

Vocational Special Education Teachers' Competencies: A Literature Review

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Abstract

The research outlines the facts surrounding the special education teacher competencies in teaching vocational skills among special need students can be tested by the evaluation of skills, knowledge and attitudes. A comprehensive literature review from 2016 to 2023 has been undertaken to describe teaching characteristics that are meant to validate and/or classify the competencies of special education teachers. This methodology will systematically analyze previous studies to identify issues related to competencies of vocational special education teachers. The findings of this study found that there are three main characteristics that are closely related, namely (1) Knowledge in vocational special education, (2) Skills in vocational special education, and (3) Attitude of special education teacher. Further research on the special education teacher competencies in teaching vocational skills among special need students can be done to improve the effectiveness of teaching and learning sessions in vocational field at school. Reviews are performed for the electronic database using the set object collection criteria. Inductive review of a total of 12 papers revealed key characteristics for vocational special education teachers, suggesting that competencies and behaviors can be delineated through their development. The following classes were divided: skills, knowledge and attitudes. The study and evaluation of skills described in earlier studies resulted in a recommendation to extend the vocational knowledge, teaching skills and attitude structure for special education teacher. It provides advice for special education teacher in various forms in the development of vocational field competencies.

Keywords: Vocational Special Education, Teacher Competencies, Literature Review

Introduction

Special Need Students (SSN) are capable of achieving the same potential as other typical students if given the support of all interested parties. There are several state efforts that promotes rights and access to increase the potential of this group. One of them is the Incheon Declaration 2015 (UNESCO, 2015) which wants to reduce poverty and increase suitable jobs and job prospects for this group in one of the Incheon strategies. While in the country, Malaysia has shown full support to the United Nations Educational, Scientific and Cultural Organization (UNESCO) which strives for Education for *All* and *No Child Left Behind* slogan.

In order to achieve this, special education curriculum, particularly under Technical and Vocational Education and Training (TVET), offers SSN opportunities to acquire skills and

practical experience essential for future employment (Nasri et al., 2010). Specifically, the Specific Vocational Skills (SVS) field caters to the needs and potentials of SSN, as highlighted by Hashim et al (2017) and Ministry of Education (MoE, 2013). However, ensuring effective SVS instruction necessitates special education teachers' proficiency in vocational knowledge and pedagogy, as emphasized by (Dupoux, 2008).

At the other hand, transitioning from school to adulthood represents a critical juncture for SSN, where the acquisition of vocational skills becomes paramount for their integration into the workforce and community life. Extensive research, including studies by Jones and Williams (2011); Ofoegu and Azarmsa (2016), highlights the significance of vocational education in enhancing SSN's readiness for employment post-schooling. In line with Malaysia's commitment to educational equity, initiatives such as the Technical and Vocational Education Transformation program, supported by the Ministry of Education (MoE) and aligned with Rancangan Malaysia Kesebelas (RMK-11), aim to cultivate a technically proficient workforce for national development.

According to Aida et al (2016) as stated in Azahari's (2020) study, the curriculum under the TVET program places a large emphasis of up to 80 percent in the practical skills section versus 20 percent focus on theory. The learning curriculum in vocational schools mostly carries out practical activities in the learning process (Ana, 2020; Handayani et al., 2020). This fact is in line with Nooriah et al (2017); Nurahimah and Rafisah (2010) who explain that the role of the teacher in ensuring student proficiency is not just delivering theory but needs to ensure students master skills through engaging hands-on activities. This illustrates that practical skills become a priority in mastering a skill. Therefore, it is important for teachers to update their skills according to current needs in addition to receiving new curriculum knowledge.

Background Study

Special Education Teachers' Competence in Vocational Education

Teachers are considered a core asset in an effective education system, as they are the primary and objective implementers of the curriculum set by Malaysia Ministry of Education (MoE). In the second year of the third wave of PPPM 2013-2025, MOE's commitment to dignify the teaching profession continued through improving the professional competence and quality of teachers. This effort included the publication of the Master Plan for the Development of Teacher Professionalism 2.0 which is a guide to the implementation of continuous professionalism development (2021 PPPM Annual Report 2013-2025, MOE 2022). This shows that teacher professionalism is a major factor in determining the brilliance of the education system (Khalip & Hariza, 2015). However, teachers in the 21st century face various challenges to improve their competencies to keep in line with technological developments while educating generations (Faiz et al., 2022). Zainuddin (2019) defines competence as a person's ability to carry out their responsibilities based on their knowledge, skills and personalities.

