

# THE IMPACT OF COMPETENCY CERTIFICATION TRAINING FOR OCCUPATIONAL HEALTH SAFETY EXPERTS (K3) OF SMES AND TECHNOLOGY STARTUPS ON COMPANIES

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**Abstract:** The aim of this study is to evaluate the impact of occupational health and safety (OHS) certification training on SMEs and technology startups. The focus is on a training program provided by the Deputy of SMEs at the Ministry of Cooperatives and SMEs to improve worker awareness, compliance, and skills in OHS. A qualitative approach was used, with data collected through in-depth interviews and observations. Respondents were employees from SMEs and technology startups who had completed OHS certification training. Descriptive analysis was used to analyze the data. The study found that OHS certification training has a positive impact on companies. The positive impacts discovered include increased worker awareness and compliance with OHS regulations, reduced risks of accidents and occupational illnesses, increased efficiency and productivity, improved quality of products and services, and reduced operating costs. However, the study also found that there are factors that influence the success or failure of OHS certification training programs, such as confidence, motivation, and support from management. Therefore, it is recommended that the Ministry of Cooperatives and SMEs continue to evaluate the training program and provide sufficient support to companies in implementing OHS training. In conclusion, OHS certification training has a positive impact on companies, particularly SMEs and technology startups. The positive impact can be enhanced by considering the factors that influence the success of the training program. Therefore, the training program needs to be continually developed and improved to increase worker awareness, compliance, and skills in OHS.

**Keywords:** Expert Competency Certification, Occupational Health Safety, UKM.

## INTRODUCTION

In an era of increasingly rapid technological development, the potential for workplace hazards is increasing (Novarika et al., 2021). These risk factors are generally related to the production process and can have a negative impact on productivity, such as health problems, production failures, asset damage, loss of work time, and even fatal accidents.

In this case, the rapid development of technology will affect the improvement of production processes in various industries, especially in the Small and Medium Enterprises (SMEs) industry (Sari & Nawawi, 2022). Therefore, support for the development of SME human resources through SKKNI Certification is very necessary. General K3 Expert Training BNSP certification is one of the efforts to support the development of SME human resources through SKKNI K3 Kepmenaker 38 Certification of 2019.

Occupational health and safety (K3) is a very important aspect for every company (Kurnia, 2020). Therefore, K3 expert competency certification training for SMEs and technology startups is one of the programs implemented by the Deputy for SMEs, Ministry of Cooperatives and SMEs to increase awareness and skills in maintaining occupational safety and health in the company environment.

This study aims to evaluate the implementation of the K3 expert competency certification training program for SMEs and technology startups. This research will discuss the impact of K3 certification training on companies, especially SMEs and technology startups.

The problem related to the evaluation

study of the implementation of training programs for SME and technology startups at the Deputy for SMEs, Ministry of Cooperatives and SMEs is whether the K3 certification training program implemented can have a positive impact on companies, especially SMEs and technology startups. In addition, this study will also discuss what factors can affect the success of the implementation of the K3 certification training program.

Previous research on K3 has been conducted by many researchers in various fields. Some previous studies focused more on factors that influence K3 behavior in the work environment, while some other studies focused more on the effectiveness of K3 training programs.

One of the previous studies relevant to this study is a study conducted by Rustanto et al., (2022). This study aims to evaluate the effectiveness of K3 training in small and medium-sized companies. The results of this study show that effective K3 training can increase awareness and skills in maintaining occupational safety and health in the company environment. However, this study focused more on small and medium-sized companies in general and has not been specific to SMEs and technology startups.

Another previous research was conducted by Purwanto, (2021). This study aims to evaluate the effectiveness of K3 training programs in manufacturing companies in Indonesia. The results of this study show that a good K3 training program can improve workers' knowledge and skills in maintaining occupational safety and health in the company environment. However, the study did not

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focus on small and medium-sized companies, nor was it specific to SMEs and tech startups.

Other previous studies have been conducted, but all of them have similarities in identifying factors that affect the effectiveness of K3 training programs. Some of the factors identified in previous studies include the design of appropriate training programs, strong management support, and worker involvement in K3 training programs.

Some previous research has been conducted in the field of K3, but this research focuses more on the impact of K3 certification training on companies, especially SMEs and technology startups. Previous research also tends to be more focused on large companies, so this research will pay more attention to small and medium-sized companies.

This research will provide novelty in the field of K3 because it will pay attention to aspects that have not been discussed much in previous research. In addition, this study will provide recommendations that can help the government in improving the implementation of K3 certification training programs for SMEs and technology startups in the future.

Based on this background exposure, researchers felt interested in assessing the impact of occupational health safety expert (k3) competency certification training for SMEs and technology *startups* on companies.

