

Article

# Contribution of the industrial world business program to work skills and work readiness with disabilities

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**Abstract:** This research aims to analyze the contribution of the Industrial World Business program in improving the work skills and work readiness of people with disabilities through the Systematic Literature Review method. The involvement of businesses and industries in developing inclusive programs for people with disabilities is an important key to bridging the skills gap and employment opportunities. This research identifies various programs, best practices, and challenges in implementing these programs. Based on the results of the literature reviewed, it was found that inclusive job training programs significantly improve the technical and non-technical skills of people with disabilities while strengthening their readiness to face a competitive job market. On the other hand, there are still obstacles in the accessibility and adaptation of training programs that must continue to be optimized. However, to achieve greater inclusivity, improvements are still needed in terms of accessibility, program adaptation, and efforts to reduce discrimination in the world of work. It is hoped that the results of this research can become a basis for policymakers, industry players, and educational institutions to continue to develop inclusive programs and empower people with disabilities in the world of work. Collaboration between industry and vocational service providers is critical to improving employment outcomes and facilitating a successful transition from education to employment for people with disabilities.

**Keywords:** disabilities; business and industry; work skills; readiness; training and participation

## 1. Introduction

People with disabilities face significant challenges in gaining fair and equitable access to the world of work. Global data shows that people with disabilities often experience gaps in education, skills training, and participation in the labor market compared to the general population. According to the World Health Organization (Officer and Posarac, 2011), more than 1 billion people worldwide live with disabilities, and more than 80% of them are in developing countries, where opportunities to obtain job training and employment are very limited. Therefore, efforts to improve the skills and work readiness of people with disabilities through training organized by the Industrial World Business World are important in increasing accessibility and social inclusion in the world of work.

Along with technological developments and industrial dynamics, the skills needed in the world of work continue to change. This creates additional challenges for people with disabilities, who often do not have equal access to relevant skills training. Many are hampered by social stigma, limited physical accessibility, and a lack of training programs tailored to their needs. It is hoped that the contribution of the business and industrial world in organizing special job training programs for people

with disabilities will be able to overcome most of these challenges. These programs aim to provide technical and non-technical skills that suit market needs, as well as prepare people with disabilities to compete in a dynamic work environment.

According to research conducted by Raja et al. (2020), people with disabilities often do not have the technical skills required by industry with limited access to education and training. These limitations affect their ability to compete in the job market. Therefore, skills training organized by the Business and Industrial World plays an important role in bridging this equation. Programs designed specifically for people with disabilities aim to provide relevant technical skills, such as computer programming, manufacturing engineering, and creative skills. Skills training programs supported by the Business and Industry World also contribute to improving non-technical skills, such as communication, leadership, and time management skills. Research (Omar et al., 2024) shows that non-technical skills are as important as technical skills in increasing the work readiness of people with disabilities. These skills help them adapt to dynamic work environments and increase their chances of retaining employment in the long term.

Several studies show that industry-supported skills training programs have a significant positive impact on people with disabilities. In India, for example, information technology-based training programs supported by large technology companies have improved skills and employment opportunities for participants with disabilities (Raja et al., 2020). This program provides access to much-needed skills in a growing sector, increasing participants' competitiveness in the job market. The results of this study are consistent with the findings of Alborno and Gaad (2014), which show that company involvement in providing inclusive job training can improve the quality of life of people with disabilities through increasing employment opportunities. Work readiness of people with disabilities includes technical skills and mental and social readiness to face the world of work. According to Kaye et al. (2011), one of the main challenges faced by people with disabilities is social stigma and low expectations from employers. Many employers still doubt the ability of people with disabilities to work productively, even if they have received relevant training. This causes high levels of unemployment among people with disabilities, even though they have adequate skills.

However, with inclusive and industry-supported training programs, perceptions of people with disabilities are starting to change. Internship programs and on-the-job training provided by companies help people with disabilities to demonstrate their abilities in the workplace. Research by Nolan and Gleeson (2017) shows that internships and workplace-based training can improve participants' technical and non-technical skills, and help them adapt to real work environments. Apart from that, this training also allows employers to see firsthand the potential of people with disabilities, thereby reducing stigma and increasing inclusion in the workplace.

The study by Schur et al. (2009) also found that companies that implemented inclusive training programs for people with disabilities reported increased productivity and employee loyalty. This shows that providing training and employment opportunities to people with disabilities is not only beneficial for the participants but also provides benefits for the company itself. Companies that participate in this inclusion program can create a more diverse and inclusive work environment, which

in turn improves the company's reputation in the eyes of society. In addition to contributions from the private sector, government policies also play an important role in supporting skills training for people with disabilities. Many countries have implemented social inclusion policies that require companies to provide employment or training quotas for people with disabilities. For example, in some European countries, governments provide tax incentives to companies that employ people with disabilities, while in other countries, there are quota schemes that require companies to provide training or employment for them (International Labour Organization, 2019).

In Indonesia, the government, through the Ministry of Manpower, has attempted to encourage social inclusion programs in the world of work by involving the private sector. Job training programs for people with disabilities organized by the business and industrial world are often supported by government policies, such as the Pre-Employment Card program, which provides access to training for people with disabilities. However, the biggest challenge faced is the lack of supervision over implementing this policy, so many companies are still reluctant to actively participate in inclusion programs (Roulstone and Barnes, 2005).

