The Development Suitable Job Profile for Students with Learning Disability

Nik Norlaili Jamilah Nik Othman, Fathiyah Mohd Kamaruzaman and Mohamad Sattar Rasul

***Abstract* – Nowadays, the issue of unemployment among special need workers has been arisen. This article has focused on unemployment issue among students with learning disabilities (SLD) who has skills competent in specifically in TVET sectors. It is important to explore and discover the suitability of job profile and work ability among SLD. The objective is to develop job profiles and work ability of SLD refereeing to the human capital theory blended with multiple intelligence theory. Meta-analysis has been used to have a better comprehensive regarding previous study between 2021 until 2023. Thus, the job profile for moderate and low skill workers has been matching with the work ability of the SLD in food service industry. The finding elements of work ability comparing with both of theory will give a new dimension of pathway for a SLD to strive in the competitive labor market workforce. While revealing the potentials among SLD will reduce the discriminations among themselves towards to community members. Besides, it will create a new job profile which cater to the potential of SLD towards the industry related. A job profile that suitable with working ability and uniqueness capabilities of SLD will cater to the industry demands on supply of skilled workers. Through this mapping outcomes, it will help Special Need Division to be align with the work ability and job profile trough the duty and task that can be accomplish by the SLD before they graduated from special need school.**

***Keywords* – Job profiles, Work ability, Characteristics SLD, Students with Learning Disabilities (SLD), Technical Vocational Education and Training**

I. INTRODUCTION

In the contemporary landscape of education and employment, the integration of students with learning disabilities into the workforce poses both challenges and opportunities (Grimaldi-Puyana et al., 2018; Yong et al., 2023). Recognizing the importance of inclusive employment practices, this article seeks to explore the creation of a suitable job profile for students facing learning disabilities such as autism, ADHD, Down syndrome, dyslexia, cognitive delays, and multiple disabilities (Kreider et al., 2020; Mathewson et al., 2023; Trip et al., 2019) . To achieve this, some theories and models will draw upon the insights of the Human Capital Theory, Multiple Intelligence Theory, and the Job Characteristic Model, aiming to discern an effective framework that aligns with the diverse needs and talents of these individuals.

Human Capital Theory, a foundational concept in labor economics, emphasizes the investment in individuals' education, training, and health as a means to enhance their economic productivity(Dimov, 2017; Moghtader, 2023). This theory will serve as a lens through which we evaluate the potential for adapting employment profiles to better accommodate students with learning disabilities, viewing their unique capabilities as valuable human capital (Aisyah Ibrahim et al., 2022; Makhbul, 2020).

Furthermore, the Multiple Intelligence Theory proposed by Howard Gardner acknowledges the diversity of cognitive abilities and offers a broader understanding of intelligence beyond traditional metrics (Hasanuddin et al., 2022; Hearne & Stone, 1995) . Integrating this theory into the exploration allows for a nuanced examination of the varied strengths and talents of students with learning disabilities, informing the development of job profiles that capitalize on their individual cognitive capacities(Berlian et al., 2020; Hasanuddin et al., 2022; Rile et al., 2015). To shape the investigation, will also delve into the Job Characteristic Model, exploring how job design elements such as skill variety, task identity, task significance, autonomy, and feedback can be tailored to create a supportive and inclusive work environment for students with diverse learning needs (Cangialosi et al., 2023; Johari et al., 2011; Smart et al., 2023).

The primary objective of this research is to determine a model that aptly addresses the complexities of creating job profiles suitable for students with autism, ADHD, Down syndrome, dyslexia, cognitive delays, and multiple disabilities. By integrating these prominent theories, researcher aim to contribute to the establishment of inclusive employment practices that celebrate the unique talents of every individual, fostering a workplace environment where diversity is not only acknowledged but embraced.

