

EVALUATION OF THE SAFETY RIDING TRAINING FOR EMPLOYEES AT PT INDONESIA NIPPON SEIKI USING THE KIRKPATRICK MODEL

ikhsan nurahman, anggraeni pratama indrianto, ningsih, fatuhraman

ikhsan nurahman

department of management, universitas yarsi pratama, indonesia
email: ikhsan@yarsipratama.ac.id

anggraeni pratama indrianto

department of management, universitas yarsi pratama, indonesia
email: anggraeni@yarsipratama.ac.id

ningsih

department of management, universitas yarsi pratama, indonesia
email: ningsih@yarsipratama.ac.id

fathurahman

department of management, universitas yarsi pratama, indonesia
email: fathurahman@yarsipratama.ac.id

submitted: dd-mm-yyyy, revised: dd-mm-yyyy, accepted: dd-mm-yyyy

abstract

Employee training is one of the strategic efforts in improving the competence of human resources, especially in the manufacturing industry. PT Indonesia Nippon Seiki as a company engaged in automotive components requires employees who are skilled and adaptive to technological developments. This study aims to evaluate the effectiveness of employee training using the Kirkpatrick model, in collaboration with the Management Department of Yarsi Pratama University. The Kirkpatrick model was chosen because of its ability to provide a comprehensive evaluation through four levels, namely reaction, learning, behavior, and results. The research methods included training need analysis, distributing questionnaires to measure participant satisfaction (level 1), and conducting pre-test and post-test to assess the improvement of material understanding (level 2). The results showed that the participants reacted positively to the quality of the resource persons and the materials presented, with an average questionnaire score of 4.35. In addition, there was a significant increase in material understanding, indicated by the increase in the average post-test score of 83.9% compared to the pre-test which only reached 39.8%. This research is expected to be a reference for PT Indonesia Nippon Seiki in designing more effective training programs, as well as a consideration for the Management Department of the University of Indonesia.

Keywords: Training Evaluation, Kirkpatrick Model, PT Indonesia Nippon Seiki, Yarsi Pratama University, Human Resource Management

INTRODUCTION

Occupational Health and Safety (OHS) is a crucial aspect in maintaining workforce productivity and well-being. According to Indonesian Government Regulation No. 50 of 2012, OHS encompasses all activities aimed at ensuring and protecting workers' safety and health through

efforts to prevent work accidents and occupational diseases (Dwi, R. M.; Handayani, P.; Danti, 2019). OHS is not only a legal obligation but also a managerial strategy to reduce operational risks and enhance organizational performance.

Several studies have shown that effective OHS implementation significantly reduces workplace accidents and improves employee job satisfaction. For instance, (Ghodrati, N.; Samari, M.; Shafiei, 2018) found that companies consistently implementing OHS programs experienced 35% fewer work accidents compared to those that did not. Additionally, (Ramli, 2010) emphasized that OHS is an integral part of an organizational culture that prioritizes sustainability and operational efficiency.

Human resource management plays a pivotal role in the successful implementation of OHS policies. Professionally managed HR can help create a safe, healthy, and conducive work environment. (Robbins, S. P.; Judge, 2019) highlight the importance of balancing employee needs with organizational goals to achieve optimal productivity. (Similarly, 2016)(Mathis, R. L.; Jackson, 2016) argue that effective HR management enhances employee engagement in safety programs.

In the case of automotive companies like PT Indonesia Nippon Seiki, which relies on high employee mobility, safety riding becomes a critical component of their safety policy. Given that many employees commute using motorcycles, road traffic accidents become a primary concern. Research by (Irawan, B.; Sutarto, 2020) reveals that structured safety riding training can reduce commuting-related work accidents by 22%.

The collaboration between the Traffic Directorate (Dirlantas) of Banten Police and Yarsi Pratama University in providing safety riding training exemplifies a strategic preventive measure. This training not only improves technical riding skills but also raises awareness of safe driving behavior. As highlighted by (Lestari, W.; Prabowo, H.; Ramadhani, 2021), road safety education has a positive correlation with reduced traffic violations among industrial workers.

