

# The Implementation of Vocational Skills in Teaching and Learning of People with Disabilities in the Community-Based Rehabilitation Center (CBRC): A Review from Ecological Environments Perspective

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**Abstract** Vocational education for students with learning difficulties (SLD) emphasizes theoretical teachings and practical experiences among students, while teaching them the knowledge and skills required for an occupation. Studies on the teaching of vocational skills for SLD focus mainly on students in the mainstream educational system. The current study aims to explore the teaching and learning of vocational skills for SLD in a Community-Based Rehabilitation Center (CBRC), in Selangor, Malaysia from an ecological environment's perspective. Six teachers from the CBRC were interviewed and observed. Results show teachers focused mainly on microsystem and mesosystem environments through the various strategies to support TnL of vocational skills' education for SLD. Insufficient pedagogical skills and vocational training among teachers, and inadequate physical facilities and equipment compromised the execution of TnL in this context. We suggest CBRC teachers incorporate exosystem and macrosystem

environments in TnL of vocational skills among children with learning disabilities through a community-based or project-based approach involving corporate social responsibility (CSR) to improve vocational skills in both students and teachers. Implications to the current practice are also discussed.

**Keywords** Vocational Education, Students with Special Needs, Community-Based Rehabilitation, Project-Based Approach, Ecological Environment

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## 1. Introduction

Persons with disabilities (PWD) in Malaysia are categorized into different groups according to their inabilities, such as developmental disabilities (mental retardation), limb disabilities, visual impairments, learning

disabilities, hearing impairments, dumb, and autism [1]. Malaysian Social Welfare Department (JKMM) has introduced the Policy for Persons with Disabilities to provide them with equal rights and opportunities to live like other members of the society. The goal includes enabling equal access to education at all levels, including lifelong education. To achieve this goal, the Malaysian government introduced Special Education in 1920, which covers a range of services tailored to the needs of PWD.

Special education in Malaysia is administered by the Ministry of Education Malaysia (MOE) through the Special Education School Program, Inclusive Education Program, and Inclusive Special Education Program in mainstream schools. Besides MOE, the JKMM is also responsible for providing education to students with special needs, specifically for students with learning difficulties, through the Community-Based Rehabilitation (CBR) Program.

The main goal of the CBR program is to support development of students with learning difficulties, so they can thrive as individuals who are skilled, independent, oriented, can plan, manage daily life, and adapt to society [2]. In accordance with the Malaysia's Shared Prosperity Vision 2030, technical and vocational education and training (TVET) is focused on improving the ability and job skills of all, including the disabled [3,4]. In the era of the revolution of IR4.0, vocational skills training to special needs students (SNS) is considered timely and wise. Ultimately, it is expected to help students with special needs achieve accessible equal education, as stated in the Action Plan for Persons with Disabilities, 2016-2022.

### 1.1. Problem Statement

To be effective and attractive, vocational education's curriculum for SNS should be developed in accordance with the needs and interests of the students. Yet, one of the greatest obstacles faced by students with special needs is the level of learning required to gain full mastery of a skill or lesson. Attention should be given to getting special education teachers to acquire the required TnL competencies to ensure that they are capable of teaching students with special needs [5,6,7]. Admittedly, teachers' competency and dedication play an important role in this matter. For example, the curriculum for these students cannot be designed as one size fits all curriculums. Also, teaching aids must cater for the needs and ability of the students. In this context, teachers with professional qualifications in teaching special needs students (SNS) are crucial for the implementation of this curriculum.

Additionally, many parents of SNS still ignore the importance of vocational skills to SNS [8], especially those in rural areas. Most parents would consider the students unfit and incapable for a comprehensive educational experience. The main factor contributing to

this thinking is the lack of confidence in the abilities of their special needs children. For example, parents might be anxious to let them engage in practical activities, including cooking and sewing. This obsession with the thoughts of injury is understandable but could result in SNS being left behind. Consequently, these students could not learn life skills important for them to be independent, putting back the dependency to the families.