II. PROBLEM STATEMENT

In the realm of education and employment, a critical challenge persists in developing suitable job profiles for students with learning disabilities, including autism, ADHD, Down syndrome, dyslexia, cognitive delays, and multiple disabilities. The existing workforce frameworks often fail to adequately address the diverse cognitive strengths and unique abilities of these individuals (Lagorio & Romero, 2023). This discrepancy underscores the need for a comprehensive model that integrates key theoretical perspectives. The Human Capital Theory emphasizes investment in education and training, urging a re-evaluation of these students' skills as valuable assets. Howard Gardner's Multiple Intelligence Theory recognizes the multifaceted nature of intelligence, calling for a holistic understanding of

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cognitive abilities. Simultaneously, the Job Characteristic Model offers insights into tailoring job designs for inclusivity(Seqhobane & Kokt, 2021). This study seeks to address this gap by determining a model that aptly informs the development of job profiles, ensuring they align effectively with the specific needs and strengths of students with learning disabilities, fostering an inclusive professional landscape.

III. LITERATURE REVIEW

Human Capital Theory, Multiple Intelligence Theory and Job Characteristic Model to Develope the Job Profile for Learning Disability

The integration of Human Capital Theory, Multiple Intelligence Theory, and the Job Characteristic Model is crucial for tailoring job profiles to address learning disabilities. Human Capital Theory justifies investment in education, recognizing individuals with ADHD, autism, dyslexia, cognitive delays, Down syndrome, and multiple disabilities as valuable contributors(Dimov, 2017). Multiple Intelligence Theory offers insight into diverse cognitive strengths, guiding the identification of unique talents. The Job Characteristic Model ensures that job designs align with the cognitive needs of each disability category. Developing customized job profiles fosters inclusivity and maximizes the potential of individuals with learning disabilities, promoting a workforce that values diversity and capitalizes on the richness of human capabilities.

Originating from labor economics, Human Capital Theory posits that investing in education and training enhances individuals' economic productivity (Moghtader, 2023). In the context of learning disabilities, literature supports the application of this theory by recognizing the intrinsic value of education and skill development for individuals with ADHD, autism, dyslexia, cognitive delays, Down syndrome, and multiple disabilities. Prior research argues that embracing the principles of Human Capital Theory is essential for redefining the perception of individuals with learning disabilities as valuable contributors to the workforce (Belletier et al., 2021; Dimov, 2017; Kandpal et al., 2023; Vittal et al., 2023; Yanson & Mann, 2020). Advocates for viewing the unique skills of individuals with learning disabilities (e.g., ADHD, autism, dyslexia) as essential assets, thereby reshaping perceptions of their contribution to the workforce.

Proposed by Howard Gardner, Multiple Intelligence Theory challenges the traditional view of intelligence by identifying various cognitive abilities beyond standardized measures. Literature exploring this theory in the context of learning disabilities emphasizes the importance of recognizing and nurturing the diverse talents of individuals (Berlian et al., 2020; Rile et al., 2015). Studies suggest that tailoring job profiles based on this theory can lead to more inclusive work environments, leveraging the unique cognitive strengths of individuals with learning disabilities (Rushton et al., 2023). Acknowledges varied cognitive strengths beyond traditional measures, offering a more nuanced understanding of intelligence

The Job Characteristic Model, developed by Hackman and Oldham, focuses on key aspects of job design, including skill variety, task identity, task significance, autonomy, and feedback. In the literature, this model is frequently cited for its relevance in creating jobs that align with the cognitive needs of individuals with learning disabilities. Prior research argues that adapting job characteristics to accommodate specific learning disabilities contributes to job satisfaction, engagement, and overall well-being(Bortolotti et al., 2023; Irani-Williams et al., 2021; Kannan et al., 2022; Lindquist et al., 2023). Guides the adaptation of job profiles to align with the cognitive needs of individuals with learning disabilities, ensuring tasks are structured to enhance engagement and satisfaction.

Job Characteristic Model Matched with Job Profile for Learning Disability

The Job Characteristics Model (JCM) refer to Figure 1, provides a framework for designing jobs that enhance employee motivation, satisfaction, and performance. When developing suitable job profiles for individuals with learning disabilities such as ADHD, autism, dyslexia, intellectual disability, Down syndrome, and multiple disabilities, it's crucial to consider their unique needs and abilities. For individuals with ADHD, tasks should incorporate high task significance by emphasizing the impact of their work on the overall project or organization(Vieregge et al., 2023). ADHD individuals may benefit from tasks with clear objectives and immediate feedback to maintain focus and motivation. Autonomy in task execution can also be adjusted to provide a balance between structure and freedom(Wang, 2020). In the case of autism, tasks should be designed with clear task identity, allowing individuals to see the beginning and end of their work. Structured and repetitive tasks that align with their specific interests or skills can enhance job satisfaction(Rai & Maheshwari, 2021). Skill variety can be introduced gradually to encourage growth and development, while providing clear feedback is essential for individuals with autism to understand their performance.

