for All Indicators (Max Value 1)	Achievement Value < 0.50	Base
	Achievement Value $0.50 \leq x < 0.70$	Reactive
	Achievement Value $0.70 \leq x < 0.80$	Planned
	Achievement Value $0.80 \leq x < 0.90$	Proactive
	Achievement Value $0.90 \leq x \leq 1$	Resilient
Mining Worker Participation (Max Value 0.15)	Achievement Value < 0.07	Base
	Achievement Value $0.07 \leq x < 0.10$	Reactive
	Achievement Value $0.10 \leq x < 0.12$	Planned
	Achievement Value $0.12 \leq x < 0.14$	Proactive
	Achievement Value $0.14 \leq x \leq 0.15$	Resilient
Responsibilities of Work Unit Leaders (Max Value 0.35)	Achievement Value < 0.17	Base
	Achievement Value $0.17 \leq x < 0.24$	Reactive
	Achievement Value $0.24 \leq x < 0.29$	Planned
	Achievement Value $0.29 \leq x < 0.33$	Proactive
	Achievement Value $0.33 \leq x \leq 0.35$	Resilient
Analysis and Statistics of Accidents, Dangerous Events, Occupations Due to Workforce Diseases, and Occupational Diseases (Max Value 0.20)	Achievement Value < 0.10	Base
	Achievement Value $0.10 \leq x < 0.14$	Reactive
	Achievement Value $0.14 \leq x < 0.17$	Planned
	Achievement Value $0.17 \leq x < 0.19$	Proactive
	Achievement Value $0.19 \leq x \leq 0.20$	Resilient
Control Efforts Taken (Max Value 0.30)	Achievement Value < 0.15	Base
	Achievement Value $0.15 \leq x < 0.20$	Reactive

Variable	Mark	Achievement
	Achievement Value $0.21 \leq x < 0.25$	Planned
	Achievement Value $0.25 \leq x < 0.28$	Proactive
	Achievement Value $0.28 \leq x \leq 0.30$	Resilient

The classification of achievement level categories consists of basic, reactive, planned, proactive, and resilient. Achievement level assessment is based on each indicator and parameter.

3. RESULTS AND DISCUSSION

Based on the measurement results through the method of collecting data from documentation review, questionnaires, interviews, observations, focus group discussions, testing, and data analysis, it is known that the indicator of mine worker participation achieved a score of 0.09, which falls into the reactive category. The indicator of Unit Work Leader Responsibility achieved a score of 0.21, which falls into the reactive category. The indicator of analysis and statistics of accidents, work-related diseases, incidents due to work-related diseases, and hazardous incidents achieved a score of 0.09, falling into the basic category. The indicator of control efforts undertaken achieved a score of 0.14, falling into the basic category, as shown in Table 3.

Table 3. Results of the Assessment of Mining Safety Performance Achievement Levels

No	Measurement Items	Measurement Method	Weight	Achv	Ket
1	Mine Worker Participation		0.15	0.09	Reactive
1.1	Individual Concern and Behavior towards Mining Safety Risks		0.05	0.02	
1.1.1	Workers' Awareness of Mining Safety Risks	TD, PJ, OBS		0.47	
1.1.2	Commitment and initiative of workers in occupational safety management	PJ, KS, OBS		0.40	
1.1.3	Discipline of workers on the job and outside the job	TD, OBS, FGD		0.53	
1.1.4	Actualization of <i>the company's</i> core values by workers	TD, FGD		0.40	
1.1.5	Actualization of the company's <i>golden rules</i> of mining safety by workers	TD, FGD		0.40	
1.2	Worker Involvement in Mining Safety Management		0.10	0.07	
1.2.1	The presence of an employee in a job on weekdays	E.G.		1.00	
1.2.2	The presence of workers in mining safety activities	E.G.		0.80	
1.2.3	The role of workers in mining safety activities	KS, FGD		0.70	
1.2.4	Involvement of department/section/section representatives in the mining safety risk management team	E.G.		0.40	
1.2.5	The role of department/section/section representatives in mining safety risk management	KS, FGD		0.80	
1.2.6	Involvement of Workers (Non-Supervisory) in mining safety risk management	WWC, FGD		0.40	
1.2.7	The Role of Workers (Non-Supervisory) in mining safety risk management	WWC, FGD		0.40	
1.2.8	Involvement of the mining safety committee in developing mining safety goals, objectives and programs	E.G.		0.80	
1.2.9	The role of mining safety committee members in developing mining safety goals, objectives and programs	WWC, FGD		0.60	
1.2.10	The role of the mining safety committee in developing mining safety goals, objectives and	WWC, FGD		0.55	