Undoubtedly, if a teacher has a strong foundation in knowledge, embraces technology, pedagogy and demonstrates varied teaching styles and has a high level of self-efficacy, the competence of a teacher can be improved. (Rubashini, 2021; Majoko, 2019; Holzberg et al., 2018). In addition, Annan and Roziah (2017); Baharuddin et al (2017) also found that the characteristics of teachers who are proficient in applying technology in teaching and have good values can positively affect their competency level.

The Meaning of Competency

A study by Hay McBer in 1996 has introduced the approach to identify the required skills. He also explained the method of converging *behavioral events* that determine the attitude of employees through observing their behavior (Spencer & Spencer, 1993). In addition, the competency model introduced by McLagan (1980) involves training and competency-related courses can enhance the process of planning, organizing and improving aspects of human resource development. Subsequently, the creation of the work competency model by Boyatzis (1982) was also inspired by McLagan's (1980) ideas. Proficiency and competence have quite similar meanings in addition to the fact that Abdul Razak (2017) found that the term 'proficiency' is often used in academic studies involving aspects of competence.

One well-known competency model is the competency model introduced by Boyatzis (1982). The competency model developed by Boyatzis (1982) is a framework of performance that forms the basis for understanding the aspects that constitute proficiency. The model suggests that a person's performance can show significant improvement when his or her abilities are aligned with work needs and demands (Boyatzis, 2008). Boyatzis (2008) also adds that, competence also refers to experience, intelligence and the ability to carry out responsible duties. In addition, the Iceberg Competency Model introduced by Hay McBer (1996) explains that competence involves knowledge, skills, attitudes and values. This approach is also supported by Rozi (2021) who describes that competence is an effective combination of aspects of knowledge, skills and attitudes. Understanding competence is very important for a teacher as the success of students often depends on the ability and efficiency of the teacher in managing teaching and learning process.

Methodology

This literature review utilizes a document analysis approach, involving the scanning and screening of records obtained from pertinent electronic databases. Consultation with a knowledgeable information specialist aided in refining search terminology and methodology. Articles or publications bearing titles matching the topic of the article were included within the search parameters. The research delves into various aspects of special education teacher competency within vocational settings, necessitating a broad range of samples to encompass knowledge, skills, and attitudes. Despite employing composite search terms across multiple electronic archives, duplications in search results were observed. The search methodology adhered to predefined parameters for inclusion and exclusion, with detailed results outlined at each stage, as illustrated in Figure 1.