For individuals with dyslexia, job tasks should be presented in formats that accommodate their reading challenges(Simonet & Castille, 2020). Task significance can be emphasized by highlighting the contribution of their work to the overall goals. Skill variety can be adjusted to align with their strengths, and feedback should be communicated in multiple formats, considering their diverse learning preferences. Individuals with intellectual disabilities benefit from tasks with moderate skill variety to match their capabilities(Zheng et al., 2023). Task identity and significance can be maintained through clear instructions and recognition of their contributions (Siruri & Cheche, 2021; Yoon et al., 2020). Structured and routine tasks may provide a sense of security, while autonomy can be adjusted based on individual capabilities. For those with Down syndrome, tasks should be designed with clear task identity, emphasizing routine and repetitive elements. Skill variety can be introduced gradually, and tasks should be adapted to align with their abilities (Pak et al., 2023). Providing positive and constructive feedback is crucial for maintaining motivation and enhancing job satisfaction. In the case of

multiple disabilities, a flexible approach is essential, tailoring the job characteristics to the individual's unique combination of abilities and challenges. Tasks should be adapted to provide a balance between structure and variety, with clear communication and feedback mechanisms(Junça-Silva & Menino, 2022).

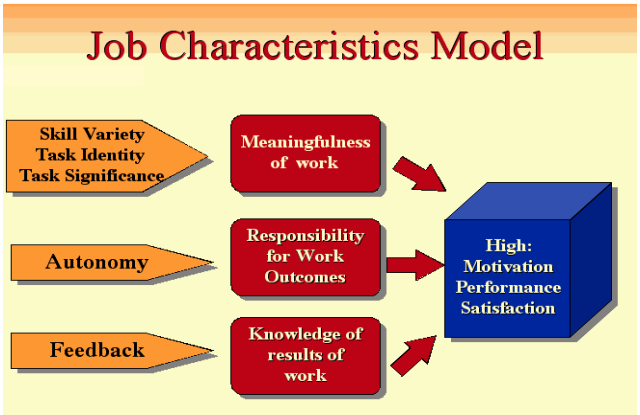

Figure 1. Job Characteristics Model

The Job Characteristics Model (JCM) is developed by organizational psychologists J. Richard Hackman and Greg Oldham to understand how various aspects of job design impact employee motivation, satisfaction, and performance (Muñoz et al., 2022). The model is based on the premise that certain job characteristics contribute to the psychological states that, in turn, lead to positive outcomes for employees. The key components of the JCM include:

Skill Variety: Refers to the degree to which a job requires a variety of different activities, skills, and talents. High skill variety means that the job requires employees to use a wide range of skills, making the work more interesting and challenging (Woods et al., 2021). Some of autism have lacking in skill variety because they only do the repetition daily routine, so the employer need to finds out which job profile that are suitable for autism employee.

Task Identity: Involves the extent to which a job requires the completion of a whole and identifiable piece of work. High task identity implies that employees can see the finished product of their efforts, which can enhance their sense of achievement and responsibility (Seqhobane & Kokt, 2021). The employer needs to know the types workload that can be accommodate by the SLD accordingly to their categories.

Task Significance: Relates to the impact of the job on the lives of other people, both within and outside the organization. High task significance means that the job has a meaningful impact, contributing to the well-being of others or the organization as a whole (Simonet & Castille, 2020). Task significance provide a responsibility towards the SLD so that they need to give a better job in order to have satisfaction from the employer and customer.

Autonomy: Refers to the degree of freedom, independence, and discretion employees have in planning and organizing their work. High autonomy gives employees a sense of control over their tasks and fosters a feeling of responsibility(Lauring & Kubovcikova, 2022). Anatomy gives SLD to determine the level of complete for certain task. After completing the first task then the SLD can move to another task.