	programs			
1.2.11	Attendance and Involvement of the Chairman of the Mining Safety Committee in mining safety committee meetings	E.G.	1.00	
1.2.12	The Role of the Chairman of the Mining Safety Committee in mining safety committee meetings	WWC, FGD	0.70	
1.2.13	Presence and Involvement of the Vice Chairman of the Mining Safety Committee in the mining safety committee meeting	E.G.	1.00	
1.2.14	The role of the Vice Chairman of the Mining Safety Committee in mining safety committee meetings	WWC, FGD	0.70	
1.2.15	Presence and Involvement of the Secretary of the Mining Safety Committee in the mining safety committee meeting	E.G.	1.00	
1.2.16	The Role of the Secretary of the Mining Safety Committee in mining safety committee meetings	WWC, FGD	0.80	
1.2.17	Presence and Involvement of Mining Safety Committee Members in mining safety committee meetings	E.G.	0.80	
1.2.18	Role of Mining Safety Committee Members in mining safety committee meetings	WWC, FGD	0.70	
1.2.19	The role of mining committee members in representing their departments/sections	WWC, FGD	0.70	
1.2.20	Total hazard reporting and/or whistleblowing by employees	TD, WWC	0.70	
1.2.21	The appropriateness and reliability of hazard reporting and/or <i>whistleblowing</i> by employees	E.G.	0.40	
1.2.22	Number of workers' suggestions and inputs for improved mining safety	E.G.	0.40	
1.2.23	Suitability and reliability of workers' advice and input for improved mining safety	TD, WWC	0.50	
1.2.24	Effectiveness of worker participation	TD, WWC	0.40	
2	Responsibilities of Work Unit Leaders		0.35	0.21
				Reactive
2.1	Implementation of mining safety policy		0.05	0.03
2.1.1	Efforts to internalize corporate values by Management	TD, FGD	0.70	
2.1.2	Efforts to Internalize <i>the Company's Golden Rules for Mining Safety</i> (Golden Rules) by management	TD, FGD	0.60	
2.1.3	Effectiveness of mining safety policies	E.G.	0.40	
2.1.4	Workers' perception of management's commitment in implementing mining safety policies	KS, WWC	0.70	
2.2	Mining safety leadership and commitment		0.05	0.04
2.2.1	Top management's perception of the role of mining safety	WWC	0.80	
2.2.2	Workers' perceptions of leadership and management commitment	KS, WWC	0.60	
2.2.3	Availability of mining safety budget in RKAB	TD, WWC	0.70	
2.2.4	Realization of mining safety budget in RKAB	E.G.	0.60	
2.2.5	Speed of top management in responding to mining safety issues	KS, FGD	0.73	
2.2.6	Number of top management attendance at <i>site visits</i>	E.G.	0.40	
2.2.7	The role of top management in <i>site visits</i>	WWC, FGD	0.80	
2.2.8	Effectiveness of management review meetings	E.G.	0.40	

2.2.9	The role of the highest leadership at the management review meeting	WWC, FGD	1.00
2.2.10	Management support for innovation and improvement of mining safety performance	WWC, FGD	0.80
2.2.11	Rewarding the mining safety performance of workers	TD, WWC	0.60
2.2.12	Sanction for violations of mining safety from workers	TD, WWC	0.70
2.2.13	Summit/PJO perception of mining safety role	WWC	0.80
2.2.14	Summit/PJO attendance rate on <i>site</i> (excluding leave and attending invitations from supervisory agencies)	E.G.	0.80
2.2.15	Workers' perceptions of leadership and management commitment from the summit/PJO	KS, FGD	0.85
2.2.16	Department/Section/Section leaders' perception of the role of mining safety	KS	0.80
2.2.17	Workers' perception of leadership towards leadership and commitment from department / Section / Section leaders	KS, WWC	0.80
2.2.18	The presence of the Summit / PJO in mining safety activities (Meeting. Meetings, seminars and other activities)	E.G.	1.00
2.2.19	The role of the Summit / PJO in mining safety activities (Meeting. Meetings, seminars and other activities)	KS, FGD	0.90
2.2.20	The role of the Summit / PJO in the preparation and review of mining safety policies	KS, FGD	0.80
2.2.21	The role of KTT/PJO in mining safety risk management	KS, FGD	0.80
2.2.22	Involvement of departmental leaders in the preparation and review of mining safety policies	E.G.	0.80
2.2.23	The role of department/section leaders in the preparation and review of mining safety policies	KS, FGD	0.80
2.2.24	Involvement of department leaders in mining safety activities	E.G.	1.00
2.2.25	The role of department/section/section leaders in mining safety activities	KS, FGD	0.70
2.2.26	Involvement of department/section/section leaders in mining safety risk management	E.G.	0.60
2.2.27	The role of department/section/section leaders in mining safety risk management	KS, FGD	0.80
2.2.28	Presence of operational supervisors at mining safety working group meetings	E.G.	0.80
2.2.29	The role of operational supervisors in mining safety working group meetings	KS, FGD	0.80
2.2.30	Involvement of operational supervisors in mining safety risk management	E.G.	0.40
2.2.31	The role of operational supervisors in mining safety risk management	KS, FGD	0.80
2.3	Mining safety enforcement compliance		0.05 0.02
2.3.1	Initiative and awareness to meet the statutory requirements of mining safety aspects	TD, WWC	0.50
2.3.2	Effectiveness of compliance with the provisions of laws and regulations and other related requirements	E.G.	0.40
2.3.3	The company's response to the invitation from the sector guidance agency	TD, WWC	0.60