Although programs from the Business and Industrial World have significantly contributed to improving the skills and work readiness of people with disabilities, their implementation does not always go smoothly. According to Prince (2010), one of the main obstacles is the lack of awareness and understanding from employers regarding the potential of people with disabilities. Many companies still hold the view that employing people with disabilities requires additional costs, both in terms of training, providing accessibility facilities, and extra supervision. Apart from that, accessibility issues are still a big challenge for people with disabilities. Many training facilities are not designed to accommodate special needs, such as physical access for people with mobility disabilities or hearing and vision aids for those who need them. According to the "Disability Rights UK" (Equality Commission for Northern Ireland, 2018), many disabled people feel uncomfortable or even unable to take part in training due to limited accessibility. This results in low participation of people with disabilities in training programs that should benefit them. Apart from that, limited resources are also an obstacle in implementing training programs for people with disabilities. Many small and medium-sized companies do not have sufficient budgets to organize inclusive training programs. According to Lunt and Thornton (1994), inclusive training requires significant investment, both in terms of providing accessible facilities and adaptive technology and developing training modules that suit the needs of people with disabilities.

To overcome existing challenges, a more holistic approach is needed to implement job training programs for people with disabilities. First, companies need to increase their awareness and understanding of the potential of people with disabilities. This can be done through outreach campaigns and training for company management about the importance of social inclusion in the workplace. A study (Mitra, 2006) shows that company awareness of the rights of people with disabilities can increase their participation in training and employment programs. Second, the government must strengthen policies supporting skills training for people with disabilities. Tax incentives and training subsidies can effectively encourage private sector participation in providing inclusive training. Apart from that, the government must also ensure that

the training facilities provided are accessible to all types of disabilities, both physically and technologically. Third, partnerships between the public, private, and civil society sectors are critical to the success of this training program. Close collaboration between various stakeholders can ensure that the training programs align with industry needs while providing fair opportunities for people with disabilities to participate in the world of work.

It can be concluded that skills and work readiness are two important elements in the transition process of people with disabilities from education to the world of work. The business world and industry involvement through training and skills development programs are necessary to create an inclusive work environment. Based on available data, the participation rate of people with disabilities in the labor market is still very low compared to non-disabled groups. This can be caused by a lack of relevant skills and equal opportunities to access job training because the business world and industry have a strategic role in providing training and skills development programs for people with disabilities, which are expected to increase their work readiness. Therefore, it is important to carry out a comprehensive study regarding the contribution of the business and industrial world in developing the skills of people with disabilities to ensure that existing programs can answer existing needs. This research uses the Systematic Literature Review method to explore relevant and up-to-date information regarding programs implemented to improve the skills and work readiness of people with disabilities. Through this approach, it is hoped that this research can provide a clearer picture of the effectiveness of these programs.

## **2. Theoretical framework**

### **2.1. Work skills and work readiness**

Work skills refer to the technical, social, and cognitive abilities required to perform specific job tasks, while work readiness encompasses the overall preparedness of an individual to enter the workforce, including confidence, adaptability, and professionalism (Green, 2013; Rodrigues et al., 2021).

### **2.2. Industry-based training**

Industry-based training is a special program designed to meet the skills needs of a particular industry (Nduro et al., 2015). This program focuses on providing technical skills. Usually, these technical skills will be useful for increasing work productivity because there is communication, teamwork, and problem-solving in the training.

### **2.3. Internships and on-the-job training**

Internships and on-the-job training are industry programs that can provide practical experience (Thakur et al., 2024). The experience gained by interns can immediately serve as an important bridge between academic learning and the professional world of work. Theoretical knowledge from the academic world can be applied in a real-world environment. In addition, these internships and on-the-job training programs also offer the opportunity to build professional networks and

understand workplace culture. Non-technical skills such as communication, teamwork, and adaptability are also experiences that are gained.

Industry and business programs contribute directly to the development of work skills. Contributions that can be developed such as technical, interpersonal, and adaptability skills, improve the work readiness of individuals with disabilities. This relationship is influenced by employer attitudes, policy support, and the quality of the work environment, which act as moderator variables, strengthening or weakening the effectiveness of the program. In addition, an inclusive and supportive work environment also serves as a mediating variable that improves the results of training programs on skills and work readiness. Overall, the effectiveness of industry programs is shaped by an inclusive social and organizational context, which creates a positive impact on the employment opportunities of individuals with disabilities.

### **3. Materials and methods**

This research uses a Systematic Literature Review (SLR) approach to analyze and evaluate the contribution of the Industrial World Business program to the work skills and work readiness of people with disabilities. The SLR approach was chosen because it allows researchers to comprehensively identify, assess, and synthesize relevant literature and its structure (Palomino et al., 2019). Based on previous research findings, this method is considered appropriate to provide an in-depth understanding of the role of business and industry in improving the skills and work readiness of people with disabilities.

SLR begins by formulating straightforward research questions to guide the literature search and analysis process. In this research, the research questions formulated are as follows: 1) How do job training programs organized by businesses and industry contribute to improving the work skills of people with disabilities; 2) What are the challenges and obstacles faced by people with disabilities in accessing training programs provided by business and industry; 3) How much influence do business and industry programs have on the work readiness of people with disabilities; 4) What are the best practices in implementing job training programs for people with disabilities in the industrial sector.