Feedback: Involves the extent to which employees receive direct and clear information about the effectiveness of their performance (Lengnick-Hall et al., 2021). Regular and constructive feedback helps employees understand how well they are performing and allows for continuous improvement. Feedback can provide the level of satisfaction regarding SLD job performance (Lengnick-Hall et al., 2021). Whether the feedback can be reported by employer, customer or their colleague. Good feedback will be motivated SLD to give a good work in future.

Form all of five constructs, there has the suitability to apply in developing a new job profile for students with learning disability by refereeing to the capabilities among all of the six categories of them (Huang et al., 2022). The only ways to get a suitable job for SLD is to analysis the working ability that can be suited with the character and symptoms among the SLD

IV. METHOD

Meta – Analysis has been used in this study to have better comprehensive knowledge regarding the construct comparism between the theories and models which can developed a new job profile for SLD accordingly. This study has compared two theories and one models which has been mentioned earlier that is Human Capital Theory, Multiple Intelligence Theory and Job Characteristic Models.

TABLE 1: COMPARISM BETWEEN MODELS AND THEORIES

Construct	Human Capital Theory	Multiple Intelligence Theory	Job Characteristics Model
Skill Variety			√
Task Identity			√
Task Significance			√
Anatomy			√
Feedback			√
Intra-personal		√	
Naturalist		√	
Spatial		√	
Musical		√	
Linguistic		√	
Bodily-Kinaesthetic		√	
Interpersonal		√	
Logical-Mathematical		√	
Individual input	√		
Education	√		
Outcomes	√		

Table 1 show all of the comparism construct in the model and theory. Table 2 show all the weekness and strength of six categories of SLD. The Job Characteristics Model (JCM), Multiple Intelligence Theory (MIT), and Human Capital Theory (HCT) offer distinct perspectives on understanding and optimizing the relationship between individuals and their work (Ciocirlan, 2023). When considering the creation of a new job profile for individuals with learning disabilities, a comparison among these theories becomes essential.

In order to developed a new job profile for SLD the study need to identify the nature of job profile that can be suit with the strength and weakness among the SLD(Mlekus et al., 2022). Prior study highlights that instead of giving a chance together with the supported employment to the SLD there also needs to comply with their capabilities to complete the job task in order to motivated them to become better in work performance(Kannan et al., 2022).

TABLE 2: THE CHARACTERISTICS OF SLD WITH THEIR STRENGTH AND WEAKNESS TO SUIT WITH THE JOB PROFILE

Associated Characteristic	Autism Spectrum Disorder	Intellectual Disability	Down Syndrome	ADHD	DYSLEXIA	Multiple Disabilities
Creative (in specific areas)	Strength	Strength			Strength	
High focus (related to interests)	Strength					
Distractible	Weakness					
Strong systemizes/	Strength					
Obsessive routines	Weakness				Weakness	
Repetitive body movements	Strength		Weakness	Strength		
Prodigious memory/ Poor memory	Strength		Weakness		Weakness	
Visual-spatial skills	Strength	Weakness	Strength	Strength	Weakness	
Exceptional talents in very specific areas	Strength	Strength	Strength	Strength		
Social skills	Weakness	Strength	Strength	Strength	Weakness	Weakness
Reading, writing and/or spelling abilities			Weakness	Weakness	Weakness	Weakness
Cognitive abilities		Weakness	Weakness		Weakness	Weakness
Communication skills	Weakness	Strength	Weakness		Weakness	Weakness

Sources: Adaptation from Bellato A. et al (2023) and (Shahid et al., 2022)

V. FINDINGS

The Job Characteristics Model, developed by Hackman and Oldham, focuses on the core dimensions of skill variety, task identity, task significance, autonomy, and feedback. It suggests that jobs that encompass these characteristics can lead to higher job satisfaction and motivation. For individuals with learning disabilities, tailoring jobs to their specific strengths and providing clear feedback could be pivotal in promoting success and job satisfaction.