2.3.4	Company compliance in following up on written directives from sector guidance agencies through circulars of the chief mine inspector	TD, WWC	0.50
2.3.5	Company compliance in following up on the results of coaching and supervision by mine inspectors	E.G.	0.20
2.3.8	Compliance of PJO and department/section leaders in following up on summit directives/instructions related to compliance with mining safety regulations	TD, WWC	0.60
2.4	Determination of roles, responsibilities and authorities in mining safety		0.04 0.03
2.4.1	Independence of mining safety management	TD, FGD	0.60
2.4.3	Availability of the person in charge of operations	TD, WWC	1.00
2.4.4	Implementation of duties and responsibilities of the Summit / PJO	E.G.	0.80
2.4.5	Availability of competent Mining Technical Personnel	E.G.	0.60
2.4.6	Availability of operational supervisors and technical supervisors	E.G.	0.80
2.4.7	Implementation of duties and responsibilities of operational supervisors and technical supervisors	E.G.	0.40
2.4.8	Availability and authority of K3 Section and Mining KO Section	TD, FGD	0.50
2.4.9	Determination of responsibilities / <i>job description</i> related to mining safety for workers	E.G.	1.00
2.4.10	Provision of support and authority to workers to express objections to work if mining safety requirements are in doubt	KS, FGD	0.75
2.4.11	Implementation of the mechanism for selecting workers' representatives to the mining safety committee	KS, FGD	0.70
2.4.12	Management's perception of mine worker management	KS	0.80
2.5	Mining Safety Strategy and Operations Management		0.04 0.02
2.5.1	Formulation of mining safety strategies	TD, FGD	0.50
2.5.2	Elaboration and alignment of mining safety management strategies	TD, FGD	0.40
2.5.3	Scope of monitoring and measuring mining safety management performance	TD, FGD	0.50
2.5.4	Effectiveness of monitoring and measuring mining safety management performance	E.G.	0.40
2.6	Information, Communication, Pendampigan, Mining Safety Consulting		0.04 0.03
2.6.1	Mining safety induction compliance	E.G.	1.00
2.6.2	Number of mining safety meetings	E.G.	0.40
2.6.3	Quality mining safety meetings	TD, WWC	0.60
2.6.4	Number of mining safety campaigns	E.G.	1.00
2.6.5	Effectiveness of mining safety campaigns	KS, FGD	0.63
2.6.6	Effectiveness of external mining safety communication with partners (<i>customers, contractors, sub-contractors</i>)	KS, WWC	0.70
2.6.7	Effectiveness of vertical communication between work unit leaders and members	KS, WWC	0.70

2.6.8	Effectiveness of horizontal communication between co-workers	KS, WWC	0.80
2.6.9	Effectiveness of communication between working groups	KS, WWC	0.80
2.6.10	Effectiveness of communication between shifts	KS, WWC	0.60
2.6.11	Reliability of facilities and supporting media for mining safety communication	TD, OBS	0.60
2.6.12	Number of <i>mentoring, coaching</i> and <i>counselling</i> for workers from work team leaders	E.G.	0.80
2.6.13	Effectiveness of <i>mentoring, coaching</i> and <i>counselling</i> for workers from work team leaders	KS, FGD	0.62
2.6.14	Space availability and access to mining safety information from workers	KS, FGD	0.70
2.6.15	Protection of whistleblowers and reporting handling mechanisms in complaints of mining safety violations (<i>whistleblowing system</i>)	KS, FGD	0.60
2.6.16	External stakeholder outreach	TD, WWC	0.60
2.6.17	Inventory of stakeholder expectations and needs	TD, WWC	0.50
2.6.18	Effectiveness of mining safety communication	E.G.	0.40
2.7	Quality Control of Mining Safety in Operational Activities		0.04 0.02
2.7.1	Number of standard work procedures for work operations	E.G.	0.60
2.7.2	Effectiveness of Standard Procedures for Work Operations	OBS, WWC	0.50
2.7.3	Conformity of establishing daily operating work plans	TD, WWC	0.80
2.7.4	Conformity of the determination of daily operational readiness checks	TD, OBS	0.60
2.7.5	Suitability of granting permits to enter mining sites	TD, WWC	0.70
2.7.6	Conformity of licensing and equipment operating licenses	TD, WWC	0.60
2.7.7	Suitability of special work permit issuance	TD	0.40
2.7.8	Conformity of determination of critical areas, activities and controls in mining safety aspects	TD, FGD	0.70
2.7.9	Suitability of determination of distribution and composition of mining areas	TD, FGD	0.80
2.7.10	Number of inspections, test checks by direct operational supervisors	TD	0.80
2.7.11	Conformity and reliability of inspection results, inspections, tests by direct operational supervisors	TD, WWC	0.50
2.7.12	Number of inspections, testing inspections by mid-level operational supervisors	E.G.	0.60
2.7.13	Suitability and reliability of inspection results, inspections, tests by mid-level operational supervisors	TD, WWC	0.50
2.7.14	Number of inspections, testing inspections by internal parties outside the person in charge of the area (cross)	E.G.	0.40
2.7.15	Conformity and reliability of inspections, testing checks by internal parties outside the person in charge of the area (cross)	TD, WWC	0.50
2.7.16	Effectiveness of mining safety inspections	E.G.	0.40
2.8	Mining Safety Quality Assurance through SMKP Internal Audit		0.04 0.02