LITERATURE REVIEW

Employee training is a fundamental element in human resource development, particularly in industries requiring high operational precision and mobility, such as the automotive sector. Training not only enhances employee skills but also fosters behavioral changes that contribute to organizational safety and productivity. According to (Noe, 2017), effective training is designed to close the gap between current employee capabilities and the competencies required to meet strategic goals.

In the context of workplace safety, particularly occupational health and safety (OHS), training serves as a preventive tool to minimize risks and accidents. (Goetsch, 2015) asserts that a well-structured safety training program significantly reduces workplace incidents and improves overall organizational performance. Similarly, (Geller, 2001) emphasizes that training aimed at promoting safety behavior must include elements of engagement, reinforcement, and feedback to be effective.

The Kirkpatrick Model, developed by Donald Kirkpatrick in 1959 and refined over time, remains one of the most widely used frameworks for evaluating training effectiveness. The model consists of four levels: Reaction, Learning, Behavior, and Results (Kirkpatrick, D. L.; Kirkpatrick, 2016). The first level, Reaction, measures participants' satisfaction with the training experience. Level two, Learning, evaluates the increase in knowledge or skills. Level three, Behavior, examines whether the learning is applied in the workplace. Lastly, level four, Results, assesses the training's overall impact on organizational performance. (Bates, 2004) notes that the Kirkpatrick Model's strength lies in its simplicity and applicability across various sectors, making it a robust choice for training evaluation.

In the manufacturing and automotive industries, safety-related training, such as safety riding programs, has become increasingly vital due to high employee mobility and the use of motorcycles for commuting. According to Haddon's Matrix (Haddon, 1980), interventions before and during transport—such as skills training and awareness campaigns—can significantly reduce

injury severity and incident frequency. In alignment, a study by (Widiastuti, N.; Rahmawati, Y.; Nugroho, 2020) found that employees who underwent structured safety riding training demonstrated better hazard perception and defensive driving behavior.

Moreover, the effectiveness of safety training is also influenced by organizational culture and managerial support. (Burke, M. J.; Sarpy, S. A.; Smith-Crowe, K.; Chan-Serafin, S.; Salvador, R. O.; Islam, 2006) argue that training is more impactful when supported by leadership commitment, continuous learning culture, and reinforcement mechanisms. This aligns with the findings of (Christian, M. S.; Bradley, J. C.; Wallace, J. C.; Burke, 2009), who identified that safety climate and perceived organizational support significantly moderate the transfer of safety training outcomes into actual job behavior.

In the Indonesian context, traffic accidents are among the leading causes of employee injury, particularly in industrial zones with long commuting distances. The National Traffic Police (Korlantas Polri) has collaborated with academic institutions to provide training programs that are tailored to the commuting patterns and risk profiles of industrial workers. Research by (Irawan, B.; Sutarto, 2020) confirmed a 22% reduction in commuting-related incidents following the implementation of safety riding workshops supported by local law enforcement and educational institutions.

In sum, literature across various disciplines consistently highlights the pivotal role of structured training programs in enhancing both employee competence and workplace safety. The Kirkpatrick Model offers a valid and reliable structure for assessing training outcomes, and when applied in safety riding contexts, it can yield actionable insights for policy and operational improvements.

METHODS

This study employs the Kirkpatrick Evaluation Model, which consists of four levels, to measure the effectiveness of the safety riding training program conducted by the Traffic Directorate (Dirlantas) of Banten Police in collaboration with Yarsi Pratama University at PT Indonesia Nippon Seiki. The model was chosen for its ability to provide a comprehensive assessment, starting from participants' reactions to the tangible impacts on the organization.

The Kirkpatrick Model is one of the most popular and widely used training evaluation frameworks across various organizations due to its strengths in scope, simplicity of structure, and flexibility of application. Originally introduced by Donald L. Kirkpatrick in 1959, the model has continued to be relevant in modern training evaluation because of its capacity to deliver a holistic picture of training effectiveness (Kirkpatrick, 1994).