Despite increasing literature in special education in Malaysia, less attention has been given to the implementation of special education under JKMM involving Community-Based Rehabilitation. According to [9], the implementation of SNS' curriculum in Malaysia is still unclear and needs to be examined. This study would add body of knowledge to the areas of special education, special education teachers, and SNS in Malaysia, which are still scarce [10].

Apart from insufficient vocational skills training among teachers, inadequate physical facilities, and laboratory equipment could also affect the efficiency of TnL of vocational education for students with learning disabilities. The unavailability of materials, machines, and equipment causes limitations in CBRC, especially in rural areas. Also, limited space, which is unsuitable for TnL, caused discomfort to students and teachers alike. Indeed, educational institutions need to provide equal opportunities by providing adequate facilities and amenities to enable proper implementation of the vocational skills' education programs [7].

Given the factors of knowledge constraints, insufficient training in vocational skills, and inadequate laboratory equipment for TnL to thrive in this context, this study is important to offer suggestions on how teachers in CBRC could incorporate and leverage its ecological environment to ensure that TnL can be implemented well for SLD.

### 1.2. Literature Review

#### 1.2.1. Special Education Program in Malaysia

In Malaysia, the special education program was offered by the Ministry of Education Malaysia (MOE) and the Department of Social Welfare Malaysia (JKMM). MOE was responsible for providing educational paths, including special schools for students with visual impairment, hearing impairment, and learning disabilities. Apart from that, it offers the Special Education Integration Program and Inclusive Education Program in primary and secondary schools through the Special Education Service Center.

As well, JKMM offers the Community-Based Rehabilitation (CBR) Program. The CBR program was initiated in 1984, through the CBR Pilot Project in Mukim Batu Rakit, Kuala Terengganu, which involved 55 people with disabilities. The CBR program has grown rapidly and received encouraging responses from the community from time to time. To date, there are 486 CBR programs

nationwide, which operate on three models, namely Home Based, Center Based and Center-Home Based.

In line with those initiatives, the Department of Development of Persons with Disabilities (JPOKU) was established in 2009. JPOKU provides services and facilities for care, protection, rehabilitation, training and employment opportunities to PWD, as well as encouraging active participation of the local community through integration and development of PWD. The establishment of JPOKU is in support of the Policy for Persons with Disabilities and the 9th Malaysia Plan (9MP), which is to increase numbers of vocational training centers for people with disabilities and increase their independency. The government believes that people with disabilities can also contribute to the country if they are given continuous organized skills training [12]

The main idea of the CBRC is to become a "One-Stop Center" and as a focal point through a community integration approach in each district and state. This means services for PWD will be provided in one place to ease access to information, advisory services and other needs, as well as appropriate training for PWD and the local community. Currently, there are ten activities at CBR including gross motor skills, fine motor skills, social development, language development, self-management, pre-writing, reading, counting and drawing, game creativity, recreation, music therapy, sports, and vocational training.

Advocacy is one of the aspects outlined in the Action Plan for People with Disabilities 2016-2022 [2]. The goal is to raise awareness and create a positive attitude in the community towards people with disabilities through effective programming. From the educational perspective, it is hoped that the programs could increase access to

