

THE RELATIONSHIP BETWEEN TRAINING CLIMATE AND SELF EFFICACY TO THE EFFECTIVENESS OF THE IMPLEMENTATION OF ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEM TRAINING

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ABSTRACT

The environment is an inseparable element of human health. A good environmental management will bring benefit to human and surrounding. The successful implementation of International Standardized Management System (SML) ISO 14001 is determined by various factors and one of the factors is training. The purpose of this study was to analyze the correlation of training climate and self-efficacy to the effectiveness of ISO 14001 SML training. This study was categorized as a quantitative type with a cross-sectional design. The population consisted of participants with the total sampling of 90 respondents. The research variables include the training climate, self-efficacy and the effectiveness of the training. This study was conducted in PT XYZ, one of the manufacturing company in Jakarta. The results indicated that training climate and self-efficacy promote the effectiveness of the training with the percentages of 46.7% and 51.1% respectively. The prevalence of ratio that increases the opportunity for practical training is managers' support (12.9), mastery experience (5.7), and opportunities to use learned abilities (0.2). In conclusion, the climate training and self-efficacy show a positive relationship with the effectiveness of training

Keyword: climate transfer, environment management system ISO 14001, self-efficacy, training

INTRODUCTION

Environmental issues in relation to industries in Indonesia have received special attention from the government considering it is potential impacts on the environmental and public health of the environment industry [1]. The application and enforcement of regulation by the government related to the protection of health and environment are getting tighter thus it requires industry players to be able to guarantee the sustainability of industry along with the guarantee of protection of industrialization impact on the environment and human health around it.

Implementation of an environmental management system in a company will significantly help the company in managing the risks that may arise in the operations performed [2]. Considering the failure risk will always exist in work activities caused by imperfect planning, poor implementation, or inadvertent errors [3]. The implementation of the environmental management system ISO 14001

will help the company in the environmental management.

Environmental health consists of aspects of human health, including quality of life determined by physical, biological, social, and psychosocial factors. Environmental health can also be oriented towards the assessment, control, and prevention of the factors as mentioned above that could potentially negatively affect the health of present and future generations [4].

Quality of health and environment in the work area is an essential factor for the achievement of high work productivity in order to achieve optimal corporate profits. If the quality of health and environment in the work area of a company is good, then high work productivity can be achieved, and vice versa [5]. In addition, the World Health Organization (WHO) reminds of the importance of attention to environmental health. Increased industrial activity in developing countries has consequences of increasing communities exposed to environmental hazards including

work environments. The condition reminds all parties to start introducing and controlling hazards or dangers that arise [6].

Noe [7] explains that training is a planned undertaking to facilitate employees in learning knowledge, skills, and attitudes related to their work. Training can also be done with the aim of improving competence. According to Noe [7], the competence in question is behavior, ability, and knowledge. Another definition says that training is an effort to provide a planned learning experience designed to bring about change in knowledge, ability, or expertise in individuals [8]. One of the training objectives of the company is to assist employees in the process of adaptation in work while developing their competence in work. It is expected that when returning to work, the competence obtained can help improve productivity at work [9].

In some conditions, Noe [7] explains that to obtain optimal results, it should be synchronized between the company's strategy with the strategy of planning and application of training. Synchronization is done to obtain harmony between the training conducted with the effort to achieve the vision by the organization. In addition, the training will be more measurable and well planned. In some literature, it is explained that the combination of participants' skills and framing training will determine the effectiveness of training [10]. It is also explained that to achieve optimal results in the implementation of the training, it is required several strategies because there are a lot of factors or variables that influence it. Some of these factors will significantly determine the successful transfer of training. Some of these include self-efficacy of trainees [10].

Noe [7] describes self-efficacy as one of the most critical concepts that provide the foundation for the theory of social science development. A number of studies have shown support for the concept of self-efficacy. Self-efficacy is defined as referring to the perception of an individual's ability to organize and implement actions or behaviors to display a

particular skill. The establishment of a high belief called self-efficacy often helps the individual in achieving his goals [11]. In another study, it is explained that there is a strong relationship between self-efficacy towards goal setting and performance [12]. While different studies explain a significant correlation between self-efficacy with academic achievement of a number of students [13].