Strict inclusion and exclusion criteria were used to ensure the selected literature was relevant to the research topic. These criteria help filter out studies directly relevant to the research objectives. The following are the inclusion and exclusion criteria used:

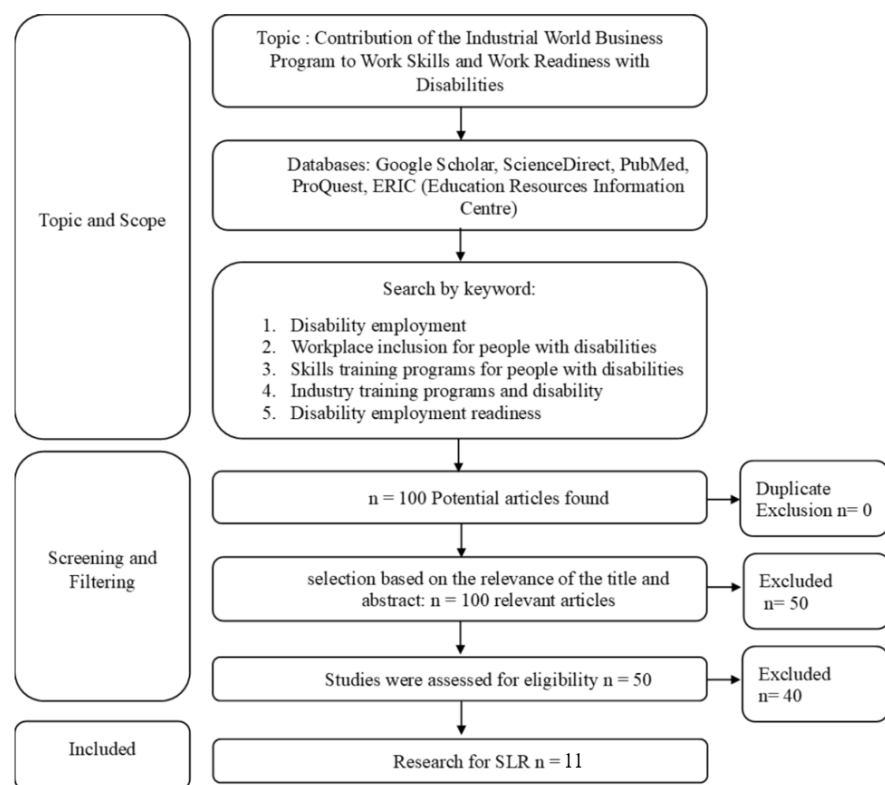
a. Inclusion Criteria; 1) Studies published in the last 10 years (2013–2023); 2) Articles published in peer-reviewed scientific journals; 3) Studies that discuss the contribution of business and industry or job skills training programs for people with disabilities; 4) Studies that report empirical results regarding improving the skills and work readiness of people with disabilities; 5) Literature available in English and Indonesian.

b. Exclusion Criteria; 1) Studies that do not focus on the skills or work readiness of people with disabilities; 2) Articles not published in peer-reviewed journals (for example, opinions, editorials, or institutional reports without review); 3) Literature that is not relevant to the context of business and industrial programs; 4) Studies that focus only on policy without highlighting the contribution of training programs.

The literature to be reviewed is taken from various credible academic database sources to ensure the quality of the data obtained. The databases used include Google Scholar, ScienceDirect, PubMed, ProQuest, and ERIC (Education Resources Information Centre).

In addition, additional literature was taken from reports of international organizations such as the International Labor Organization (ILO), World Health Organization (WHO), and Disability Rights UK. Keywords used in the literature search include; Disability employment, Workplace inclusion for people with disabilities, Skills training programs for people with disabilities, Industry training programs and disabilities, Disability employment readiness, industrial business world and disability skills training, and Workplace accessibility and disabilities.

After formulating research questions and establishing inclusion/exclusion criteria, the next stage is to conduct a literature search. The systematic process of this literature review can be depicted in **Figure 1** with an explanation of the following steps:



**Figure 1.** Steps to a systematic literature review.

### Step 1: Initial Search

Relevant literature was searched through various academic databases using predetermined keywords. At this stage, more than 100 potential articles can be found.

### Step 2: Select Title and Abstract

From the initial search results, selection was carried out based on the relevance of the title and abstract. Articles inappropriate to the research topic are eliminated at this stage. At the end of this process, approximately 50 relevant articles are hoped to remain for further analysis.

### Step 3: Full-Text Filtering

Articles that pass title and abstract selection will be read in full to ensure they comply with the inclusion criteria. At this stage, articles that do not present relevant empirical data will be removed from the list.

#### Step 4: Quality Screening

Articles that pass full-text screening will be further evaluated based on the quality of the methodology used. Studies that used weak or invalid research methodology were excluded. At the end of this process, approximately 30-40 high-quality articles are expected to be used in the final analysis.

#### Step 5: Data Analysis

Data Analysis and Synthesis are carried out after relevant literature has been identified and selected; the next stage is to carry out data analysis and synthesis from the selected articles. At this stage, important information from each article, such as research methodology, population studied, findings, and contribution to the skills and work readiness of people with disabilities, will be extracted. The analysis steps are carried out by extracting data from the main information from each study identified and storing it in a data table. This information includes the study title, year of publication, author, study objectives, methodology used, main results, and contribution to skills/work readiness of people with disabilities. Next, the Categorization of Findings using Extracted data is then categorized based on the main themes that emerge, such as the contribution of training programs to the technical skills of people with disabilities.

The influence of training on job readiness and transition to work. Challenges faced by people with disabilities in accessing training. Solutions and recommendations proposed by the study to improve business and industrial programs for people with disabilities. After the previous stage, the next step is carried out, namely, Narrative Synthesis. A narrative synthesis was carried out based on these identify factors to synthesize relevant findings (Popay et al., 2006). This synthesis will help paint a general picture of the contribution of business and industry to the work skills and work readiness of people with disabilities, as well as provide a deeper understanding of the challenges and opportunities that exist.

