**Conference Paper** 

# The Role of Training Management in The Development of Human Resources in The Era of Industrial Revolution 4.0

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*Corresponding author:	ABSTRACT
E-mail: siti.aisah_mn19a@nusaputra.ac.id	Introduction: Training is often seen as an activity that is commonly carried out on employee performance. To create quality employee performance with training can help the success of a company. The company's goals are expected to be achieved with high employee performance. In the era of Industry Revolution 4.0, it is very important if Human Resources are further improved. Through this training man- agement, the company can improve employee performance and the quality of hu- man resources owned by the company so that they can compete in the industry 4.0 Revolution Era. Because of this, based on the research background above, training management plays an important role in improving the development of Human Re- sources in the Industrial Revolution Era 4.0 So that with the existence of training management in the Industrial Revolution Era, human resources will be of higher quality and can develop better in every company by keeping up with the increasing times. Methods: In writing this journal using a literature review, which contains the results of the researchers' thoughts on the theories in articles, journals, books, etc. which are following the research topic. Literature reviews use qualitative methods which only emphasize definitions, concepts, and focus more on case studies or theoretical adjustments to problems that occur in a given scope. The literature review was used as a reference in this study, namely international jour- nals and national journals. Results: Based on the results obtained from several literature reviews, this training management played an important role in the devel- opment of Human Resources in the Industry 4.0 Revolution Era. because the era of the industry 4.0 revolution, was characterized by the need for digital skilled human resources to support the application of industry 4.0. Therefore, training management plays an important role in the development of Human Resources in the Industrial Revolution Era 4.0 as the main asset to create quality Human Re- sources so they can compete. Discus

Introduction

Training is often considered the most common employee performance activity. Good training will help the company in a successful way to achieve its goals by getting good employee performance. The company's efforts to carry out its goals, namely employee performance, are important. Company goals are expected to be achieved with high employee performance.

Kasmir (2016) explains that training is a process in shaping and equipping an employee through his / her knowledge, abilities, behavior, and expertise. According to Mangkuprawira (2011), training for an employee is a process of learning certain knowledge and skills and attitudes so that employees become more skilled so that they can carry out their responsibilities better according to standards

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activities effectively and efficiently through other people. According to experts regarding training and management, the researchers concluded that training management is a management function management process by utilizing part of the training to achieve the goals of a company.

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In the modern era, global competition such as the industrial revolution 4.0 and the AEC (Asian Economic Community) can lead to competition in the world of economy, one of which is in the world of work. The Industrial Revolution 4.0 can have implications for changing the way people live, think, and relate to one another. Significant changes in the technological, economic, social, and political field can affect Human Resources because human resources are the role of the 4.0 industrial revolution as a success factor.

Increasing the quality of human resources is very important in facing the Industry 4.0 Revolution Era. through this training management, the company can improve employee performance and the quality of human resources owned by the company to be able to compete in the Industrial Revolution Era 4.0. With changes in human life becoming completely digital, it is possible that robots will replace human jobs. But robots will not dominate in all sectors. Robots are still not able to take over jobs related to human interaction and knowledge. Therefore, companies need to prepare qualified and competent human resources in accordance with their fields in order to achieve company effectiveness. Employees must continue to be encouraged to continue to learn and increase their knowledge of technology. Because a workforce that is able to apply and control today's technology is the one who is able to keep moving forward. Therefore, the competencies that must be possessed by an employee in this revolutionary era are mastery of technology and science, engineering, the arts and mathematics and increasing skills. Especially in a pandemic condition like this time, which is needed by an employee so that there is no displacement or termination of employment, an employee must improve his quality to be able to compete.

Based on the research background above, training management plays an important role in improving the development of human resources in the era of the industrial revolution 4.0. So that with the existence of training management in the era of the industrial revolution, quality human resources can develop very well in every company by keeping up with the increasing times.

## **Literature Review**

## Training according to experts

Mangkuprawira (2011) states that training for an employee is a process of learning certain knowledge and skills and attitudes so that employees become more skilled so that they can carry out their responsibilities better according to standards. According to Hamali and Budihastuti (2019), Training is a series of individual activities to improve skills and systematic knowledge so that they can have professional performance in their fields. Training is a learning process that allows employees to carry out work according to standards. According to Kasmir (2016), it is explained that training is a process in shaping and equipping an employee through his knowledge, abilities, behavior, and expertise.