Overall, the Kirkpatrick Model stands out as a superior training evaluation tool because it offers a complete overview of training impact, has an intuitive and easy-to-understand evaluation structure, and can be adapted to various types, forms, and scales of training. These three core advantages comprehensiveness, simplicity, and adaptability make the Kirkpatrick Model one of the most recommended and widely adopted approaches in the field of human resource development (Hania, 2015).

As illustrated in Figure 1, the Kirkpatrick Evaluation Model evaluates training effectiveness through four levels, namely:

Level 1: Reaction

The Reaction level aims to measure participant satisfaction with the training implementation. This level reflects the perceived quality of the training process, including aspects such as facilities, materials, and delivery methods. Measurement at this level is typically conducted using a reaction sheet or questionnaire, distributed during the training session, at the end of the session, or prior to the training's closing. The goal is to gather immediate feedback from participants regarding their experiences and perceptions of the training.

Level 2: Learning

The Learning level evaluates how much participants have gained from the training in terms of knowledge, attitudes, and skills. This is typically measured by comparing pre-test and post-test results. In this study, the pre-test and post-test assessments were delivered through an online platform (e.g., Google Forms) to assess both cognitive understanding and attitudinal shifts among the employees.

Level 3: Behavior

The Behavior level measures the degree to which participants apply the training in their job roles. This level focuses on identifying behavioral changes that align with the training objectives. To evaluate this level, the study employed a combination of direct observations at PT Indonesia Nippon Seiki, structured questionnaires, and interviews with safety committee members and senior management. For better accuracy, it is recommended to compare post-training behavior with baseline data or performance records collected prior to the training.

Level 4: Results

The Results level focuses on assessing the final impact of the training on the organization's performance. This includes examining whether behavioral changes observed at Level 3 contributed significantly to achieving business or operational objectives. Metrics such as reduced accident rates, improved employee performance, or enhanced safety compliance may serve as key indicators.



Figure 1. The Kirkpatrick Model

This study adopts the Kirkpatrick Evaluation Model as a framework for analyzing the effectiveness of a safety riding training program titled "Effective Leadership Mindset and Habits," conducted at PT Indonesia Nippon Seiki. The program was carried out in collaboration with the Traffic Directorate of Banten Police and Yarsi Pratama University, and was attended by employees of PT Indonesia Nippon Seiki. The training aimed to improve motorcycle safety awareness and encourage safe driving behaviors both inside and outside the organizational environment.

In this implementation, the researchers applied all four levels of the Kirkpatrick Model, with the primary aim not only to assess knowledge acquisition, attitude shifts, and behavioral changes among participants, but also to examine the organizational outcomes resulting from the training. The training evaluation at the learning level (Level 2) was conducted through a systematic sequence of stages as shown in Figure 2. These included the design of measurement instruments, administration of pre-tests before the training began, and post-tests after the training concluded. The objective was to provide a clear comparison between the participants' conditions before and after the training, thereby determining the extent of material absorption.

No	Need Analysis	Lev. 1 Reaction	Lev. 2 Learning	Lev. 3 Behavior	Lev. 4 Result
----	---------------	-----------------	-----------------	-----------------	---------------

1	Training Need Analysis	Questionar e	Pre & Post Test	Before After Training	Efisiensi After Training
---	------------------------------	-----------------	--------------------	--------------------------	--------------------------------

Figure 2. Learning Evaluation Flow

Explanation of Figure 2: Evaluation Stages Using the Kirkpatrick Model:

Training Needs Analysis

Training Needs Analysis (TNA) is a systematic process aimed at identifying the competency development requirements of employees to improve work effectiveness. This information is obtained through coordination with division or unit leaders who possess direct insight into the operational challenges and team needs. One of the triggers for initiating a specific training program in this case was the increasing number of traffic accidents involving employees, whether during commuting or on-duty activities. This phenomenon signaled the need for intervention in the form of motorcycle safety training, risk management during travel, and the promotion of safety awareness across the organization. Therefore, the results of this analysis are not only used to determine the appropriate training content, but also to select participants who genuinely require development in the identified areas. This approach aims to minimize risk, improve safety, and enhance overall productivity.