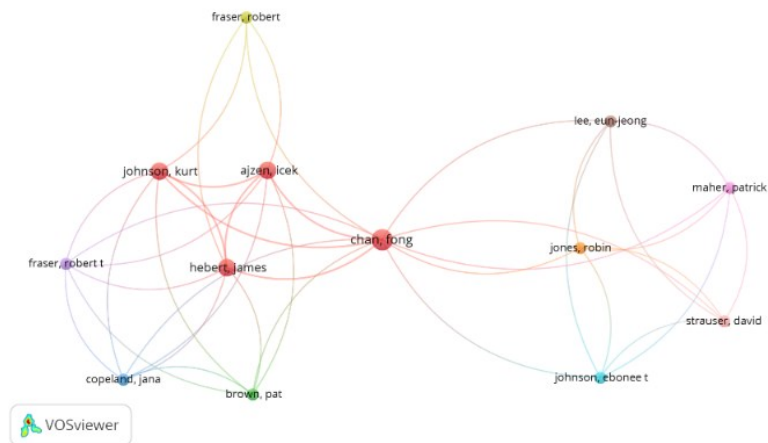
To ensure the validity and reliability of the results of the literature review, this research implemented the following steps:

- 1) Source Triangulation: Using multiple literature sources from different databases to ensure consistent findings.
- 2) Peer Review: The literature synthesis results will be reviewed by peers or experts in the field to ensure the accuracy of interpretation and conclusion drawing.
- 3) Process Documentation: All steps of literature search and selection are well documented to facilitate replication and audit by other researchers.

## **4. Results**

### **4.1. Bibliometrics**

**Figure 2** explains how writers with interconnected networks conduct research. 13 authors have 3 or more links. Only 1 (one) author name, Chan Long, has links with other authors from 2 clusters different.

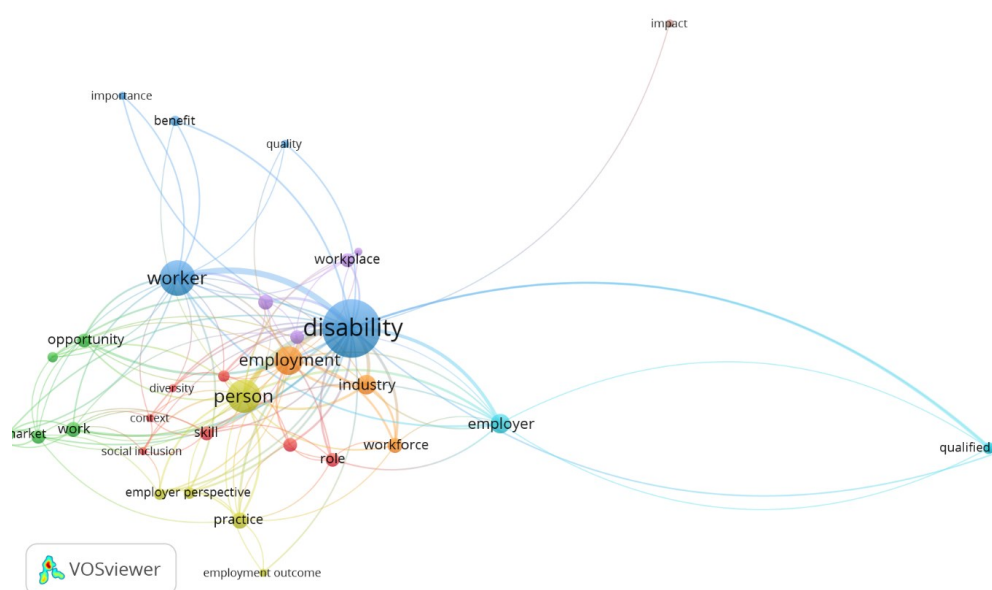


**Figure 2.** Co–authorship (mutually connected/related).

#### 4.2. Co-occurrence

From **Figure 3**, it can be seen that disabled workers have a significant relationship directly with employment with several supporting things, including employment roles and practices for disabled workers, to make these disabled workers into workers who suit market needs. This research conducted by Santilli et al. (2018) said that involving the business world and industry in providing interventions for workers with disabilities is important because it can make workers with disabilities capable and ready to enter the world of work and the market competition required by industry. The eleven reviews highlighted in **Table 1** explain the crucial role of industry-based training programs and organizational support in improving employment opportunities for individuals with disabilities. The studies emphasize that inclusive attitudes, personalized interventions, and collaboration between education, business, and industry are key to preparing individuals with disabilities for the workforce. Additionally, the findings underscore that inclusive work environments not only enhance job readiness and skills but also improve the quality of life for people with disabilities.