# Type of training

According to Mangkupwira (2011), the training program is divided into two parts, namely:

- a. General Training Program
  - This is where employees will get skills so that they can be used in almost any type of job.
- b. Specific Training Program (Special)

This is where employees will get information and skills that are ready to be used, especially in the field of work.

#### Definition of management

According to Hery (2018) in his book entitled "Introduction to Management", he states that Management is an activity carried out by a manager, where Management is a process of coordinating all activities effectively and efficiently through other people.

## Training management

According to the opinion of experts about training and management, so that the researchers conclude which is where Management Training is a management function management activity by utilizing training activities so that the goals of a company can be achieved.

Human Resources According to Sumarsono (2003), which states that Human Resources are:

(1) Sony Sumarsono said that this human resource is a production process that is allocated through work or service businesses. So that Human Resources describes a quality business which can obtain goods or services.

(2) Human Resources, namely someone who can work to provide services. So, that human resources here must be able to work that can carry out economic activities, which produce goods and services so that people's needs can be met.

## Human resources development

Based on the opinion of experts regarding Human Resources, the researcher concludes that the development of Human Resources is the process of developing someone who is used as a driving force in an organization towards a better level.

#### Industrial Revolution 4.0.

According to Lichtblau et al. (2015) stated that Industry 4.0 refers to the latest technological advances, for example embedded systems that serve as a foundation for bringing together machines, physical objects, people, product lines, and processes through organizational boundaries in order to produce new types of intelligence, networks and fast value chains. Thus its physical facilities are supported by a virtual one to increase automation, flexibility and product diversity in a way that has better process and system integration.

#### **Material and Methods**

This study, using a literature review, which contains the results of the researchers' thoughts on the theories contained in articles, journals, books, etc. which are following the research topic. Literature review uses a qualitative method which only emphasizes definitions, concepts, and focuses more on case studies or theoretical adjustments to problems that occur in a given scope. The literature review was used as a reference in this study, namely international journals and national journals.

The procedure for analyzing data that will be used as a reference and theory in the preparation of this journal is by collecting data from various references such as international journals, national journals and books. After that, classify each statement contained in the data that has been collected and enter all data. That way, researchers can check the continuity of the data collected with a predetermined journal title, the next step is to describe the appropriate data. The international journals used were obtained from Science Direct.

The international journals used were obtained from ScienceDirect (sciencedirect.com), Taylor.Francis Online (tandfonline.com) Google Scholar (googleshcolar.com). In the scientific direct source the researcher wrote the keyword "training management" which contained 540,940 findings, while in the Taylor. Francis Online source there were 630,869 findings. And the researcher wrote the keyword "human resource development" in a scientific direct source which contained 352,819 findings, while in

Taylor. Francis Online there were 624,883 findings by writing the same keywords. However, only 8 international journals match the theme of this research.

National journals obtained from google scholar (scholar.google.com) by writing the keywords "training management" with 377,000 findings and "human resource development" with around 754,000 findings. However, only 2 journals were analyzed by researchers and following the research theme.

In addition to international journals and national journals, researchers also use books as sources used in this literature review. The book by Hery, S. E., M. Si. with the book title "introduction to management" and a book by M Syamsul Maarif & Lindawati Kartika with the book "Training Management"

#### **Results and Discussion**

In Adianto and Sugianto's research (2019), development and training have an effect on employee performance at PT Bank Negara Indonesia. According to Hendra (2020), who discussed the advancement of a university that would require good Human Resources (HR), currently, HR productivity must be increased to maintain the sustainability of an organization because competition in business is increasingly difficult. Thus, in every university to form a better organizational culture, and carry out training and human resource development programs that must be carried out to overcome the problems, and provide motivation to all employees so that performance can continue to increase.