Evaluation Level 1: Reaction

This level measures participants' initial reactions to the training program. Data collection was carried out through online questionnaires filled out by participants at the end of the training session. The questionnaire assessed various aspects such as the quality of material delivery by instructors, the relevance and effectiveness of the training content, and the perceived benefits immediately following the training. The results of this evaluation serve as feedback to improve future training programs in terms of delivery methods, content, and instructor selection. (Ritonga et al., 2019)

Evaluation Level 2: Learning

This level aims to determine how well participants understood and absorbed the training material. Measurement was done using online tests administered before (pre-test) and after (post-test) the training session. By comparing the two results, the study could assess the increase in knowledge or skills gained from the training. These results serve as an indicator of the effectiveness of the training materials and methods in enhancing participant competencies.

Evaluation Level 3: Behavior

At this level, the goal is to determine whether the knowledge and skills gained during training translated into behavioral changes in the workplace, specifically at PT Indonesia Nippon Seiki. This was assessed by comparing participants' behavior before and after the training, to evaluate the extent to which the learning was applied in daily work routines. The evaluation was conducted through direct observation by the company's safety committee, using a monthly checklist report to monitor participants' safety-related behaviors on the job. It is important to note that behavioral changes may not be immediate; participants require time and opportunity to apply what they have learned. It is not always possible to pinpoint when change will occur—but what matters is whether the training content is being genuinely applied in practice.

Evaluation Level 4: Results

The fourth level of evaluation focuses on measuring the final impact of the training on the organization. It aims to determine whether the training produced tangible benefits for both the participants and the organization, or whether it was counterproductive. The method used was

pre-and post-training comparisons, analyzing changes in key performance indicators or organizational metrics relevant to training objectives.

RESULTS

Training Need Analysis

The training needs analysis for the program "Effective Leadership Mindset and Habits" (Batch 1 and Batch 2) was conducted through a collaborative effort between PT Indonesia Nippon Seiki, Universitas Yarsi Pratama, and Korlantas Polda Banten. As part of the process, division leaders were asked to identify and nominate employees deemed in need of this training by completing a Google Form provided by the training organizer, namely the Safety Committee of PT Indonesia Nippon Seiki.

The submitted forms were then analyzed to determine the eligible training participants, as presented in Table 1 and Table 2. The participants came from various job levels including managers, section heads, leaders, staff members, and contract-based employees (PKWT) based on the specific leadership development needs within each respective unit.

Tabel 1 Form Training Need Analysis (Batch 1)

No	Name	Position	No	Name	Position
1	Dudy Iskandar	SM.	6	Bambang	AM
2	Machyudi S.	DM.	7	Kintan	Staff
3	Adin	SH.	8	Heru	Staff
4	Anung Wicaksono	AM.	9	Nyi Imas	Staff
5	Soni Soleman	DM.	10	Luki Abdul	Staff

Tabel 2 Form Training Need Analysis (Batch 2)

No	Name	Position	No	Name	Position	No	Name	Position
1	Acep j.	Employee	41	Sayupi	Employee	81	Bustomi	PKWT
2	Bero	Employee	42	Syaiful H	Employee	82	Bahrudin	PKWT
3	Baha Udin	Employee	43	Sarpin	Employee	83	Bahrin	PKWT
4	Denny P	Employee	44	Muhamad S	Employee	84	Bayu P	PKWT
5	Deri Rahman	Employee	45	Tajudin	Employee	85	Cindy Fina	PKWT
6	Denny Futura J	Employee	46	Topik H	Employee	86	Celvin C	PKWT
7	Deni Irawan	Employee	47	Wahyudi K.	Employee	87	Cicik M	PKWT
8	Dimas P	Employee	48	Wiwik Tri H.	Employee	88	Dela P	PKWT
9	Endang M	Employee	49	Wawan S	Employee	89	Despita	PKWT
10	Ervin K	Employee	50	Yulian E	Employee	90	Dhea N	PKWT
11	Eep Farhan	Employee	51	Anggi Puspa	PKWT	91	Desih	PKWT
12	Fery Setiawan	Employee	52	Arif Al Irfan	PKWT	92	Erik J	PKWT
13	Ferry Sd	Employee	53	Dewi Sapitri	PKWT	93	Fazar L	PKWT
14	Fathurahman	Employee	54	Dina Safitri	PKWT	94	Fitra Putra	PKWT
15	Feri Angga P.	Employee	55	Endang	PKWT	95	Fathiyah	PKWT