**Figure 3.** Co-occurrence.

**Table 1.** List of journal names from analysis results.

Author/Year	Research topic	Analysis of results
(Butterworth and Migliore, 2015)	Trends in employment outcomes of young adults with intellectual and developmental disabilities, 2006–2013.	This research focuses on trends in employment outcomes for young adults with intellectual and developmental disabilities in the United States. Butterworth et al. found that access to skills-based training was critical to their employment success. This article supports the importance of training programs specifically designed by businesses and industry for people with intellectual disabilities, which play a major role in improving their skills and work readiness.
(Lindsay et al., 2019)	Employers’ perspectives of including young people with disabilities in the workforce, disability disclosure and providing accommodations.	This research focuses on employers’ perspectives on the inclusion of people with disabilities in the work environment. This study shows that support from management and company policies plays a key role in the success of people with disabilities in the world of work. These findings show the importance of organizational support in training and internship programs provided by the business world and industry for people with disabilities.
(Ju et al., 2013)	Employer attitudes toward workers with disabilities: A review of research in the past decade.	This research provides an overview of employer attitudes toward workers with disabilities in the United States. Negative attitudes from employers often prevent people with disabilities from getting suitable jobs. This article provides a foundation for programs run by business and industry to change employer perceptions and create a more inclusive work environment.
(Hedley et al., 2017)	Employment programmes and interventions targeting adults with autism spectrum disorder: A systematic review of the literature.	This research examines employment and intervention programs targeting adults on the autism spectrum. Hedley et al. found that programs that provide specialized and ongoing training are critical to the employment success of people with autism. This article is important for the development of training programs tailored to the needs of individuals with specific disabilities such as autism in the context of business and industry.
(Nota et al., 2014).	Employer attitudes towards the work inclusion of people with disability.	This article explores employers’ attitudes towards the inclusion of people with disabilities in the workplace. Nota et al. highlights the importance of awareness and education for employers to create an inclusive environment. This article provides insight into how programs run by business and industry can help overcome stigma and misunderstandings about people with disabilities in the world of work.

**Table 1. (Continued).**

<b>Author/Year</b>	<b>Research topic</b>	<b>Analysis of results</b>
(Wehman et al., 2016)	Employment for adults with autism spectrum disorders: A retrospective review of a customized employment approach.	This article describes a personalized employment approach for adults with autism, demonstrating the importance of industry-based interventions to ensure job readiness. Demonstrates the importance of a tailored employment approach for people with autism, providing an overview of how personalized industry-based training can improve their employability skills.
(Hirschi, 2018).	The fourth industrial revolution: Issues and implications for career research and practice.	Review how the implementation of dynamic human resource management can support industrial training programs for people with disabilities. Provides insight into how effective human resource management can support successful industrial training for people with disabilities.
(Blick et al., 2016)	Do inclusive work environments matter? Effects of community-integrated employment on quality of life for individuals with intellectual disabilities.	This article explores the relationship between inclusive employment and the quality of life of people with intellectual disabilities, demonstrating the importance of industry involvement in training and employment. Demonstrate that an inclusive work environment improves the quality of life of people with disabilities and reduces discrimination in the workplace.
(Grigal et al., 2018)	Inclusive higher education for people with intellectual disability in the United States: An overview of policy, practice, and outcomes.	This article highlights the relationship between inclusive higher education and employment outcomes for people with intellectual disabilities. Higher education programs in collaboration with industry provide a better pathway to gaining relevant skills in the workplace. Business and industry play an important role in creating a smooth transition from education to work.
(Moran et al., 2014)	Motivations of persons with psychiatric disabilities to work in mental health peer services: A qualitative study using self-determination theory.	This qualitative study highlights the work experiences of people with disabilities involved in industry-supported programs. The results show that direct industry involvement in job training is critical in building practical skills and job readiness for people with disabilities. Programs that collaborate with industry are more effective in providing access to jobs that suit the abilities of people with disabilities.
(Nolan and Gleeson, 2017)	The transition to employment: the perspectives of students and graduates with disabilities.	This research explores the challenges of transitioning from education to the world of work for graduates with disabilities.

## **5. Discussion**

### **5.1. Contribution of the business and industrial world program in improving the work skills of persons with disabilities**

People with disabilities face unique challenges in accessing adequate education and job training. However, with collaboration between the business industry and the government, several training programs have been designed to help people with disabilities acquire relevant work skills and increase their readiness to face the world of work. This literature research shows several important contributions from the world of business and industry programs. Several training programs facilitated by the business and industrial world focus on improving technical skills relevant to industry needs. Manufacturing, technology, and service industries, such as hotels and restaurants, have launched training that matches the technical skills required in these sectors. In the technology sector, people with disabilities are given basic to advanced training in software use, programming, and other relevant technical skills. A study in India focused on training people with disabilities in information technology found significant improvements in participants' skills, leading to higher employment (Hunt et al., 2022; Kumar et al., 2012; Lindsay et al., 2018). This research shows that technical skills are an important factor in increasing the competitiveness of people with disabilities in the job market.

Apart from technical skills, several business and industry programs also provide training in creative and entrepreneurial skills for people with disabilities. This program is designed to encourage people with disabilities to have the ability to create employment opportunities. For example, in the crafts and arts sector, training organized by several large companies in Indonesia helps people with disabilities develop products with high sales value, ultimately encouraging them to become independent entrepreneurs.

This entrepreneurship training program is also supported by technical and business management guidance, which prepares people with disabilities to manage their businesses effectively. Studies from several countries show that entrepreneurial skills can be a significant alternative for people with disabilities who have difficulty finding work in the formal sector. Another important contribution from business and industry programs is on-the-job training and internship programs. Internship programs give people with disabilities the opportunity to learn directly in a real work environment so they can develop technical skills as well as social and behavioral skills in the workplace (Cease-Cook et al., 2015; Gilson and Carter, 2016).