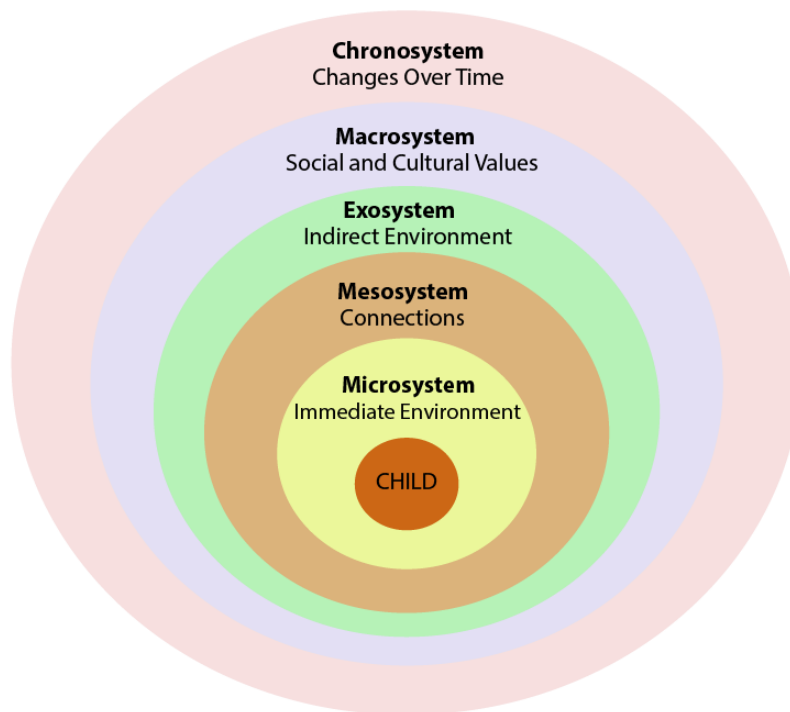
education, including lifelong learning, for PWD. In addition, the action plan focuses on improving facilities and encouraging PWD participation in social activities through the collaboration between the community and private sector through corporate social responsibility, which creates and strengthens multi-sector and multi-disciplinary collaborations.

In the context of research in Malaysia, many studies have been conducted on SNS in mainstream primary and secondary schools [11,13,4] and studies related to teachers in special needs classes [14,5,15,7,16]. Hence, this study focuses on the implementation of TnL of vocational skills in CBRC.

### 1.2.2. Ecological System's Theory

The Ecological System's Theory (EST) was introduced by Uri Bronfenbrenner [17,18], who believes that a person's development is affected by everything in their surrounding environment. This theory asserts that human development is a product of the dynamic interaction of individuals with the environments in which they grew up. There is a reciprocal relationship between an individual and the environment that shapes their behavior. This ecological environment consists of five subsystems: 1) microsystem which is the setting in which the individual is located, 2) mesosystem, which is the interaction between factors in microsystem which covers the relationship between several microsystems, 3) exosystem, related to experiences in other social settings in which the individual is not present, but this system affects the development of the individual, 4) macro system related to cultural values, customs, and laws, and lastly 5) the chronological system, which covers aspects of events throughout the lifespan.

### Bronfenbrenner's Ecological Systems Theory



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**Figure 1.** Bronfenbrenner Ecological System Theory (1986)

In the current study, researchers surveyed the extent to which the teachers in CBRC integrate the ecological environment in implementing vocational skills' learning session. The four environments studied and their descriptions are as follows:

The microsystem is the closest environment to students consisting of parents, siblings, teachers, peers, school, and others encountered daily. In this subsystem, there is a direct interaction between students and socialization agents in this immediate environment. In the microsystem, students are not considered individuals who only receive experience in this setting, but they also actively influence this environment. The family is the closest socializing agent in the life of every student and has a great influence on children's behavior.

Mesosystems include interactions between several microsystems. If there is a problem in one microsystem, it also indirectly affects the other microsystem. For example, the child's experience with family at home and their experience at school. In the context of education, this relationship can be observed closely, for example, the child's emotional disorders at home will affect the child's behavior at school.

The exosystem is a larger social system where the individual or student is not in this environment, but what happens in this environment will affect the student's development. For example, parents who are busy working until midnight will have low interactions with their children at home. Insufficient interaction and parental

attention will influence the children to get more connected with their peers, social media, and others.

The fourth system examined in this study is the macro system. This subsystem is the largest environment, which consists of aspects of culture, religion, beliefs, ideology, legislation, politics, and others. The principles found in the macro environment will influence the interaction at all layers of the environment. For example, if a teacher believes that his job is only to teach, he will carry out the tasks related to the teaching only. This will pose a problem if the teacher was asked to perform a task not related to teaching, he would refuse or will not perform the task as expected.