Proceeding Seminar Nasional dan Call for Papers
 Lembaga Penelitian dan Pengabdian Masyarakat (LPPM)
 Yarsi Pratama University

16	Erwin Setiawan	Employee	56	Ela Sapitri	PKWT	96	Ikhwan S	PKWT
17	Hamzah Yani	Employee	57	Faradiba	PKWT	97	Izelita	PKWT
18	Hady M	Employee	58	Hasanah	PKWT	98	Jaenal H	PKWT
19	Humaeni	Employee	59	Heni N	PKWT	99	Jumaroh	PKWT
20	Irwan Irawan P	Employee	60	Latifah	PKWT	100	Kusroni	PKWT
21	Iman Sulaeman	Employee	61	Muhamad A	PKWT	101	Miftahudin	PKWT
22	Ismatullah R	Employee	62	Rian	PKWT	102	Mila	PKWT
23	Ida Farida	Employee	63	Silvina Nur	PKWT	103	Mabruroh	PKWT
24	Kuat	Employee	64	Shifana A P	PKWT	104	Muhammad R	PKWT
25	Mohamad T	Employee	65	Silva Tirani	PKWT	105	Mustofa	PKWT
26	Mohamad Satibi	Employee	66	Yusuf A	PKWT	106	Muhammad N	PKWT
27	Muhamad Dini	Employee	67	Zaki Adi F	PKWT	107	Ninis Danesa	PKWT
28	Mustopa	Employee	68	Arsha K	PKWT	108	Natasya D	PKWT
29	Muhamad Ade	Employee	69	Aditia N	PKWT	109	Ridwan	PKWT
30	Muhamad I	Employee	70	Ali Akbar	PKWT	110	Rizki Fahrizal	PKWT
31	Muhamad Z	Employee	71	Ali R	PKWT	111	Retna Nindian	PKWT
32	Ma`Mur	Employee	72	Aujan I	PKWT	112	Rifki Abdillah	PKWT
33	Mulyani	Employee	73	Ahmad Ijudin	PKWT	113	Rismawati	PKWT
34	Nana Alfian	Employee	74	Ariful Ahkam	PKWT	114	Raudotul J	PKWT
35	Nuning Sri E.	Employee	75	Asep H	PKWT	115	Saebi	PKWT
36	Rilus Husniriza	Employee	76	Ani Suntiah	PKWT	116	Saptunah	PKWT
37	Rohani	Employee	77	Adhi Renata.	PKWT	117	Tb. Romadon	PKWT
38	Sriyono	Employee	78	Agyar	PKWT	118	Yusfika F	PKWT
39	Suprihatin	Employee	79	Antoni	PKWT	119	Zikri Zidan	PKWT
40	Sofia M	Employee	80	Atika P	PKWT	120	Akbar N	PKWT

The objectives of this training are as follows:

- a. Participants understand and are able to apply an effective leadership mindset.
- b. Participants understand and are able to develop and implement positive habits that support their roles as impactful leaders.

These objectives serve as the foundation for the development of the training materials, which were delivered over a two-week period at the Yarsi Pratama University

DISCUSSION

1) Evaluation Level 1 (Reaction)

Level 1 evaluation aims to measure participants' satisfaction with the implementation of the

“Effective Leadership Mindset and Habits” training. The assessed aspects include the quality of material delivery by the trainer, the relevance of the training content, and the participants’ overall experience during the training sessions. The results of this evaluation serve as input for improving the quality of future training batches. The assessment indicators are presented in Table 3.