Based on the reports analyzed in this research, companies that provide internship opportunities for people with disabilities report that the programs benefit not only the interns but also the companies themselves, who receive a workforce that is trained and better prepared to work. In Japan, internship programs for people with disabilities have become integral to inclusive workforce training, where companies must provide internship quotas for disabled workers (Futagami and Kettunen, 2022; Mithout, 2021).

## **5.2. Job readiness of persons with disabilities after participating in training programs in the business and industrial world**

Work readiness of people with disabilities is one indicator of the success of a training program. Job readiness not only includes technical skills relevant to industry needs but also includes adaptability, communication, and leadership skills in the workplace. Based on the results of the literature, several indicators of work readiness developed through training programs in the business and industrial world include:

Increasing independence and self-confidence is a significant aspect of the work readiness of people with disabilities after attending training. People with disabilities who were previously hesitant to interact with a competitive work environment showed increased self-confidence after an inclusive training process. Studies show that the success of training in improving technical and non-technical skills also impacts increasing work motivation and their ability to overcome challenges in the workplace (Halim and Muhammad, 2024; Morando and Brullo, 2022).

Non-technical skills, or what are known as soft skills, play an important role in the work readiness of people with disabilities. Training programs emphasizing communication, teamwork, and time management skills help people with disabilities to be better prepared for dynamic work situations. One report from a global technology company that provides communication skills training for people with disabilities stated that participants who had undergone the training could communicate more effectively with colleagues and customers.

Business and industrial training also helps people with disabilities mentally prepare for a demanding work environment. Research shows that the transition from education to work is often a challenge for people with disabilities, especially in terms of adapting to workplace regulations and expectations. Training programs that include aspects of work simulation or workplace orientation provide opportunities for people with disabilities to prepare themselves psychologically and mentally (Bell and Weinstein, 2011; Fabian, 2000; Kulkarni and Lengnick-Hall, 2014).

### **5.3. Challenges in implementing programs in the business and industrial world**

Although the contribution of business and industry programs in improving the skills and work readiness of people with disabilities is quite significant, their implementation has several challenges. Accessibility is still a major challenge in many job training programs organized by business and industry. Many training facilities have not been designed to meet the specific needs of people with disabilities, such as physical accessibility for wheelchair users, adaptive technology devices for people with visual disabilities, or sign language interpretation for people with hearing disabilities. This limited accessibility often means that people with disabilities cannot participate in training optimally.

In addition to accessibility issues, many companies still have a limited understanding of the needs and potential of people with disabilities in the workplace. Social stigma that considers people with disabilities to be less productive or need extra supervision is still a significant obstacle. Industry awareness of the importance of inclusion and acceptance of people with disabilities still needs to be increased through outreach and training for employers and other stakeholders. Some business and industrial programs face limitations regarding financial resources and available training facilities. Many small and medium-sized companies do not have sufficient budgets to organize adequate inclusive training programs. In addition, providing special assistive devices and adaptive technology for people with disabilities also requires significant investment, which not all companies can provide (Mark et al., 2019; Rouse and McBride, 2022).

By expanding aspects of the previous discussion, it can be seen that although business and industrial training programs play a significant role in improving the skills and work readiness of people with disabilities, there are still many aspects that need to be improved, especially in terms of accessibility, industry understanding, and resource allocation. This challenge must be addressed through more comprehensive policies and increased collaboration between government, the private sector, and educational institutions so that people with disabilities can be truly integrated into the labor market.

Based on the findings of this research, several recommendations can be made to increase the effectiveness of business and industry programs in preparing people with disabilities to enter the world of work. Accessibility Infrastructure Development: Companies need to improve workplace accessibility by providing physical and technological facilities that suit the needs of people with disabilities. This includes the

construction of wheelchair access ramps, the provision of hearing aids, and digital accessibility for people with sensory disabilities.

Training for companies is not only about disabilities but also about understanding how people with disabilities are. In this case, business and industry programs must facilitate training for companies in accepting and handling people with disabilities. This includes raising awareness about the importance of inclusivity and providing guidance on designing disability-friendly work environments.

The Inclusive Training Program is the basis for implementation. Training programs must be designed inclusively, taking into account the special needs of people with disabilities. The training curriculum needs to be adapted so that people with disabilities can optimally develop technical and non-technical skills. Collaboration with the Government where the Government must encourage more companies to get involved in training programs for people with disabilities through adequate incentives or regulations (Parmenter, 2011; Saleh and Bruyère, 2018).

## **6. Conclusion**

This research concludes that the contribution of the business world and industry through job training programs for people with disabilities has proven effective in improving their work skills and readiness. However, to achieve greater inclusivity, improvements are still needed in terms of accessibility, program adaptation, and efforts to reduce discrimination in the world of work. It is hoped that the results of this research can become a basis for policymakers, industry players, and educational institutions to continue to develop inclusive programs and empower people with disabilities in the world of work.

Based on the analysis of these references, the industrial world's contribution to the work skills and readiness of people with disabilities is very significant. Industry-backed programs provide relevant, practical training addressing the challenges people with disabilities face in obtaining and maintaining employment. The program creates an inclusive and supportive environment, ensuring that people with disabilities can participate fully in the world of work. Collaboration between industry and vocational service providers is critical to improving employment outcomes and facilitating a successful transition from education to employment for people with disabilities.