Previous studies conducted by scholars show that studies from an ecological perspective can provide a more holistic input in understanding the educational situation and individual development [20,21,22,23,24,25].

## 2. Materials and Methods

### 2.1 Research Design

This study is a basic qualitative design using semi-structured interviews and observations to obtain a clear and comprehensive description to understand a situation or phenomenon [26,27]. This design is appropriate because this study focuses on inductive, interpretive data and requires a complete description from

informants.

## 2.2. Research Location

The current study was conducted at a Community-Based Rehabilitation Center (CBRC) in the state of Selangor, Malaysia.

## 2.3. Population and Sampling Procedure

Purposive sampling technique was used to recruit informants for the current study. Informants were purposely selected from the CBRC where the data collection took place. Six special education teachers, two males and four females, who teach Home Science vocational subjects at the CBRC were selected.

## 2.4. Data Collection Instruments: Trustworthiness and Credibility

Data for the current study were collected through semi-structured interviews and observations. Interview guides were used during the semi-structured interview sessions. Video recording and notes were taken during observation. Informants were interviewed individually between 30 to 60 minutes per session. Three visits were made to the CBRC for the interviews and observations during informants' vocational skills classes. Interviews recordings were transcribed into text and thematic analysis was conducted. To maximize the trustworthiness and credibility of the findings, interviews transcripts, field notes, and observations recording were analyzed together for cross-analysis and data triangulation purposes. The interview transcripts were also returned to the informants to check for consistency and accuracy.

## 3. Findings

This study examined the current practice of teaching vocational skills to SLD in Malaysia. Teachers who teach vocational skills in CBRC in Selangor were interviewed and observed for this purpose. This section will present findings from the interviews and observations of teachers in CBRC's during TnL.

### 3.1. Theme One: Teaching and Learning Strategies

The first research question focused on the implementation of TnL methods by special needs teachers in vocational skills classes. Based on the interviews and observations, the researchers found that teachers in CBRC applied two main TnL methods, namely teacher-centered and student-centered. They adopt a teacher-centered strategy mostly at the beginning of the class. The purpose is to gain attention and control the behavior of SNS to focus on the teacher and the lesson. For instance, R4

mentioned:

*“(Translated) Ahaa... we need to give them instructions, or else they will never know what to do...”*

The informants also said that teachers need to select TnL methods based on the time and emotional state of the students. For example, teachers need to ensure students are ready and in a good mood to start the class. Otherwise, the learning process will get disrupted.

In terms of teaching aid, informants use videos and PowerPoint presentations during class. In discussing this, R5 stated,

*“(Translated) usually what we did...for example, show them videos, to get them to understand. We need to use attractive materials for them.”*

Videos were used to demonstrate vocational skills to students. According to them, videos help their students pay attention. Besides that, PowerPoint presentations with text, graphics, and audio also attract students' interest and attention. R3 added these approaches could stimulate students' sense of sight and hearing. He/she articulated,

*“(Translated) I was not in class yet, but the students have been waiting in front of the class to start learning. From there, I could see that the students are more interested if we use video in the lesson.”*

Notably, students are a bit afraid to do hands-on activities during practical classes. Step-by-step demonstration is needed since students with learning disabilities require extra guidance and monitoring compared to normal students. Here, instructions had to be clear and repeated many times to ensure that students can do it properly. Otherwise, the students will be lost and do other things. For example, R4 mentioned,

*“We asked them to do it repeatedly. The instructions have to be clear and repeated, only then they will get it. Otherwise, they will be lost and wander to other places to do other things.”*

Additionally, based on observations, informants often used questioning and storytelling techniques to provide understanding to SNS in conducting vocational skills practical class.