Table 3. Questionnaire Indicators

Speakers Quality				
Mastery of training material in depth.				
The speaker’s insight and experience with the training material.				
Ability to present material clearly and understandably.				
Variety of teaching methods (simulations, gamification).				
Use of visual aids (infographics, videos).				
Utilization of examples, references, or analogies to aid participants’ understanding.				
Willingness to listen to and respond to participants’ questions/opinions.				
Relevance of assignments/discussion materials to training objectives.				
Ability to create an inclusive discussion space that respects differences.				
Accuracy and clarity of answers to participants’ questions.				
Skill in facilitating discussions related to the material.				
Ability to create an interactive and enjoyable training atmosphere.				
Consistency in starting and ending sessions on time.				
Ability to motivate participants throughout the training.				
Appropriateness of time allocation relative to the material scope.				
Conducting evaluation tests and providing feedback at the end of the training.				
Training Quality				
The training material can be directly applied to the participants’ work.				
The material provides the necessary knowledge to achieve performance targets.				
The training methods (presentations, discussions, simulations, etc.) are effective for participant understanding.				
The training encourages active participant involvement (Q&A sessions, case studies, etc.).				
The material is neither too easy nor too difficult, matching the participants’ competencies.				
The use of slides, videos, or other visual aids supports understanding.				
The scope of the material aligns with the training objectives.				
The training meets the needs of PT. INS in achieving its zero accident vision.				
The training environment and room atmosphere support participants in receiving education.				
Overall, participants are satisfied with the training they attended.				
Results				
What percentage of the training results contributes to the implementation of your work?				
What percentage of the training results contributes to achieving your performance targets?				
What percentage of the training results contributes to achieving your division's performance targets?				
What percentage of the training results contributes to achieving your institution’s performance targets?				
What percentage has your competency improved after the training?				
What percentage of the training material was completely new to you?				
What percentage of the training time was used effectively?				

Participants were asked to provide their assessment of the quality of the trainer, the quality of the training, and the outcomes gained after attending the training. Level 1 results obtained from participants of the “Effective Leadership Mindset and Habits” training showed an average score of 3.8 in Batch 1 and 4.2 in Batch 2. The Level 1 results are presented in Table 4 and Figure 1.

Table 4. Questionnaire Result

Assessment Aspect	Indicator	Batch 1	Batch 2	Average
-------------------	-----------	---------	---------	---------

Trainer Quality	Mastery of the material	4.2	4.5	4.35
Training Quality	Relevance of the material	4.0	4.3	4.15
Training Outcome	Readiness to apply	3.8	4.2	4.0

Based on the Level 1 evaluation, it can generally be concluded that the training participants had a fairly positive reaction to the training they received. The quality of the trainer in Batch 1 and Batch 2 improved from 4.2 to 4.5, with an average of 4.35. The quality of the training in Batch 1 and Batch 2 increased from 4.0 to 4.3, with an average of 4.15. The outcomes gained after attending the training were rated as very good, as Batch 1 and Batch 2 showed an improvement from 3.8 to 4.2, with an average of 4.0.

2) Level 2 Evaluation

Level 2 evaluation measures participants' understanding of the training material. The test questions are based on the content delivered during the training and are intended to assess how well participants absorb the material. These test questions are administered to participants before (pre-test) and after the training (post-test). The results of the pre-test and post-test (Level 2) for the "Effective Leadership Mindset and Habits" training (Batch 1 and Batch 2) are presented in the following table.