## **MATERIALS AND METHODS**

The research method used in this study is a descriptive qualitative method with a case study approach (Rusli, 2021).

This research will be conducted on SMEs and technology startups who are members of the PIKKO Association (Indonesian Automotive Component Industry Association) and have participated in the K3 certification training program organized by the Deputy for SMEs, Ministry of Cooperatives and SMEs.

The data collection process will be carried out through in-depth interviews with company management and employees who have attended the K3 certification training program (Purba et al., 2019). In addition, data collection is also carried out by making direct observations within the company and conducting documentation studies on the K3 certification training program that has been implemented.

Data analysis will be carried out inductively by identifying the main themes that emerge from the data that has been collected. Furthermore, the data will be analyzed using content analysis techniques to identify patterns and relationships between themes that have been identified.

The selection of respondents was carried out by purposive sampling techniques. The criteria used in the selection of respondents were SME companies and technology startups that had attended the K3 certification training program and were still active in carrying out business activities. The number of respondents taken was as many as 30 people from each SME representative (PT and CV) who were considered representatives. The stages in this study include: (1) preparation, (2) data collection, (3) data analysis, (4) exposure to results and

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discussion, and (5) making conclusions.

## **RESULTS AND DISCUSSION**

### **Changes in workers' knowledge and attitudes related to occupational safety and health (K3).**

The results showed that K3 expert competency certification training has a significant impact on changes in workers' knowledge and attitudes related to occupational safety and health (K3) in SMEs and technology startups. This can be seen from the increase in scores on knowledge tests and changes in workers' attitudes related to K3 after attending training.

The results of a similar study conducted by Noviyanti et al., (2020) showed an increase in workers' knowledge and attitudes towards K3 after attending K3 certification training. In addition, research conducted by Edigan, (2019) also found changes in workers' attitudes and behaviors related to K3 after attending K3 certification training.

Changes in workers' knowledge and attitudes towards K3 after K3 expert certification training are important because they can affect workers' awareness and compliance with K3 regulations. In the long run, this can reduce the risk of accidents and health problems in workers, and increase the efficiency and productivity of the company through reducing lost work time due to accidents and health problems in workers.

Therefore, companies need to pay special attention to K3 expert competency certification training for their workers, especially for SMEs and technology startups who often do not pay attention to occupational safety and health aspects. In

addition, companies need to measure and monitor the impact of K3 expert certification training on changes in workers' knowledge and attitudes to determine the effectiveness of training programs and correct weaknesses that may arise.

### **Increased awareness and compliance of SMEs and technology startups with K3 regulations.**

The results showed that after conducting K3expert competency certification training for SMEs and technology startups, there was an increase in workers' awareness and compliance with K3 regulations. This is shown by the increase in knowledge about K3 and regulations related to K3 and changes in workers' attitudes towards the importance of K3 in the work environment.

K3 expert competency certification training for SMEs and technology startups can have a positive impact on increasing worker awareness and compliance with K3 regulations. This is in line with the results of research conducted by Fassa & Rostiyanti, (2020) which found that K3 training for construction workers can increase workers' knowledge and attitudes related to K3 and increase workers' compliance with K3 regulations.

Increasing workers' awareness and compliance with K3 regulations will have a positive impact on reducing the risk of accidents and health problems in workers. In addition, this can also increase the efficiency and productivity of the company through reducing work time lost due to accidents and health problems in workers as well as improving the quality of products and services produced by the company.

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Thus, K3 expert competency certification training for SMEs and technology startups needs to continue to be improved to increase workers' awareness and compliance with K3 regulations in the work environment. This can be done by integrating K3 training programs as part of HR development efforts in the company. In addition, there is also a need for regular evaluation and monitoring of the implementation of the K3 expert competency certification training program to ensure the success of the program and correct the factors that affect the success or failure of the training program.

#### **Reduced risk of accidents and health problems in workers.**

The results showed that training in K3 expert competency certification for SMEs and technology startups was proven to reduce the risk of accidents and health problems in workers. In this study, it was seen that the incidence of occupational accidents and occupational diseases was seen in companies that adopted K3 expert certification training. This shows that K3 expert certification training can help companies create a safer and healthier work environment for their workers.

K3 expert competency certification training conducted on SMEs and technology startups can help reduce the risk of accidents and health problems in workers. This training provides an opportunity for workers to understand and apply correct K3 practices, so as to help prevent accidents and health problems in workers. In addition, K3 expert certification training also allows SMEs and technology

startups to develop K3 programs that suit their needs and their work environment.

Studies have shown that companies that implement K3 expert certification training programs experience a decrease in the incidence of occupational accidents and occupational diseases. This shows that K3 expert certification training can help companies create a safer and healthier work environment for their workers. In the long run, reducing the risk of accidents and health problems in workers can help companies reduce health care costs and increase work productivity.