2.8.1	Basic implementation of SMKP Internal Audit	TD, ANL	0.40	
2.8.2	Compliance of SMKP Internal Audit Method	TD, ANL	0.40	
2.8.3	Successful Achievement of SMKP Internal Audit Objectives	TD, ANL	0.40	
2.8.4	Number of <i>Opportunities for Improvement</i> (OFI) from SMKP Internal Audit Results	E.G.	0.20	
2.8.5	Completion of the plan does not continue the internal audit of SMKP	E.G.	0.40	
3	Analysis & Statistics of Work Accidents, Occupational Diseases, Events Due to Labor Diseases, Hazardous Events		0.20	0.09 Basis
3.1	Analysis of Mining Safety Case Data		0.05	0.02
3.1.1	Mining Safety Data Integrity	TD, ANL	0.50	
3.1.2	Scope of Analysis and Data Processing of Mining Safety Cases	TD, ANL	0.40	
3.1.3	Maturity of Mining Safety Data Analysis Results	TD, ANL	0.40	
3.2	Mining Safety Case Investigation		0.05	0.02
3.2.1	Number of Mining Safety Cases investigated	E.G.	1.00	
3.2.2	Collection of Data and Information related to mining safety cases	TD, ANL	0.50	
3.2.3	Mining safety case investigation paradigm	TD, FGD	0.60	
3.2.4	Technical analysis of mining safety cases	E.G.	0.20	
3.2.5	Establishment of corrective and preventive actions on mining safety cases	E.G.	0.40	
3.2.6	Realization of the implementation of corrective and preventive actions on mining safety cases	E.G.	0.40	
3.2.7	The number of mining safety cases is similar and repeated in the last 2 years	E.G.	0.20	
3.3	Mining Safety Performance Statistics based on lagging indicators		0.05	0.03
3.3.1	Pencapaian <i>Accident Frequency Rate</i>	E.G.	0.40	
3.3.2	Pencapaian <i>Accident Severity Rate</i>	E.G.	0.60	
3.3.3	Number of Dangerous Events	E.G.	0.60	
3.3.4	Morbidity Frequency Rate <i>Achievement</i>	E.G.	0.20	
3.3.5	Achievement of <i>Absence Severity Rate</i> (including events due to labor illness)	E.G.	0.20	
3.3.6	Frequency of Occupational Diseases	E.G.	1.00	
3.4	Organizational Learning		0.05	0.02
3.4.1	Retrospective learning from mining safety management	TD, FGD	0.30	
3.4.2	Number of improvements based on mining safety learning	TD, FGD	0.40	
4	Control efforts undertaken		0.30	0.14 Basis
4.1	Governance-based mining safety risk control		0.04	0.02
4.1.1	Basic mining safety risk management	TD, FGD	0.50	
4.1.2	Completeness of the risk management cycle	TD, FGD	0.40	
4.1.3	Scope of risk management	TD, FGD	0.40	
4.1.4	Risk management effectiveness	E.G.	0.40	
4.2	Mining occupational health management		0.03	0.02
4.2.1	Basic Development of mining occupational health program	TD, WWC	0.50	
4.2.2	Realization of the main program: occupational health	E.G.	1.00	
4.3	Mining working environment management		0.03	0.02
4.3.1	Basic development of mining work environment program	TD, WWC	0.50	

4.3.2	Realization of the main program: work environment	E.G.	1.00
4.3.3	Effectiveness of work environment programs	E.G.	0.40
4.4	Engineering Management and Process Design		0.04 0.02
4.4.1	Suitability of the application of mining engineering: reliability of the design of mining operational activities	TD, OBS, FGD	0.33
4.4.2	Suitability of the application of mining engineering: reliability of mining operational activity methods	TD, OBS, FGD	0.40
4.4.3	Suitability of mining engineering application: suitability of using equipment and hardware for mining operational activities	TD, OBS, FGD	0.40
4.4.4	Suitability of mining engineering application: suitability of using equipment and software for mining operational activities	TD, WWC	0.40
4.4.5	Effectiveness of mining design and engineering	E.G.	0.40
4.5	Mining Safety Asset Management		0.04 0.02
4.5.1	Procurement and purchase of mining safety assets	TD	0.40
4.5.2	Mining Safety Asset Inventory	TD, FGD	0.30
4.5.3	Supply Chain Management	TD, FGD	0.50
4.5.4	Asset Integrity Management: Total Feasibility Testing of Mining Facilities, Infrastructure, Installations and Equipment (SPIP)	E.G.	0.20
4.5.5	Asset integrity management: Realization Commissioning	E.G.	0.20
4.5.6	Asset Integrity Management: Total Maintenance of Mining Facilities, Infrastructure, Installations and Equipment (SPIP)	E.G.	0.20
4.5.7	<i>Nilai Physical Availability</i>	E.G.	1.00
4.5.8	<i>Nilai Mechanical Availability</i>	E.G.	1.00
4.5.9	Tree Program Realization: Operational Safety	E.G.	0.40
4.5.10	Effectiveness of operation safety programs	E.G.	0.40
4.6	Worker Reliability Management in Mining Safety Management		0.03 0.01
4.6.1	Fulfillment of Employee Work (<i>Fitness for Psychological and Physiological Completion Duty</i>)	E.G.	0.80
4.6.2	Effectiveness of Selection and Placement of Worker Documentation Review	E.G.	0.40
4.6.3	Fulfillment of Worker Competency in accordance with Work Competency Standards	E.G.	0.60
4.6.4	Effectiveness of Work Competency Fulfillment	E.G.	0.40
4.6.5	Total Mining Safety Education and Training	TD	0.40
4.6.6	Education Implementation Approach and Safety Aspect Training Documentation Review	TD, FGD	0.40
4.6.7	Effectiveness of Education and Training on Mining Safety Aspects	E.G.	0.40
4.6.8	Knowledge Retention and Improved Review of Post-Education and Training Worker Performance Documentation	TD, FGD	0.50
4.6.9	Knowledge Retention and Post-Certification Worker Performance Improvement	TD, FGD	0.40
4.6.10	Compatibility of <i>Roster</i> Designation and <i>Shift/Employee's Work Shift</i>	TD, FGD	0.40