Table 5. Pretest and Post Test Result

No	Name	Pre Test	Post Test	Avg.
Batch 1				
1	Dudy Iskandar	52	89	37
2	Machyudi Suryanto	48	85	37
3	Adin	55	92	37
4	Anung Wicaksono	50	88	38
5	Soni Soleman	47	90	43
6	Bambang	53	91	38
7	Kintan	45	87	42
8	Heru	51	89	38
9	Nyi Imas	49	86	37
10	Luki Abdul	50	88	38
	Average	50.0	88.5	+38.5 (77%)
Batch 2				
1	Employee	42,7	85,7	42,6
2	PKWT	37,6	83,0	45,3
	Average	39,8	83,9	44,2

From Tables, it is evident that the average pre-test score was below 50, indicating that participants needed this training. The lowest pre-test score was 39.8, which suggests that, on average, the training participants—particularly contract-based employees (PKWT) had not yet mastered the material due to their limited knowledge. In contrast, permanent employees scored better, as they already had more driving experience. Therefore, additional training with a greater focus on practical fieldwork is necessary. After the training, there was a significant improvement in material mastery, with post-test scores reaching 85.7 for permanent employees and 83.0 for PKWT employees. Based on this evaluation, it can be concluded that the participants' understanding of the training material was very strong, as shown by the substantial increase in their test scores.

3) Level 3 Evaluation: Behavioral Changes Post-Training

Level 3 evaluation was conducted to assess whether the knowledge and skills gained during the training truly resulted in behavioral changes in the workplace. This evaluation compared participants' work behavior before and after the training. The data showed that throughout 2024, the number of accidents was relatively high, with a total of 22 injuries and 1 fatality. However,

following the training and a monitoring period of three months afterward, there was a significant decrease in accidents, with no incidents or fatalities reported. These results indicate a substantial improvement in workplace safety after the training and demonstrate that the training effectively influenced participants to adopt safer work practices. This supports the company's efforts to achieve the vision of zero accidents.

4) Level 4 Evaluation (Results or Impact)

Level 4 evaluation aims to measure the final impact of the training on organizational performance. This evaluation assesses whether the training provides real benefits to both the participants and the organization or if it fails to contribute significantly. The method used involves systematically comparing performance indicators before and after the training. The results show significant positive changes that deliver tangible economic value to the organization. Before the training, medical costs were around Rp18 million per month. After the training, medical expenses dropped to zero, indicating no more medical claims or related expenditures. This translated into savings of approximately Rp54 million over three months. In addition, production losses amounted to 21 workdays per month before the training, but after the training, there were no production losses reported. This improvement resulted in an estimated savings of Rp63 million from avoided production downtime. Furthermore, the organization had paid Rp120 million in compensation for a fatality in March 2024, but following the training, no further fatality-related compensation was needed. Overall, Level 4 evaluation demonstrates that the training had a highly significant positive impact on organizational performance, improving workplace safety, operational efficiency, and cost savings.

CONCLUSION

Based on the research and analysis conducted, the author can draw the following conclusions:

1. From the Level 1 evaluation, it can generally be concluded that the training participants had a fairly positive reaction to the training they received. The quality of the trainer improved from 4.2 to 4.5 (with an average of 4.35) between Batch 1 and Batch 2. Similarly, the quality of the training increased from 4.0 to 4.3 (average 4.15). The outcomes gained after the training were rated very good, with scores rising from 3.8 to 4.2 (average 4.0) across both batches.
2. Level 2 evaluation (learning) showed that the average mastery of the material during the pre-test was 50.0 for Batch 1 and 39.8 for Batch 2, indicating that participants had not yet sufficiently mastered the material. However, after the training, there was a significant improvement in mastery, with post-test scores rising to 88.5 for Batch 1 and 83.9 for Batch 2. Based on this, it can be concluded that participants developed a strong understanding of the training material.
3. According to Level 3 evaluation, the number of accidents in 2024 was quite high, with 22 injuries and 1 fatality. After the seminar and monitoring over the following three months, the number of accidents dropped significantly to zero, completely eliminating fatalities.
4. Level 4 evaluation indicates that the training had a highly significant positive impact on organizational performance, improving safety, work efficiency, and cost savings.