According to informants, teachers themselves are crucial in ensuring the effectiveness of TnL. Teachers who can create a safe, conducive condition and environment for learning would have a positive impact on students. Students will be inclined to come to school and engage in TnL sessions. It is not easy to keep the students engaged. Moreover, teachers also need to manage students who sometimes had other health issues.

### 3.2. Second Theme: Laboratory Facilities

To understand the extent in which laboratory facilities support vocational education, the researchers participated in practical classes conducted by the informants. Based on their observation, the researchers found that the laboratory

physical facilities at the CBRC are not well-equipped, except with basic equipment. The researchers visited three labs—cooking lab, self- and home management lab, and sewing lab. Unfortunately, the equipment in each lab was inadequate and some is not functioning. This fact was supported by the statement of the informants. They reported that,

*“(Translated) No, we do not have enough (equipment) here. We need to take turn. There will be students who will demonstrate and the rest will watch. If all of them have the equipment, maybe the class will be harder to control.” (R1).*

R2 also added, *“For the time being, the equipment is not enough, but not entirely.”*

Sometimes teachers need to buy the ingredients needed for classes using their own money. Sometimes they will ask students to bring it from home. Funding is available from the Malaysian Social Welfare Department or from the Ministry of Education. But the application process will take time to get approval. As R4 stated,

*“(Translated)...but if from the KPM, based on the suggestions, we need more funding - financially. We managed most things now using our own money, most teachers want to invest for the hereafter.”*

Findings from interviews and observations indicate that laboratory facilities, such as equipment and materials that support the implementation of vocational skills classes are not at par with the requirement to conduct TnL of vocational education with the students. Our observation shows the laboratory facilities need to be properly equipped so TnL could take place.

### 3.3. Third Theme: Constraints in Implementing Vocational Skills

Data show that teachers at the CBRC have some constraints, first, in terms of learning content or vocational skills' curriculum. According to the informant, they could not follow the syllabus like when teaching students in the mainstream system. Just as R5 pointed out, *“(Translated)...in a month, we would repeat the same thing, they will keep memorizing, remembering, and focusing for a month... there are some who could not remember...”* This is because some students with learning disabilities in CBRC are at risk cognitively, and their focus and memorizing skills are very low. Thus, teachers need to repeat the topics until the students understand and apply them correctly.

The second constraint is related to the needs of students in CBRC. Students placed in CBRC consist of two categories, namely low functional and medium functional students. Usually, students sent to CBRC will undergo a screening process. These students come with various behavioral and emotional issues that teachers need to understand. R6 informed,

*“(Translated) Some of them are hyper, slow learners, and some like to be alone, so the teacher needs to figure out how to handle the students at that time.”*

Based on our observations, teaching assistants were helpful, but the diverse characteristics of these SNS to some extent affect the TnL process. Hence, they added, teachers need to be more concerned with student behavior and find solutions to calm the students in the classroom without getting stressed out.

The last issue brought up by the informants was insufficient pedagogical skills and vocational training, which also affected the implementation of TnL at the CBRC. R5 expressed,

*“(Translated) (we) do not have the skills to implement it. We (teachers) got orders to implement the (vocational) skills at school but we were never trained for that. Teachers have to find courses on their own and pay using their own money. It's quite burdensome.”*

His/her statement also supported by R6,

*“(Translated) We (teachers) want to implement the policies (by CBRC), but we were never given any training to do that...”*

These statements implied that the teachers were not regularly trained, which affects their readiness to conduct TnL sessions with the students.

## 4. Discussion

In this study, the researchers attempted to understand the implementation of vocational skills among students with learning disabilities in CBRC from the perspective of ecological environment. In this section the researchers will discuss the findings of the current study based on the four layers of ecological environment, namely micro, meso, exo, and macro systems.