4.6.11	Workers' Statements related to Job <i>Satisfaction</i> and Mental <i>Well-Being</i> at Work Based on Survey Results	KS, WWC	0.70
4.7	Change Management		0.04 0.02
4.7.1	Basic Change Management	TD, FGD	0.20
4.7.2	Benefits of Change Management	TD, FGD	0.30
4.7.3	Organizational Responsiveness to External Changes	TD, FGD	0.60
4.7.4	Effectiveness of Mining Technical Studies	E.G.	0.40
4.7.5	Change Management Effectiveness	E.G.	0.40
4.8	Emergency Management		0.03 0.01
4.8.1	Effectiveness of Emergency Response Teams	E.G.	N/A
4.8.2	Emergency Management Effectiveness	E.G.	0.40
4.9	Mining Service Company Management		0.01 0.01
4.9.1	Conformity of Requirements, Selection, and Determination of Mining Service Companies	E.G.	0.80
4.9.2	Conformity of Determination of Responsibility of Mining Service Companies Suitability of Monitoring and Evaluation of Performance of Mining Service Companies	E.G.	0.40
4.9.3	Conformity of Monitoring and Performance Evaluation of Mining Service Companies	E.G.	0.40
4.10	Document Management and Mining Safety Partners		0.01
4.10.1	Mining Safety Documentation Management	E.G.	0.60
4.10.2	Effectiveness of Documentation Management	E.G.	0.80
4.10.3	Knowledge Management	TD, FGD	0.50
ACHIEVEMENT LEVEL			0.52 Reactive

Explanation:

TD: Documentation Review

KS: Questionnaire

WWC: Interview

OBS: Observation

FGD: Focus Group Discussion

PJ: Testing

ANL: Data Analysis

The results of the assessment for these four indicators are then combined to determine the overall achievement of all indicators, resulting in a score of 0.52, falling into the reactive category. According to [5], the reactive category means the company is getting serious about safety management, but safety control is only based on incidents that have already occurred (curative), and there is no control to prevent accidents (preventive). Furthermore, the results of the safety culture maturity assessment are translated into recommendations based on each parameter, and the recommendation results are used as a basis for the development of mining safety programs beyond the mandatory core programs. The program focuses on improving the performance of indicators that are less satisfactory, maintaining and enhancing the performance of indicators that are already good, and enhancing mining safety performance. Recommendations and programs are obtained through the achievements of each measurement item, and then an integrated analysis is conducted to find the relationships between measurement items that influence mining safety performance. For more details, refer to Table 4 and Table 5.

Table 4. Recommendations for the Development of Mining Safety Programs

Item	Parameter	No	Recommendations
1.1	Individual Concern	1	Increased Employee's understanding of the overall dangers and risks of KP as well as; His control of his work territory
	and Behavior	2	Increased consistency of workers in working safely;