REFERENCES

- Bates, R. (2004). A critical analysis of evaluation practice: the Kirkpatrick model and the principle of beneficence. *Evaluation and Program Planning*, 27(3), 341-347. <https://doi.org/10.1016/j.evalprogplan.2004.04.011>
- Burke, M. J.; Sarpy, S. A.; Smith-Crowe, K.; Chan-Serafin, S.; Salvador, R. O.; Islam, G. (2006). Relative effectiveness of worker safety and health training methods. *American Journal of Public Health*, 96(2), 315-324.
- Christian, M. S.; Bradley, J. C.; Wallace, J. C.; Burke, M. J. (2009). Workplace safety: A meta-analysis of the roles of person and situation factors. *Journal of Applied Psychology*, 94(5), 1103-1127.
- Dwi, R. M.; Handayani, P.; Danti, P. A. (2019). Evaluasi Program Pelatihan Driving Safety Bagi Para Pengemudi Angkutan Semen (Transporter) di PT X Tahun 2017. *E-Jurnal Forum Ilmiah*, 16(1), 49-62.
- Geller, E. S. (2001). *The Psychology of Safety Handbook*. CRC Press.
- Ghodrati, N.; Samari, M.; Shafiei, M. (2018). The impact of health and safety practices on accident reduction in the construction industry. *Safety Science*, 104, 236-247.
- Goetsch, D. L. (2015). *Occupational Safety and Health for Technologists, Engineers, and Managers*. Pearson Education.
- Haddon, W. (1980). Advances in the epidemiology of injuries as a basis for public policy. *Public Health Reports*, 95(5), 411-421.
- Hania, A. (2015). *Model Evaluasi Kirkpatrick dan Aplikasinya Dalam Pelaksanaan Pelatihan (Level Reaksi dan Pembelajaran) di Pusat Pendidikan dan Pelatihan Perum Jakarta*.
- Irawan, B.; Sutarto, A. P. (2020). Pengaruh Pelatihan Safety Riding terhadap Perilaku Aman Berkendara Pegawai Industri Otomotif. *Jurnal Transportasi*, 11(1), 77-88.
- Kirkpatrick, D. L.; Kirkpatrick, J. D. (2016). *Evaluating Training Programs: The Four Levels*. ATD Press.
- Kirkpatrick, D. L. (1994). *Evaluating Training Programs: The Four Levels*. Berrett-Koehler Publishers.
- Lestari, W.; Prabowo, H.; Ramadhani, F. (2021). Efektivitas Edukasi Keselamatan Berkendara dalam Menurunkan Pelanggaran Lalu Lintas pada Pekerja. *Jurnal Keselamatan Kerja Indonesia*, 4(3), 89-96.
- Mathis, R. L.; Jackson, J. H. (2016). *Human Resource Management*. Cengage Learning.
- Noe, R. A. (2017). *Employee Training and Development*. McGraw-Hill Education.
- Ramli, S. (2010). *sistem Manajemen Keselamatan dan Kesehatan Kerja OHSAS 18001*. PT Dian Rakyat.
- Ritonga, R., Saepudin, A., & Wahyudin, U. (2019). Penerapan Model Evaluasi Kirkpatrick Empat Level Dalam Mengevaluasi Program Diklat Di Balai Besar Pelatihan Pertanian (Bbpp) Lembang. *Jurnal Pendidikan Nonformal*, 14(1), 12. <https://doi.org/10.17977/um041v14i1p12-21>
- Robbins, S. P.; Judge, T. A. (2019). *Organizational Behavior*. Pearson Education.
- Similarly, M. & J. (2016). The Effect of Job Satisfaction and Style of Leadership on Performance. *Asia Proceedings of Social Sciences*, 8(11), 1-6. <https://doi.org/10.5281/zenodo.7268517>
- Widiastuti, N.; Rahmawati, Y.; Nugroho, R. (2020). Safety Riding Behavior among Factory Workers in Industrial Areas: A Case Study in Bekasi, Indonesia. *Indonesian Journal of Public Health*, 15(2), 111-

120.