Based on the three main findings in the study, we learned that teachers in CBRC are too focused on the micro and meso environments. Most activities for the students in CBRC revolve around teachers, teaching assistants, and CBRC. For example, teachers only use existing resources at CBRC when implementing vocational skills classes. With the limitations of equipment and conducive laboratory, some activities could not be implemented. As a result, teachers only implement activities that could be done with the available facilities and equipment, which sometimes did not fully serve the topics in the syllabus. Indeed, lack of physical facilities could affect vocational skills practical learning objectives [11].

Our findings also show that some of the elements in the mesosystem environment, such as parents, were not involved in TnL of these students. This is a lost opportunity for teachers and students because parents could be the closest socialization agent for students with

special needs in learning vocational skills. In this context, teachers could assign the parents some tasks to do at home with the students, for instance, tidying the wardrobe, setting the dining table, or preparing simple meals. Research shows that parental involvement in supporting students at home for TnL is crucial, and particularly when the Covid-19 pandemic happened [28].

Next, teachers need to include individuals or organization, in other words-- stakeholders, in the exosystem environment in the TnL process. This can be done in a few ways. To begin with, teachers could collaborate with other external educators or experts from organizations that focus on and have expertise in particular vocational skills. Organizations such as non-government organizations (NGOs), corporate organizations, industries, higher education institutions, vocational training centers, and local communities are entities that could be active partners in achieving this goal. The collaboration could be established under the umbrella of Corporate Social Relationship (CSR). While their goal is to give back to the community through services and social support, teachers or CBRC could take this opportunity to invite them to be partners in activities that would be beneficial in the development of vocational skills for the students. A great example would be an attachment program or industrial training with supervision sponsored by these organizations for the students. Besides, they could also help fund physical facilities and equipment for the center.

In addition, more exposure to community-centered learning (CBL) and project-based learning (PBL) while teaching vocational skills would be tremendous benefit for teachers and SNS in vocational education. These two methods emphasized first-hand experience that students could get with community members or when they are working on a project. An example of this approach would be inviting guest speakers or community members in vocational fields, such as lecturers, chefs, or restaurant owners, to do a culinary demonstration at the center. The intended outcome of this activity would be to cultivate interest and motivation among students in vocational classes. Students could also hone their social skills while communicating and socializing with others, as well as getting exposure to entrepreneurship [15]. Scholars also pointed out that lack of pedagogical skills and lack of vocational training is a constraint for teachers to implement learning content [11]. From the activity, teachers could also learn first-hand on delivering vocational education to students without attending costly courses or training. Studies also support teachers in CBRC to be given training on various teaching strategies [7] and not merely focus on learning in the classroom [11,29] as it affects the effectiveness and readiness of teachers to implement vocational skills. To solve this issue, teachers should be provided with continuous training in addition to providing a more flexible curriculum in line with CBR

[28,29].

Finally, the involvement of the local community in TnL activities could also be accomplished through an open day program. In this regard, CBRC could open their door and organize an exhibition to showcase students' works. This activity could also be a platform for a fundraising event for the center. Subsequently, the center would get the benefits in terms of financial and communities could learn more about the centers and students' work. By being aware of the CBRC's effort, it would open the doors for collaboration and support from the community to the teachers and students of the CBRC [30]. This effort also leverages the intention to bring awareness and form a positive attitude towards PWD, as outlined in the strategic thrust 9 of the Action Plan for Person with Disabilities.

## 5. Conclusions

Teachers are knowledge communicators and policy implementers. To remain competitive, teachers should be equipped with updated skills and should be adaptive to change. MOE and JKMM should pay more attention to teachers' competencies when it comes to TnL of vocational skills to students with special needs. The ability of teachers to train SNS in vocational fields is vital in making sure SNS could be independent, competitive, skilled, and successful in life. The community-based (CBL) and project-based learning (PBL) are significant strategies in teaching vocational skills to SNS. Partnership with community, NGOs, public, and corporate organizations will benefit teachers, SNS, and the CBRC. Improving CBRC also emphasizes strategic thrust in the Action Plan for PWD, which is to establish and strengthen multi-sectoral and multidisciplinary cooperation networks at the regional and international levels.

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