Item	Parameter	No	Recommendations		
	towards Mining Safety Risks	3	Increasing Workers related to the ability to be aware of work situations, as well as being consistent in working safely and playing an active role in improving and improving efforts to control hazards and risks;		
		4	Increased discipline of workers in following company regulations when working in a work team, in work areas and / or projects, and in working hours;		
		5	Increased discipline of workers individually, communally, and collectively, so that minor violations can be minimized;		
		6	Increased employee discipline in an effort to maintain safety and health outside working hours and work areas;		
		7	Increased understanding of the Company's core values so that they can be actualized in the field;		
		8	Socialization related to <i>the golden rules and checking the understanding of the golden rules to employees.</i>		
		1.2	Worker Involvement in Mining Safety Management	1	Establishment of a Risk Management Team consisting of K3 and KO sections and representatives from related departments;
				2	Increased involvement of the Chairman, Secretary, and all representatives of Departments/Sections in the KP Committee regarding the preparation of KP goals, objectives, and programs;
3	Hazard reporting can be improved proactively and consistently by workers with participation rates reaching 100% of total workers;				
4	Improving the quality of hazard pioneers such as unsafe conditions and unsafe actions;				
5	Reporting on critical matters, as well as deviations from the operating system that are latent conditions causing losses and consistent and valid application;				
6	Increased validity and representation of real conditions in operational activities;				
7	Create a mechanism for participation in input from workers formally and systematically.				
2.2	Mining Safety Leadership and Commitment	1	Scheduling inspections or field observations for the management level every month;		
		2	Increased formal involvement of the Operations Supervisor in the Risk Management Team for Risk Management specific to the activities for which he or she is responsible and other related activities.		
2.3	Mining Safety Regulations Compliance and Enforcement	1	Improved identification of all provisions of laws and regulations and other related requirements in a continuous and planned manner;		
		2	Proactively improve periodic compliance assessments in order to fulfill all requirements of laws and regulations and requirements of other KP aspects;		
		3	Creation of a system to get quick notifications about the latest information on regulatory requirements and other requirements;		
		4	Increasing the ability of Department/Section Leaders to follow up on all Summit Directives/Instructions related to compliance with Mining Safety Regulations, so that they can complete according to the stipulated deadline, and are able to provide constructive input to the Summit to improve compliance with KP Regulations in the future.		
2.5	Mining Safety Strategy and Operations Management	1	Make annual targets and objectives for KP Management in accordance with SMART principles and consider the analysis of conditions and strategic issues of KP management in accordance with statutory requirements;		
		2	Make annual targets and objectives KP management in accordance with SMART principles and make assessment targets that are more than required in regulations (beyond compliance) and develop strategic alternatives based on scenario planning developed by taking into account uncertainty factors;		

Item	Parameter	No	Recommendations
		3	Aligning business processes with workers' <i>Key Performance Indicator</i> (KPI) strategies and targets, as well as achieving company performance targets;
		4	Monitoring KP management of the progress of achieving leading targets and lagging indicators, as well as monitoring what conditions occur within the system boundaries and in the environment outside the system boundaries for the short term, to help continuous improvement and anticipate potential goals that are not achieved;
		5	Monitoring KP management on an ongoing basis, which can detect critical conditions that can seriously affect system performance, challenges and opportunities, in the long term - positively or negatively, and being able to follow up knowing what to look for to maintain performance.
2.6	Information, Communication, Assistance, Mining Safety Consulting	1	Conducting Communication and Consultation on KP Management with external stakeholders (community, partners, suppliers, and government) and carried out in a planned manner for each phase of activities, and there has been access/media for stakeholders to channel information;
		2	Management proactively communicates to inventory the expectations and needs of internal and external stakeholders, relating to the implementation of KP.
2.7	Quality Control of Mining Safety in Operational Activities	1	Synchronization of the Daily Operational Work Plan with the requirements of all aspects of Good Mining Engineering Principles;
		2	Granting Equipment Operating Licenses and Licenses in accordance with statutory requirements and consistently applied;
		3	Conduct inspections, inspections, and tests with valid results and represent real conditions in operational activities;
		4	Documenting the inspection results is expected to be carried out consistently and not only detecting hazards from risks but also detecting opportunities for KP performance improvement.
3.1	Analysis of Mining Safety Case Data	1	Companies can standardize data retrieval (uniform reporting methods and forms);
		2	Make appropriate categorization of KP Data and make efforts to validate and improve data reality by taking adequate primary data;
		3	The Company develops Mining Safety data that can be accessed in real time, up-to-date, and complete (meets data integrity criteria: Easy to identify about the data, place, time and personnel who collected the data (Attributable) recording medium resistant and easy to read (Legible), data collection is carried out accurately at the time of activity (Contemporaneous), original (Original), and reflects what happened and there is no error in editing (Accurate));
		4	Conduct integrated analysis for all KP Cases;
		5	Improve the results of analysis that focuses on finding correlations between data in finding the root cause of something;
		6	Model and predict scenarios about what might happen next in the future;
		7	Make formulations and recommendations for appropriate actions to be carried out in an effort to achieve certain results and analyze the relationship between actions and results, as well as simulations to design the right solution.
3.2	Mining Safety Case Investigation	1	Conduct integrated analysis for all KP Cases;
		2	The realization of corrective and preventive measures is gradually implemented until it reaches 100% of the stipulated.
3.4	Organizational Learning	1	The company can study cases of KP management failures in internal and external companies, which are carried out in a planned and organized manner such as through the KP Committee;
		2	The company is expected to follow up on the learning results from the