According to Yang, et al. (2018) on a Method to Improve Production Management Training by Integrating the Industrial Innovation Center 4.0 in China, which can be concluded that his research discusses the progress of time that is progressing so that currently, it enters the 4.0 revolution industry so that it can combine learning online and offline training, as well as theoretical training and learning, are becoming more practical. Hlanganipai and Musara (2016) on Training and Development for Career Management and Talent Development in the Wholesale and Retail Industry in South Africa which contains the identification of training and development with efforts to replicate and expand learning, and explore the benefits of training and development in addition to management effectiveness and talent management by making a proactive human resource development strategy.

According to Saqib Shamim, et al. (2016) entitled Management Approach for Industry 4.0, it can be concluded that to show a view by suggesting good management practices in a business in the Industrial Revolution Era 4.0. Alexandre Moeuf, et al. (2017) regarding SME Industrial Management discuss new changes in the planning and production control functions of SMEs using an innovative process consisting of planning and controlling the production of Industry 4.0 to be implemented separately.

According to Dary et al (2019) conclusion that planning is needed to improve human resources that are more qualified in Supply Chain Management (SCM) in Indonesia through training and supplies, seminars, and capacity building as the potential development of human resources international standard. This is a way of forming human resources with strategic planning management will be directed at education and training with important aspects such as coordination and communication. Sulej (2020) regarding Human resource development as a sustainable element of HRM with a focus on production engineers who discuss the Industrial Revolution 4.0 as identification with extraordinary technological advances, sustainable human resource management, more attention is directed to employee development needs, which is treated to fulfill HR functions.

According to Pawan Budhwar, et al (2017), in his journal entitled The Development of Human Resource Management in MNC, which in his journal discusses how a development path or progress in human resource management, which in this journal focuses on talent management, good human resources, organizational performance, and organizational learning contained in MNCs from BRICS where these will be shaped and also implemented. In Ignacio Danvila-del-Valle, et al. (2019), entitled Human Resources Training: Bibliometric Analysis, it can be concluded that technological advances and market evolution have caused companies to rearrange their strategies. With this progress, making resources have competitive progress and giving advantages over intangible resources. Employees or employees are one of the intangible assets in human resources that influence and improve the company's performance. Based on the results of research on the effect of training management on the development of human resources in the era of the industrial revolution 4.0, it is stated that training management has a partially significant effect on employee performance. This means that employee performance will get better with training management so that human resources will also develop in the era of the industrial revolution 4.0 the performance of existing employees or human resources will develop properly if there is training management, on the contrary, if the performance of existing employees or human resources decreases if there is no good training management. The results of this study are in line with previous research (Adianto & Sugianto, 2019; Hendra, 2020; Yang et al 2018; Hlanganipai & Musara, 2016; Shamim, et al 2016; Moeuf et al., 2017; Dary et al., 2019; Sulej, 2020; Budhwar et al., 2017; Valle et al., 2019).

Overall, based on the results obtained from several literature reviews, this training management plays an important role in the development of human resources in industry 4.0. because it is characterized by the need for digital skilled human resources to support the application of industry 4.0. Therefore, training management plays an important role in the development of Human Resources in the Industrial Revolution Era 4.0, as the main asset for creating quality resources to compete in the 4.0 industrial revolution.

## Conclusion

Based on the results of the discussion, it was found that this training management plays an important role in the development of Human Resources in Industry 4.0. because the industrial revolution 4.0 will change the way people think of facing significant changes in technology and also affect human resources. To undergo industry 4.0, so it must be prepared not only for technological developments but must involve Human Resources, because as actors in the industrial revolution 4.0. Therefore, to improve Human Resources, it is necessary to have training management which is used as basic capital and quality resources that have good competitiveness.

## Suggestion

Based on the literature review journal research obtained, the author can suggest for each company and industry to improve Human Resources in the Industrial Revolution Era 4.0 with training management. So that by implementing training management in this company or industry it can make the development of Human Resources in the Industrial Revolution Era 4.0 better so that they can compete with other companies. For every company and industry in the Industrial Revolution Era 4.0, it does not always focus on existing technological developments but must also prepare quality Human Resources by implementing training management so that the development of Human Resources becomes better quality, but it could be better if the company or industry prepares for technological development comparable to qualified human resources by implementing training management in this era of industrial revolution 4.0.

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