For example, a study conducted by Asvina et al., (2023) showed that K3 expert certification training conducted on workers in manufacturing companies resulted in a significant reduction in the number of occupational accidents and occupational diseases. The results of this study show that K3 expert certification training can help companies reduce the risk of accidents and health problems in workers.

In conclusion, K3 expert competency certification training can help reduce the risk of accidents and health problems in workers. By adopting the right K3 practices, SMEs and technology startups can create a safer and healthier work environment for their workers. In addition, reducing the risk of accidents and health problems in workers can help companies reduce health care costs and increase work productivity.

#### **Increased efficiency and productivity of the company through reducing work time lost due to accidents and health problems in workers.**

The results showed that K3 expert competency certification training for SMEs

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and technology startups can have a positive impact on company efficiency and productivity through reducing lost work time due to accidents and health problems in workers.

In business, the efficiency and productivity of the company are very important in achieving business goals. K3 expert competency certification training can help companies achieve this goal by reducing lost work time due to accidents and health problems in workers.

Research shows that K3 expert competency certification training can help increase awareness and compliance of SMEs and technology startups with K3 regulations. With a better understanding of the risks of accidents and health problems in workers, SMEs and tech startups can take appropriate action to minimize these risks and avoid accidents that can lead to lost work time.

In the long run, K3 expert competency certification training can help companies reduce operational costs by reducing lost work time due to accidents and health problems in workers. This can help improve a company's efficiency and productivity, as healthy, safe workers tend to be more productive and high-performers.

Sudiyanto & Rachmah, (2023) revealed that companies that have an effective K3 program have a lower work injury rate and less lost work time than companies that do not have an effective K3 program. Thus, K3 expert competency certification training can help companies reduce these costs and improve overall efficiency and productivity. However, there are several factors to consider in ensuring

the success of the K3 expert competency certification training program. Factors such as management support, a strong safety culture, and consistent implementation can play an important role in the success of this program (Rahmanto & Soediantono, 2022). Therefore, companies must ensure that they have sufficient resources and strong management commitment to ensure the success of this program, so that workers who attend K3 training have a better knowledge of safety.

### **Improvement of the quality of products and services produced by the company.**

The results showed that K3 expert competency certification training had an impact on improving the quality of products and services produced by the company. The quality improvement can be seen from several aspects, including:

**Product and service safety:** K3 expert competency certification training makes workers better understand risks and hazards in production and service processes. That way, workers are able to make products and provide safer services for consumers.

**Production efficiency and quality:** In K3 expert competency certification training, workers are also taught about the correct techniques and methods at work, so as to improve production efficiency and product quality.

**Better handling of products and services:** K3 expert competency certification training is also taught to workers to recognize and handle products and services well, so that consumers feel more satisfied with the products or services provided.

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The results of the study show that K3 expert competency certification training has a positive impact on improving the quality of products and services produced by SMEs and technology startups. This can happen because of an increase in the knowledge and skills of workers in carrying out their duties correctly and safely. In the long run, improving the quality of these products and services can help companies improve their reputation and competitiveness in the market. Therefore, K3 expert competency certification training should be used as a long-term investment by SMEs and technology startups.

Previous research also supports this finding, as well as Sidjabat et al., (2019) showed that K3 training has a positive impact on improving product quality and service in manufacturing companies. In addition, research by Masri et al., (2021) found that K3 training has a positive impact on increasing production efficiency and improving product quality in the textile industry in Indonesia.

### **Changes in the company's operational costs after the implementation of K3 expert competency certification training.**

The results showed a decrease in operational costs for the company after the implementation of K3 expert competency certification training. The cost reduction mainly occurred in the cost of maintaining and repairing machinery, replacing personal protective equipment, and medical costs for workers who had accidents or health problems. It is estimated that the decrease in costs is due to a decrease in the risk of accidents and health problems in workers as well as an

increase in the efficiency and productivity of the company.

The application of K3 expert competency certification training for SMEs and technology startups can have an impact on changes in company operational costs. Previous research has also shown similar results, where the implementation of an effective K3 program can help companies reduce operational costs and increase efficiency. K3 training can help companies reduce the risk of accidents and health problems to workers, which in turn can reduce the cost of maintenance, treatment, and replacement of personal protective equipment. In addition, by reducing work time lost due to accidents and health problems in workers, K3 training can increase company productivity and the quality of products or services produced.

However, the cost of training and certification can be a significant start-up cost for companies, especially for SMEs and tech startups that may have more limited budgets. Therefore, careful consideration is needed before deciding to implement the K3 expert competency certification training program.

This research shows that the application of K3 expert competency certification training to SMEs and technology startups can help companies reduce operational costs and increase efficiency. Therefore, the K3 expert competency certification training program can be a beneficial investment for companies, especially for companies that have a high risk of accidents or health problems in workers.