Item	Parameter	No	Recommendations
			failure of KP management in the company's internal and external hands.
4.1	Governance- Based Mining Safety Risk Control	1	The Company is expected to manage KP Risk in accordance with RKAB for the fulfillment of legal obligations and achievement of performance targets;
		2	Companies can develop <i>key risk indicators</i> as an <i>early warning system</i> throughout the organization, and conduct <i>contingency planning</i> in various operational scenarios;
		3	Companies can create risk management methods continuously and then develop by referring to laws and regulations and following advances in science and technology.
		4	Each individual is expected to have a role in controlling risk management formally and informally
4.2	Mining Occupational Health Management	1	Occupational health programs are expected to be made, determined, and implemented with a promotive or promotive approach, preventive, curative and rehabilitative and refer to applicable related laws and standards; other related requirements; company policy; Risk Management results on all processes, activities, and work areas; evaluation of the performance of occupational health programs; the results of examination of Labor Disease and Occupational Disease Events; availability of resources, including human, financial, equipment.
4.3	Mining Work Environment Management		
4.5	Mining Safety Asset Management	1	Conduct Corporate Resource Planning aimed at Asset Register, Asset Condition Assessment, Asset Priority Assessment, Asset Life Planning, and Year Work Plan for mining equipment and materials;
		2	Conducting Asset Inventory KP aspects equipped with <i>Forecast Drevien Stock Inventory Management</i> which prioritizes product life-based optimization. To the synergy between the K3 KO Section, user units, the Logistics Section and the Finance Section for inventory management;
		3	The Asset Register is continuously updated according to actual conditions and the Company controls the availability of equipment and materials and the amount of supply of KP aspect assets needed by user work units and analyzes the reliability, availability and feasibility of maintenance of assets as a basis for efforts to improve asset performance. In addition, system development is also carried out to guide <i>predictive maintenance</i> ;
		4	The Company made <i>improvements</i> to improve the efficiency of mining equipment/material distribution flows;
		5	Realization of SPIP feasibility testing gradually until it reaches 100% of the target;
		6	Commissioning mining equipment in stages until it reaches 100% of the target;
		7	Perform SPIP maintenance gradually until it reaches 100% of the target.
4.6	Worker Reliability Management in Mining Safety Management	1	Carry out education and training of workers gradually until they reach 100% of the target (<i>Training Need Analysis</i>)
		2	The company can provide support so that the competencies trained can be maintained and implemented properly on the job;
		3	Carry out education and training properly so that post-education and training workers are able to contribute to improving the scale performance of the organization.
4.7	Change Management	1	The Company can carry out change management if there are changes and modifications to facilities, infrastructure, installations, and equipment in accordance with the technical study plan written in the RKAB provided by the government;

Item	Parameter	No	Recommendations
		2	Companies can plan proactive change management based on the results of <i>research and development</i> on opportunities to improve KP performance;
		3	The company can carry out change management on an ongoing basis and involve all elements in the company so as to produce process changes that can be used as the company's intellectual property and the company's competitive advantage.
4.10	Document Management & Mining Safety Records	1	The Company is expected to actively gather workers through regular meetings, meetings, discussions, etc., to disseminate explicit knowledge <i>and</i> knowledge in the form of experience, understanding, and practical guidance from undocumented individuals based on KP recording data that has been analyzed;
		2	Companies are expected to be able to effectively apply knowledge assets. Managing KP records which can then be analyzed into information, analyzed further, and applied so that they become knowledge. Furthermore, knowledge is built by the organization through the process of acquisition, distribution, collaboration and communication as well as the creation of new knowledge;
		3	Companies are expected to have KP information that has been confirmed to be accurate and always available to help workers do their jobs safely. Furthermore, knowledge is analyzed and applied so as to provide guidance for mine workers to be wise in KP management.

Table 5. Recommendations for Preparing a Mining Safety Program

No	Work Program
1	Increased <i>basic training awareness</i> of K3 through <i>the SHE</i> internal training program
2	Implementation of post-incident IBPR review with area supervisors
3	The socialization and giving of <i>the golden rules</i> witness unequivocally to every violation committed
4	Implementation of periodic IBPR reviews (1x/Year) with supervisors and mining safety teams
5	Preparation of TSP by involving all departments
6	The implementation of TSP reviews of all departments periodically every month and reported to the Person in Charge of Operations (PJO) of the company
7	Socialization of <i>Safety Accountability Program</i> (SAP) and increased employee participation in following up on findings
8	The provision of <i>the Safety Accountability Program</i> (SAP) theme according to the highest trend findings in each area
9	Implementation of evaluation of findings based on <i>the Safety Accountability Program</i> (SAP) risk category and the provision of improvement deadlines
10	Implementation of <i>management inspection observation</i> (mio) in a planned manner involving management, pic area, and partners
11	Scheduling <i>a review of</i> the entire procedure in each department involving the doco and area supervisors, as well as the workers involved
12	Increasing regulatory compliance and conducting socialization to related PICs
13	Creating <i>an online dashboard</i> notification related to <i>the expiration date</i> of all aspects of regulatory compliance with applicable laws and regulations (legality, competency certificates, SIO, etc.)
14	Preparation of internal and external issues by involving all department leaders
15	Preparation of identification of needs and expectations of interested parties by involving all department leaders
16	Implementation of work permits for high-risk category jobs in accordance with applicable procedures
17	Fulfillment of competency awareness in workers who perform work in high risk categories
18	Consistent implementation of planned or unplanned inspections in areas with high risk categories involving area supervisors
19	Evaluate the implementation of inspection results by making trends in inspection findings in each area and monitoring follow-up