Meanwhile, the training climate can also be a critical success factor in training. Climate training gives a significant influence on the success of the achievement of research objectives [14]. On the other hand, several studies explain a strong relationship between the implementation of ISO 14001 Environmental Management System in helping companies maintain its confusion with the company's performance [1]. The study revealed that the company that implements the ISO 14001 Environmental Management System has higher economic performance. In another study, Sri et al. [15] suggest the master company to require the companies under it to implement the Environmental Management System (Holding) to facilitate the performance achievement that has been determined. From these conditions, the current implementation of the Environmental Management System has become an important indicator in supporting the company to achieve its objectives.

In its development, some companies do development strategy of ISO 14001 environmental management system by involving many aspects, especially in the aspect of the operational application to the environment, that aspect is built by holding on to Plan-Do-Check-Action principle which forms a cycle with the main focus on following up result internal audit. The aspects of developing awareness and understanding of environmental systems, are currently still not much touched. It means the aspect understanding development of the environmental management closely related to health and environmental impacts are still not getting attention, whereas in an environmental

management system understanding of environmental management is part of the successful application systems built for environmental protection and healthcare within the industry. On the other hand the ISO 14001 guideline itself, awareness is the aspect that gets special attention. Ideally in the guideline, one of the awareness development media is special training related to ISO 14001 Environmental Management System. ISO 14001 Environmental Management System training is expected to improve the understanding of the employees to become stronger and ultimately can move the system to run well and in accordance with the defined standards.

Considering the above conditions, currently, it is still not much-found research on the effectiveness of ISO 14001 Environmental Management System training. Therefore it needs to be studied further the form and research model seen from several supporting variables. In this study, climatic training and confidence variables in individual trainees or self-efficacy will be examined to the extent of their influence in the ISO 14001 Management System training process to support the success of training that is ultimately expected to support the organization's own achievements.

METHOD

This study is a quantitative study with a cross-sectional design, meaning that the process was done at one time. While the respondents in this study were 90 participants, who were in training divided into three training sessions. The sample is taken by sampling the total population of the participants. The research location is at PT XYZ. PT XYZ as one of the manufacturing companies in Indonesia always strives to improve health and environmental management in the work area of the company. Instruments are structured based on the instrument grid which includes climate training, self-efficacy, and training effectiveness. Table 1

explains that all question items in the questionnaire have good internal consistency, it can be seen that the score obtained from the Cronbach Alfa value is always in the range of 0.8 which is calculated based on the primary data collected.

Table 1. Instrument Reliability

	Cronbach Alfa Value
Climate Training	0.802
Self-efficacy	0.831
SML Training	0.849

Climate training includes the concept of work environment characteristics that affect employees such as climate transfers, managers' support, training opportunities, and opportunity to use learned abilities which are classified as training framing or training climate by Dessler [9] in addition to peer support and technology in the work environment. In this study, it is said to have a supporting training climate if the score is above the mean score.

Self-efficacy is a state where one believes that they can succeed in learning the training materials in a training program. Such beliefs ultimately lead to the emergence of self-efficacy. While self-efficacy is assessed by the experience of success, the role model, the existence of social persuasion, and emotional and psychological conditions. In this study, if the score is above the mean score, it is categorized as good, and if the value is below the mean score, it is categorized as poor.

The effectiveness of the implementation of the ISO 14001 environmental management system training is assessed from indicators in the assessment phase including the training implementation criteria and the expectations of the training implementation on the company's performance. The implementation phase involves the implementation of the training in the company. The evaluation phase includes the quality control of the training and evaluation of the performance of employees following the training.

RESULTS AND DISCUSSION

General description of the characteristics of respondents can be seen in Table 2. Based on Table 2 it can be seen that most respondents have almost the same background that is male, aged 18 to 29 years and have a high school education level.

Table 2. The Characteristics of the Respondents

		Score
Sex	Male	83 (92.2%)
	Female	7 (7.8%)
Age	18 to 29	73 (81.1%)
	30 to 39	17 (18.9%)
Education	High School	73 (81.1%)
	Bachelors degree	17 (18.9%)

The characteristics of the work environment are one of the factors associated with the successful implementation of training. In this study, the characteristics of the work environment as a training climate can be seen in Table 3.