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## References

- Alborno, N. E., & Gaad, E. (2014). 'Index for Inclusion': a framework for school review in the United Arab Emirates. *British Journal of Special Education*, 41(3), 231–248. Portico. <https://doi.org/10.1111/1467-8578.12073>
- Bell, M. D., & Weinstein, A. (2011). Simulated Job Interview Skill Training for People with Psychiatric Disability: Feasibility and Tolerability of Virtual Reality Training. *Schizophrenia Bulletin*, 37(suppl 2), S91–S97. <https://doi.org/10.1093/schbul/sbr061>
- Blick, R. N., Litz, K. S., Thornhill, M. G., et al. (2016). Do inclusive work environments matter? Effects of community-integrated employment on quality of life for individuals with intellectual disabilities. *Research in Developmental Disabilities*, 53–54, 358–366. <https://doi.org/10.1016/j.ridd.2016.02.015>
- Butterworth, J., & Migliore, A. (2015). Trends in employment outcomes of young adults with intellectual and developmental disabilities, 2006-2013. Institute for Community Inclusion University of Massachusetts Boston.
- Cease-Cook, J., Fowler, C., & Test, D. W. (2015). Strategies for Creating Work-Based Learning Experiences in Schools for Secondary Students With Disabilities. *TEACHING Exceptional Children*, 47(6), 352–358. <https://doi.org/10.1177/0040059915580033>
- Equality Commission for Northern Ireland. (2018). Progress on disability rights in the United Kingdom. Equality Commission for Northern Ireland.
- Fabian, E. S. (2000). Social cognitive theory of careers and individuals with serious mental health disorders: Implications for psychiatric rehabilitation programs. *Psychiatric Rehabilitation Journal*, 23(3), 262–269. <https://doi.org/10.1037/h0095159>
- Futagami, S., & Kettunen, E. (2022). Employment and Human Resource Development of Disabled People in Japan and Finland: A Comparative Study from the Perspective of Diversity, Inclusion, and Decent Work. In: *Sustainable Development in Asia: Socio-economic, Financial, and Economic Perspectives*. Springer. pp. 31–53.
- Gilson, C. B., & Carter, E. W. (2016). Promoting Social Interactions and Job Independence for College Students with Autism or Intellectual Disability: A Pilot Study. *Journal of Autism and Developmental Disorders*, 46(11), 3583–3596. <https://doi.org/10.1007/s10803-016-2894-2>
- Green, F. (2013). *Skills and skilled work: An economic and social analysis*. Oxford University Press, USA.
- Grigal, M., Hart, D., & Papay, C. (2018). Inclusive higher education for people with intellectual disability in the United States. In: *People with intellectual disability experiencing university life: Theoretical underpinnings, evidence and lived experience*. Sense Publishers. pp. 69–97.
- Halim, F. A., Muhammad, N. A., & Nadrah binti Wan Muda, W. H. (2024). Factors Predicting the Acquisition of Soft Skills Among Students with Learning Disabilities in Vocational Special Education Secondary School. 2024 9th International STEM Education Conference (ISTEM-Ed), 1–5. <https://doi.org/10.1109/istem-ed62750.2024.10663189>
- Hedley, D., Uljarević, M., Cameron, L., et al. (2016). Employment programmes and interventions targeting adults with autism spectrum disorder: A systematic review of the literature. *Autism*, 21(8), 929–941. <https://doi.org/10.1177/1362361316661855>
- Hirschi, A. (2018). The Fourth Industrial Revolution: Issues and Implications for Career Research and Practice. *The Career Development Quarterly*, 66(3), 192–204. Portico. <https://doi.org/10.1002/cdq.12142>
- Hunt, X., Saran, A., Banks, L. M., et al. (2022). Effectiveness of interventions for improving livelihood outcomes for people with disabilities in low- and middle-income countries: A systematic review. *Campbell Systematic Reviews*, 18(3). Portico. <https://doi.org/10.1002/cl2.1257>
- International Labour Organization. (2019). *Promoting Employment Opportunities for People with Disabilities: Quota Schemes*. International Labour Organization. 1.
- Ju, S., Roberts, E., & Zhang, D. (2013). Employer attitudes toward workers with disabilities: A review of research in the past decade. *Journal of Vocational Rehabilitation*, 38(2), 113–123. <https://doi.org/10.3233/jvr-130625>