- 20 Fulfillment of the master list of documents for all departments along with in accordance with document numbering rules
- 21 Periodic evaluation of all mining safety work programs (KP) and distributing trends or issues of KP to all relevant departments
- 22 Implementation of post-incident investigations involving area supervisors, employees involved in incidents, related pics, and management to be able to provide appropriate decisions based on the results of the investigations carried out
- 23 Implementation of incident follow-up according to the basic cause of incident trends based on the evaluation of the investigation report
- 24 Monitoring the implementation of *incident follow-up results on an ongoing basis*
- 25 Evaluate recurring incident trends based on investigation reports and provide *incident trend output* for supervisory hazard reporting, work programs focused on incident trends, etc
- 26 The implementation of *the safety committee is tiered, starting from the department-level safety committee, PT BA's PPA site safety committee, and the safety committee with PPA partners*
- 27 Distribution of KP issues or trends to *PTBA PPA site partners* and their follow-up
- 28 Making annual RKAB along with actual *monitoring* of implementation for periodic evaluation
- 29 Making *action plans* or mitigations in every work program that has not been implemented according to *planning*
- 30 SPIP monitoring for all departments
- 31 Monitoring and implementation of calibration, feasibility testing, commissioning/re commissioning, certification, and maintenance of all SPIP
- 32 Making *training needs analysis* for all positions and making *employee competency* dashboard monitoring
- 33 Implementation of 100% employee competence in accordance with *training needs analysis*
- 34 Implementation of periodic employee competency evaluations
- 35 Implementation of technical studies / *management of change* (MOC) for any changes in work that require technical studies involving competent workers

The mining safety improvement program of PT Putra Perkasa Abadi, located at the site of PT Bukit Asam Tbk, which has been formulated, will be incorporated into the Mining Safety Work Plan and Budget for the year 2024, making the target program one year. The success criteria for the implementation of the mining safety improvement program are an increase in achievement for each measurement item, thus resulting in an overall improvement in mining safety performance.

4. CONCLUSION

The assessment result of the safety culture maturity level at PT Putra Perkasa Abadi, located at the site of PT Bukit Asam Tbk, based on the Minister of Energy and Mineral Resources Regulation No. 10 of 2023, obtained a score of 0.52, falling into the reactive category. If we look at each indicator, the participation of mine workers obtained an achievement score of 0.09, falling into the reactive category. The indicator of the Responsibility of Unit Work Leaders obtained an achievement score of 0.21, falling into the reactive category. The indicator of analysis and statistics of accidents, work-related diseases, incidents due to occupational diseases, and dangerous incidents obtained an achievement score of 0.09, falling into the basic category. The indicator of control efforts undertaken obtained a score of 0.14, falling into the basic category. The results of the safety culture maturity assessment are translated into recommendations based on each parameter, and the recommendation results are used as a basis for the development of mining safety programs. The program focuses on improving the performance of indicators that are less satisfactory, maintaining and enhancing the performance of indicators that are already good, and improving overall mining safety performance. The next mining safety improvement program will be incorporated into the objectives, targets, and programs (TSP) in 2024. The success criteria for the implementation of the mining safety improvement program are an increase in achievement for each measurement item, thus resulting in an overall improvement in mining safety performance. As a recommendation, PT Putra Perkasa Abadi at the site of PT Bukit Asam Tbk is advised to reassess the safety culture maturity level in the following year to determine the success of the programs that have been implemented. This way, less effective programs can be adjusted based on the existing field conditions.

REFERENCES

- [1] P. K. Nag, L. P. Gite, P. K. Nag, and L. P. Gite, "OHS Services and Management in Agriculture," *Human-Centered Agric. Ergon. Hum. Factors Appl.*, pp. 355–389, 2020.
- [2] J. Reason, *Managing the risks of organizational accidents*. Routledge, 2016.
- [3] M. D. Cooper and R. A. Phillips, "Exploratory analysis of the safety climate and safety behavior relationship," *J. Safety Res.*, vol. 35, no. 5, pp. 497–512, 2004.
- [4] D. Cooper, "Improving safety culture: A practical guide," (*No Title*), 1998.
- [5] P. Hudson, "Achieving a safety culture for aviation," *J. Aviat. Manag.*, vol. 3, no. 1, pp. 27–47, 2003.
- [6] S. Suryana, "Metodologi penelitian: Model praktis penelitian kuantitatif dan kualitatif," *Univ. Pendidik. Indones. Bandung*, 2010.
- [7] U. Sekaran, "Research Methods for Business: Metodologi Penelitian Untuk Bisnis, Buku 1," 2011.
- [8] D. Sugiyono, "Memahami penelitian kualitatif," 2010.
- [9] E. P. Widoyoko, "Teknik teknik penyusunan instrumen penelitian," *Yogyakarta: Pustaka Pelajar*, 2016.
- [10] A. K. Pantow, B. Sungkowo, E. A. N. Limpeleh, and A. A. Tand, "Penerimaan Mahasiswa Akuntansi atas Aplikasi Myob Accounting dengan Pendekatan Technology Acceptance Model," *Own. Ris. dan J. Akunt.*, vol. 5, no. 1, pp. 22–30, 2021.
- [11] P. A. Adler and P. Adler, *Membership roles in field research*, vol. 6. Sage, 1987.
- [12] R. Barbour and J. Kitzinger, *Developing focus group research: politics, theory and practice*. Sage, 1998.