Table 3. Climate Training Frequency Distribution

Training Framing	Score	
	Supporting N (%)	Less Supporting N (%)
Climate Transfer	36 (40.0%)	54 (60.0%)
Manager Support	78 (86.7%)	12 (13.3%)
Opportunity to use learned abilities	18 (20%)	72 (80%)
Peer Support	27 (30%)	63 (70.0%)
Technology Support	39 (43.3%)	51 (56.7%)
Total	42 (46.7%)	48 (53.3%)

Based on Table 3, it can be seen that the training climate can support respondents' perceptions about the effectiveness of the training expressed as much as 46.7% of the respondents. Of the five factors that shape the training climate, the manager support factor occupies the highest percentage expressed by 86.7% of respondents but the result of factor analysis found that the training climate variable can be explained by the five factors is only equal to 59.06%. This means that the training

climate is assessed from the five indicators in the form of climate transfer, managers' support, opportunity to use learned abilities, peer support, and technology support into a composite variable that creates a training climate. Climate training is the perception of respondents about the conditions that exist in the company where he works. Being assessed by using a Likert scale, if the score is above the mean score of the maximum score it is categorized as supporting. When further noted, the managers' support factor occupies the highest percentage expressed by 86.7% of respondents in the training climate, it can be interpreted that almost all respondents agree that the support of the manager has an essential meaning in supporting the achievement of a supportive training climate to achieve the effectiveness of a training in this research.

The condition is in accordance with the explanation by Noe [7] that explains that the manager support will significantly assist the trainees in achieving the transfer of knowledge, the form of support can be interpreted as giving training permit, psychological support and communication in which there are words of motivation. Further, Noe [7] explains that a manager should be able to understand that every employee has different needs and different preferences. In addition, managers or job leaders are also expected to be able to understand the primary needs of an employee, including the need to be appreciated, supported and guided. Helping an employee determine the effort to reach his needs through achievement is not a difficult thing if done with sincerity.

Exceptional managers' support will trigger high attainment of training transfer. The results are also in line with by Edward & Sumarni [14] concluded the simultaneous influence of the transfer climate and the transfer motivation of the leadership on the effectiveness of training.

A manager should be able to understand the needs of the fulfillment of the competence for each employee. Every different individual has different competence needs to increase, no

two people who really have the same needs. Helping an employee determine the need to increase his competence is not tricky if done sincerely and unconditionally. High manager support will trigger high achievement of training transfer. In addition to the characteristics of the work environment, another factor related to the effectiveness of the training is self-efficacy. Description of the factors in self-efficacy can be seen in Table 4. Table 4 shows that 51.1% of respondents have an excellent self-efficacy. More 40% of respondents possessed the three factors of self-efficacy such as the experience of success (mastery experience), the presence of Vicarious Experience and good physiological and emotional condition. While the social factor persuasion is good only on 20% of respondents.

Table 4. Self-efficacy Frequency Distribution

Self-efficacy	Good		Poor	
	(%)	N	(%)	N
Mastery experience	39 (43.3%)	51 (56.7%)	48 (56.3%)	
Vicarious Experience	42 (46.7%)	48 (56.3%)		
Social Persuasion	18 (20%)	72 (80%)		
Psychological and Emotional state	42 (46.7%)	48 (53.3%)		

The result of factor analysis shows that the self-efficacy variable can be explained by these four factors equal to 68.21%. This means that a composite variable is self-efficacy, illustrated by mastery experience, vicarious experience, social persuasion, and employee emotional and psychological state of 68.21% while the rest is 32.79%. This variable is illustrated from other factors, which are not obtained from this study.

The effectiveness of the training is assessed from three phases: perceptions of the training itself, implementation of training and evaluation phase. In Table 5, it can be seen perceptions of respondents to the effectiveness of training. 51.1% of respondents have good self-efficacy. This condition can represent the three factors of self-efficacy that are mastery, experience, vicarious experience and

psychological condition of the trainees. This is consistent with Bandura [11] that self-efficacy will increase if a person experiences firsthand what will be learned, in other words, an employee who is directly involved in environmental management such as the management of B3 materials, waste management, environmental hygiene, and others will experience confidence when involved in the environmental management system themed training. Table 4 shows that vicarious experience or the role model is very supportive in the formation of self-efficacy. In some studies, the condition was also achieved as revealed by Murtiningsih [15] who suggested that there is a strong relationship between self-efficacy and students' academic achievement.

Table 5. The effectiveness of Training Implementation

Training	Percentage	
	Good N (%)	Poor N (%)
Training	53 (58.9%)	37 (41.1%)
Implementation	40 (44.4%)	50 (55.6%)
Evaluation	45 (50%)	45 (50%)
Total	49 (54.4%)	41 (45.6%)

Based on Table 5 it can be seen that the effectiveness of the ISO 14001 Environmental Management System training is stated as good by 54.4% of respondents, and 58.9% of them agree with the effectiveness of the training implementation. The result of factor analysis shows that the effectiveness of training that can be explained by the three factors is 78.45%. The result of 78.45% can be interpreted that the three factors that support the effectiveness of the training can be explained by the three factors that measure the effectiveness of the training namely training, implementation and evaluation. The condition was described by Madyunin [16] that practice or training implementation has a significant effect on training effectiveness. On the other hand, Noe [7] explains that in a training program practically training implementation of training objectives, it can be done in the materials taught.