On the other hand, Howard Gardner's Multiple Intelligence Theory posits that individuals possess diverse intelligences, such as linguistic, logical-mathematical, spatial, and interpersonal. When designing job profiles, recognizing and capitalizing on the varied intelligences of individuals with learning disabilities can foster an environment where they can excel. For instance, a job that emphasizes spatial intelligence might be suitable for someone with strengths in visualizing and manipulating spatial relationships. Human Capital Theory, which focuses on the investment in education and training to enhance an individual's skills and capabilities, also plays a role. For individuals with learning disabilities, investing in targeted training programs and accommodations can enhance their human capital, making them more effective contributors to the workforce.

The most suitable approach for building a new job profile for individuals with learning disabilities would involve an integrated application of these theories. The Job Characteristics Model provides a framework for creating engaging and motivating job roles, the Multiple Intelligence Theory emphasizes the diverse strengths of individuals, and Human Capital Theory underscores the importance of investing in education and training. By combining these approaches, employers can design inclusive job profiles that consider the unique abilities and challenges of individuals with learning disabilities, fostering a workplace that promotes both productivity and job satisfaction.

VI. DISCUSSION

This Meta – Analysis construct comparism reviews that aimed at individual learning disability characteristics of autism spectrum disorder (ASD), Intellectual Disorder (ID), Down Syndrome (DS), Attention Deficit Hyperactive Disorder (ADHD), Dyslexia and Multiple disabilities has shown the comparison between all these categories. Every different category has a different strength and weakness. There has an element that has been compared for each category that are (1) creative in specific areas, (2) high focus related to interests, (3) distractible, (4) strong systemizes, (5) obsessive routines, (6) repetitive body movements, (7) poor memory, (8) visual-spatial skills, (9) exceptional talents in very specific areas, (10) social skills, reading, writing and/or spelling abilities, (11) cognitive abilities and (12) communication skills. As such for DS mostly were obesity, visuo-spatial ability, motor ability, growth curves, and general use of computer by DS evaluating the use of different input modalities.

Besides compared with ASD was more focus in completed a task and less communicate with others.

Physically appearance has the same with normal buat in term of cognitive have slightly differ according to the level of severity among themselves. Besides for ID, they were very weak while doing many tasks in one time, they cannot remember the fact and could not think critically or become a good problem solver. They prefer to follow the instruction from the top and intermediate management. Meanwhile for ADHD most of them could not focus for a quite some time, and prefer to do multiple tasks with a lot of movements. They cannot focus for a certain task regarding to the tedious work itself. They having a strength in visual spatial skill, social skills and body repetition movement.

Research on technologies for special education needs or intellectual disabilities target audiences with all categories Down Syndrome as well, but it is unclear how these technologies conceptualize adult with learning disabilities syndrome alone or how these technological fields understand the limits and opportunities for design for such population. Existing research into DS has provided design for applications for diverse types of technologies or investigated a specific context of use such as input devices under general computer use speech and language support and Augmented Reality (AR). While this map out the design of the systems, there is a lack of data on their impact on the lives of adult with learning disabilities, technology that can support multiple phenotype characteristics, as well as the design rationale behind existing technology support. A variety of terminologies and notions have been identifying while doing this Meta - Analysis articles.

VII. CONCLUSION (OR LIMITATION OR SUGGESTION FOR FURTHER STUDIES)

Through the Meta - Analysis, the results discovered work ability, categories and level of severity among SLD that suitable for each of job profile based on the low and moderate skill labor workforce. Thus, all the findings will gather into a mapping of the job profiles suitable for SLD which highlight their potential in working environment especially for food service sector. In summary, the articles examined in this study cover a diverse range of topics and initiatives that address the comprehensive journey of individuals with disabilities in the context of job profile mapping. The pre-mapping phase is highlighted through research on innovative training programs like myoelectric computer interfaces and horticultural therapy, demonstrating significant improvements in motor functions and interpersonal skills. The mapping phase is emphasized by studies using cutting-edge technologies, such as deep learning methods for attentional state detection and virtual reality training for wheelchair users. Additionally, there is a strong focus on post-mapping phases, including clinical applications like brain-controlled wheelchairs, the application of the International Classification of Functioning Disability and Health, and the use of virtual reality for vocational training. These findings collectively underline the multifaceted approach necessary to facilitate job profile mapping for individuals with disabilities and enhance their inclusion in the workforce, while also highlighting the need for further research and ongoing efforts in this domain to cater to diverse age groups and varying needs.

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