There are several studies that support the results of this study, including Research

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by Kristiawan & Abdullah, (2020) showing that the implementation of a good K3 program can reduce company operational costs through reducing health care costs and compensation costs due to work accidents. Tajuddin et al., (2022) showed that an effective K3 training program can help companies reduce costs related to work accidents, including hospitalization costs and preparation costs for returning workers who have accidents, and research by Putri & Assidiq, (2022) which states that effective K3 training can reduce company operational costs through reducing worker absenteeism due to illness or work accidents, and increase worker productivity.

From some of these studies, it can be concluded that K3 expert competency certification training for SMEs and technology startups can help companies reduce operational costs through reducing costs related to work accidents and worker absenteeism, as well as increasing worker productivity.

### **Workers' perception of the effectiveness and usefulness of K3 expert competency certification training.**

The results showed that most respondents (80%) considered K3 expert competency certification training effective in improving the knowledge and skills of K3-related workers. In addition, most respondents (75%) also consider K3 expert competency certification training beneficial for companies, especially in terms of improving occupational safety and health as well as increasing company efficiency and productivity.

The results of this study show that K3 expert competency certification training has a positive impact on SME workers and technology startups as well as companies. With this training, workers can improve knowledge and skills related to K3, so as to reduce the risk of accidents and health problems in workers. In addition, this training can also increase the efficiency and productivity of the company by reducing work time lost due to accidents and health problems in workers.

Furthermore, the results of this study are also in line with previous research, as conveyed (Purwanto, 2021) which found that K3 training is effective in increasing workers' awareness and knowledge of the risk of accidents and occupational diseases. and Barokah & Sukarno, (2022) which shows that K3 training has a positive impact on improving company performance through reducing work time lost due to accidents and health problems in workers.

All of these studies support the results of research that found that K3 expert competency certification training has a positive impact on workers' perceptions of the effectiveness and usefulness of K3 training, as well as on companies through various aspects such as increasing worker awareness and compliance, reducing the risk of accidents and health problems in workers, increasing company efficiency and productivity, improving the quality of products and services produced, and changes in the company's operating costs.

### **Factors affecting the success or failure of the K3 expert competency certification**

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**training program for SMEs and technology startups.**

The results showed that there are several factors that influence the success or failure of the K3 expert competency certification training program for SMEs and technology startups. These factors include:

- a. Participants' level of understanding of the training material
- b. Quality of training provided
- c. Motivation of participants to attend the training
- d. Corporate management support for training programs

In addition, the results also show that the K3 expert competency certification training program has a positive impact on the company. These impacts include:

- a. Increased awareness and compliance of SMEs and technology startups with K3 regulations
- b. Reduced risk of accidents and health problems in workers
- c. Increased efficiency and productivity of the company through reducing work time lost due to accidents and health problems in workers
- d. Improving the quality of products and services produced by the company
- e. Changes in company operational costs after the implementation of K3 expert competency certification training

Previous research that supports the results of this study is a study conducted by Fassa & Rostiyanti, (2020) which concluded that K3 training programs can increase workers' awareness and compliance with K3 regulations. In addition, research by Syahrullah & Febriani, (2019) also shows that K3 training programs can improve

worker performance and reduce the risk of work accidents.

Thus, the K3 expert competency certification training program has the potential to have a positive impact on the company, but the success of this training program is strongly influenced by factors such as the level of understanding of participants, the quality of training, participant motivation, and company management support.

**CONCLUSIONS**

Based on the results of research on the impact of K3 expert competency certification training on SMEs and technology startups on companies, it can be concluded that K3 expert competency certification training has a positive impact on SME companies and technology startups. This can be seen from the K3 expert competency certification training which has a significant impact on changes in workers' knowledge and attitudes related to occupational safety and health (K3) in SMEs and technology startups.

After conducting K3 expert competency certification training for SMEs and technology startups, there was an increase in workers' awareness and compliance with K3 regulations. K3 expert competency certification training for SMEs and technology startups is proven to reduce the risk of accidents and health problems in workers. K3 expert competency certification training for SMEs and technology startups can have a positive impact on company efficiency and productivity through reducing lost work time due to accidents and health problems in workers.

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K3 expert competency certification training has an impact on improving product and service quality which includes product and service safety, production efficiency and quality, and better product and service handling. In addition, there is a decrease in operational costs for companies after the implementation of K3 expert competency certification training.

K3 expert competency certification training also received a good response from respondents which was considered useful for improving the knowledge and skills of K3-related workers. Some factors that affect the success or failure of this program include the level of understanding of participants to the training material, the quality of training provided, the motivation of participants to attend the training, and the company's management support for the training program.

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