- Kaye, H. S., Jans, L. H., & Jones, E. C. (2011). Why Don't Employers Hire and Retain Workers with Disabilities? *Journal of Occupational Rehabilitation*, 21(4), 526–536. <https://doi.org/10.1007/s10926-011-9302-8>
- Kulkarni, M., & Lengnick-Hall, M. L. (2013). Obstacles to Success in the Workplace for People With Disabilities. *Human Resource Development Review*, 13(2), 158–180. <https://doi.org/10.1177/1534484313485229>
- Kumar, S. G., Roy, G., & Kar, S. (2012). Disability and rehabilitation services in India: Issues and challenges. *Journal of Family Medicine and Primary Care*, 1(1), 69. <https://doi.org/10.4103/2249-4863.94458>
- Lindsay, S., Cagliostro, E., Albarico, M., et al. (2018). A Systematic Review of the Benefits of Hiring People with Disabilities. *Journal of Occupational Rehabilitation*, 28(4), 634–655. <https://doi.org/10.1007/s10926-018-9756-z>
- Lindsay, S., Cagliostro, E., Leck, J., et al. (2019). Employers' perspectives of including young people with disabilities in the workforce, disability disclosure and providing accommodations. *Journal of Vocational Rehabilitation*, 50(2), 141–156. <https://doi.org/10.3233/jvr-180996>
- Lunt, N., & Thornton, P. (1994). Disability and employment: towards an understanding of discourse and policy. *Disability & Society*, 9(2), 223–238. <https://doi.org/10.1080/09687599466780231>
- Mark, B. G., Hofmayer, S., Rauch, E., et al. (2019). Inclusion of Workers with Disabilities in Production 4.0: Legal Foundations in Europe and Potentials Through Worker Assistance Systems. *Sustainability*, 11(21), 5978. <https://doi.org/10.3390/su11215978>
- Mithout, A.-L. (2021). From equal access to employment to equal career opportunities? *Alter*, 15–4, 341–353. <https://doi.org/10.1016/j.alter.2021.07.001>
- Mitra, S. (2006). The Capability Approach and Disability. *Journal of Disability Policy Studies*, 16(4), 236–247. <https://doi.org/10.1177/10442073060160040501>
- Moran, G. S., Russinova, Z., Yim, J. Y., et al. (2013). Motivations of Persons with Psychiatric Disabilities to Work in Mental Health Peer Services: A Qualitative Study Using Self-Determination Theory. *Journal of Occupational Rehabilitation*, 24(1), 32–41. <https://doi.org/10.1007/s10926-013-9440-2>
- Morando, M., & Brullo, L. (2022). Promoting Safety Climate Training for Migrant Workers through Non-Technical Skills: A Step Forward to Inclusion. *Merits*, 2(1), 26–45. <https://doi.org/10.3390/merits2010004>
- Nduro, K., Anderson, I. K., Peprah, J. A., et al. (2015). Industrial Training Programmes of Polytechnics in Ghana: The Pertinent Issues. *World Journal of Education*, 5(1). <https://doi.org/10.5430/wje.v5n1p102>
- Nolan, C., & Gleeson, C. I. (2017). The transition to employment: the perspectives of students and graduates with disabilities. *Scandinavian Journal of Disability Research*, 19(3), 230–244. <https://doi.org/10.1080/15017419.2016.1240102>
- Nota, L., Santilli, S., Ginevra, M. C., et al. (2013). Employer Attitudes Towards the Work Inclusion of People With Disability. *Journal of Applied Research in Intellectual Disabilities*, 27(6), 511–520. Portico. <https://doi.org/10.1111/jar.12081>
- Officer, A., & Posarac, A. (2011). *World report on disability*. World Health Organ: Geneva, Switzerland.
- Omar, M. K., Puad, M. H. M., Yaakub, M., et al. (2024). Empowering the employability of people with disability (PWD) through a skills intervention program. *Journal of Institutional Research South East Asia*, 22(1), 97-120.
- Palomino, M., Dávila, A., & Melendez, K. (2019). Methodologies, methods, techniques and tools used on SLR elaboration: A mapping study. In: *Proceedings of the 7th International Conference on Software Process Improvement (CIMPS 2018)*; 17-19 October 2018; Guadalajara, Mexico.
- Parmenter, T. (2011). *Promoting training and employment opportunities for people with intellectual disabilities: International experience*. International Labour Organization.
- Popay, J., Roberts, H., Sowden, A., et al. (2006). *Guidance on the conduct of narrative synthesis in systematic reviews. A product from the ESRC methods programme* Version, 1(1), b92.
- Raja, K., Gupta, S., Mathew, J., & Rao, P. (2020). Development of training manuals for community disability workers. *Physiotherapy-The Journal of Indian Association of Physiotherapists*, 14(1), 37-40. [https://doi.org/10.4103/PJIAP.PJIAP\\_19\\_19](https://doi.org/10.4103/PJIAP.PJIAP_19_19)
- Rodrigues, M., Fernández-Macías, E., & Sostero, M. (2021). A unified conceptual framework of tasks, skills and competences (No. 2021/02). *JRC Working Papers Series on Labour, education and Technology*.
- Roulstone, A., & Barnes, C. (2005). *Working futures? Disabled people, policy and social inclusion*. Policy Press.
- Rouse, W. B., & McBride, D. K. (2022). *Assistive Technologies for Disabled and Older Adults: Models of Use Cases, Market Economics, and Business Cases*. In: *Handbook of Model-Based Systems Engineering*. Springer. pp. 1–25.

- Saleh, M. C., & Bruyère, S. M. (2018). Leveraging Employer Practices in Global Regulatory Frameworks to Improve Employment Outcomes for People with Disabilities. *Social Inclusion*, 6(1), 18–28. <https://doi.org/10.17645/si.v6i1.1201>
- Santilli, S., Ginevra, M. C., Nota, L., & Soresi, S. (2018). Decent work and social inclusion for people with disability and vulnerability: From the soft skills to the involvement of the context. In: *Interventions in Career Design and Education: Transformation for Sustainable Development and Decent Work*. Springer. pp. 303–313.
- Schur, L., Kruse, D., Blasi, J., et al. (2009). Is Disability Disabling in All Workplaces? *Workplace Disparities and Corporate Culture*. *Industrial Relations: A Journal of Economy and Society*, 48(3), 381–410. Portico. <https://doi.org/10.1111/j.1468-232x.2009.00565.x>
- Thakur, R., Chavan, M., Vasoya, A., et al. (2024). Bridging Academia And Industry: A Study On The Skill Development Effects Of Internships And On-The-Job Training Programs. *African Journal of Biomedical Research*, 30(4).
- Wehman, P., Brooke, V., Brooke, A. M., et al. (2016). Employment for adults with autism spectrum disorders: A retrospective review of a customized employment approach. *Research in Developmental Disabilities*, 53–54, 61–72. <https://doi.org/10.1016/j.ridd.2016.01.015>