The cross-tabulation results between training and self-efficacy climate variables in the implementation of the training are presented in Table 6. The most influencing factors in the effectiveness of the training are manager support and the opportunity to apply the ability. Good management support enhances the effectiveness of the training 12 times, while the success experience has a pretension ratio of 5.5 times. Most of the respondents did not get opportunities to apply their capabilities. This motivates respondents to improve the effectiveness of the training. A good training climate is crudely related with the effectiveness of training implementation. Climate training is the existence of managers' support and

opportunity to use learned abilities. While the self-efficacy variables crudely associated based on Table 6 are successful experiences, social persuasion, and good physiology and emotional condition.

The Multivariate test results from these nine factors can be seen in Table 7. Based on Table 7 it can be seen that the factors related to the effectiveness of training implementation are managers' support with a prevalence ratio of 12.9. This means that lower support managers increase 12.9 times of the risk for the occurrence of poor training effectiveness while the self-efficacy factor that plays a role in determining the quality of training is the successful experience of the participants.

Table 6. Cross Tabulation of Training Climate and Self Efficacy to the Effectiveness of Training Implementation

	The Effectiveness of Training Implementation		p
	Good N (%)	Poor N (%)	
Climate transfer			
Supporting	22 (61.1%)	14(38.9%)	0.30
Not Supporting	27 (50.0%)	27 (50.0%)	
Manager Support			
Supporting	46 (59.0%)	32 (41.0%)	0.03
Not Supporting	3 (25.0%)	9 (75.0%)	
Peer support			
Supporting	16 (59.3%)	11 (40.7%)	0.55
Not Supporting	33 (52.4%)	30 (47.6%)	
Opportunity to Used learned Capabilities			
Supporting	5 (27.8%)	13 (72.2%)	0.01
Not Supporting	44 (61.1%)	28 (38.9%)	
Technology Support			
Supporting	22 (56.4%)	17 (43.6%)	0.74
Not Supporting	27 (52.9%)	24 (47.1%)	
Mastery experience			
Good	27 (69.2%)	12 (30.8%)	0.01
Poor	22 (43.1%)	29 (56.9%)	
Vicarious Experience			
Good	24 (57.1%)	18 (42.9%)	0.63
Poor	25 (52.1%)	23 (47.9%)	
Social Persuasion			
Good	27 (64.3%)	15 (35.7%)	0.08
Poor	22 (45.8%)	26 (54.2%)	
Psychological and Emotional State			
Good	42 (62.7%)	25 (37.3%)	0.007
Poor	7 (30.4%)	16 (69.6%)	

Table 7. The Relationship between Climate training and Self-efficacy with Training effectiveness

	p	PR	Confidence Interval (CI)
Managers' Support	0.003	12.9	2.36 to 70.53
Opportunity to use learned abilities	0.017	0.2	0.053 to 0.74
Mastery Experience	0.002	5.7	1.85 to 17.97

Participants who have less experience of success can increase a prevalence ratio of 5.7 times for ineffectiveness of training. This result is also supported by the result of factor analysis that managers' support and mastery experience is the biggest factor related to training effectiveness with the contribution of manager are 82.4% and 72.9% respectively while another factor which contributes is an opportunity to use learned abilities. Less Opportunity protects the less effectiveness of training, in other words, less opportunity actually makes the motivation of the training participants to undergo and realize effective training seriously. The same is also explained in the research conducted by Eneke & Rahyuda [17] explaining that the managers' support variable is a positive variable in influencing the transfer of employee training. The relationship between the characteristics of the respondents and the effectiveness of the training in this study cannot be analyzed because the frequency distribution of sex, age and education level shows homogeneous results considering most of the participants are male with the same age and education category.

CONCLUSION

Climate training is related to the effectiveness of training, especially on managers' support and opportunity to use learned abilities. Good managers' support will result in more effective training. Less opportunity to apply the capability of the company becomes the motivation to realize effective training. Furthermore, self-efficacy relates to the effectiveness of training in mastery experience.

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