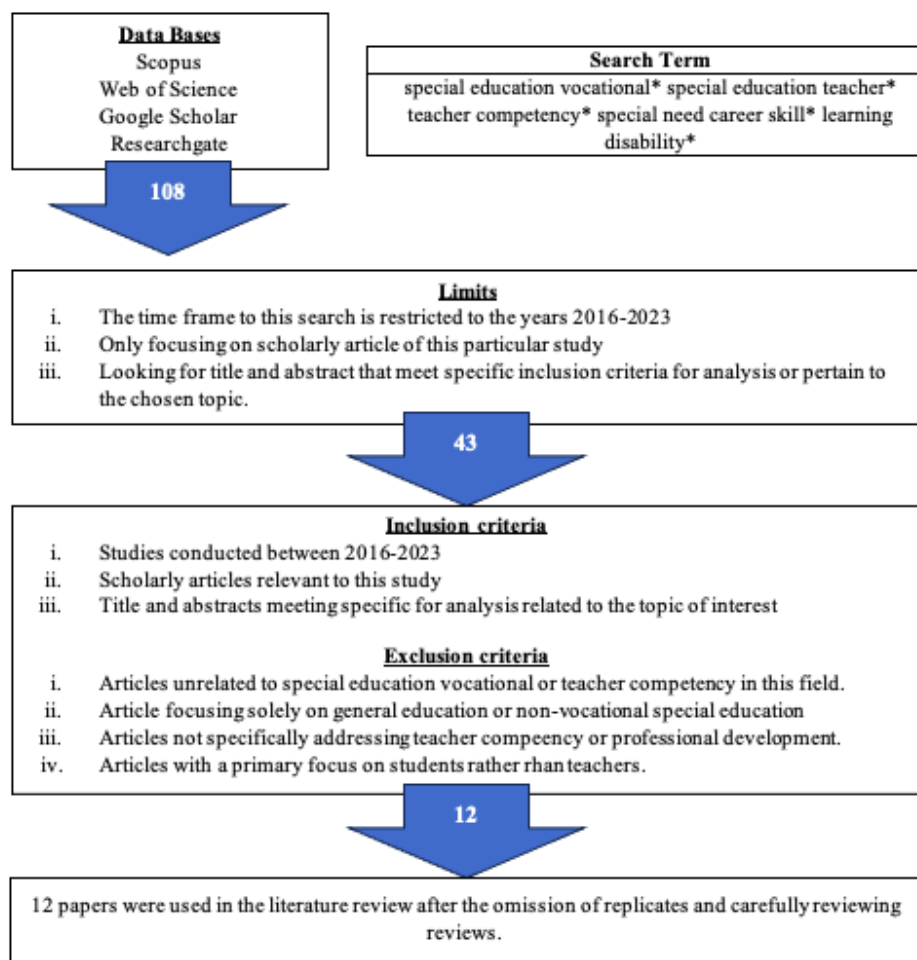


Figure 1. Flow chart.

Upon meticulous examination of the papers and elimination of duplicates, the initial pool of 108 literature pieces dwindled down to 12. Keywords underwent validation through an automated document scan within the titles and abstracts of the articles. The results received confirmation, supported by the subsequent discussion, identifying them as concise and relevant material for this paper following the search process.

Literature Review

A total of 12 articles have been identified as related to special education teachers' competencies. The findings obtained have been systematically summarized as Table 1 below.

Table 1

Articles and study findings

No	Articles	Findings	Journal
1.	The readiness of education teachers specializing in learning problems to carry out crop vocational skills teaching.	Teachers' readiness from the aspects of knowledge and skills is needed to ensure that teaching objectives can be implemented. However, this is not affected by the obstacles faced by teachers when implementing teaching even though it is found that the score of this aspect is at a high level. This shows the commitment of teachers to overcome the challenges faced during the teaching process.	66 Jurnal Ortopedagogia (2018)
2.	Special Education Teacher's Application of Entrepreneurial Elements in Teaching and Facilitation	It has been found in this study that the entrepreneurial knowledge and skills of Special Education teachers who apply entrepreneurial elements in teaching and facilitation are at a high level. This indicates that Special Education teachers have been actively employed entrepreneurial elements during teaching and facilitation	International Journal of Learning, Teaching and Educational Research (2023)
3.	The Relationship between Teaching Style, Self-Efficacy and Competency in Vocational Special Education Teachers	Based on the findings, teaching style has a positive effect on teacher's self-efficacy. In the study, teachers who received training for teaching special needs students had increased their confidence in self-efficacy. The study emphasised the importance of programmes and training required by teachers before they started teaching special needs students	Akademika 92 (Isu Khas):81-94 (2022)
4.	Typical Learning Education Teacher's Readiness to Implement 21st Century Teaching (PAK-21)	The implementation of PAK 21 achieves the targeted quality is not only by ensuring the level of teacher availability from the aspects of knowledge and skills is at a good level but it is necessary to provide current and regular training programs. In addition, the availability of resources, school infrastructure, the population of students in one class and sufficient ICT facilities need to be given attention so that the implementation of PAK 21 can be carried out holistically.	Interaction Studies 13:2(2012) (2022)
5.	Levels of Training and Proficiency of Special Education	The results show that the higher the level of teacher training, there will be a higher level of challenge in implementing KVS	Jurnal Penyelidikan TEMPAWAN Jilid

	Teachers Facing Challenges of Subject Implementation Specific Vocational Skills Based on Standard Curriculum of Special Education Secondary School	subjects based on the KSSMPK. However, when the teachers get sufficient training, the level of teacher competence to teach KVS subjects is getting better.	XXXVII 2020 (2020)
6.	Entrepreneurial Skills in Career Transition Program among Students with Special Educational Needs (SEN)	There are four elements of entrepreneurial skills that are applied to students with special educational need, especially with learning disabilities, which are the skills to produce products, the skills to market products, the skills to do business and communicate and the skills to calculate costs.	13th Proceeding of International Conference on Special Education in Southeast Asia Region (ICSAR 2023)
7.	Teachers' readiness to implement the Work Transition Program (PTK) for Students with Special Needs (SSN)	Most teachers have a moderate level of knowledge, a low level of proficiency and a high level of attitude. Overall, teachers' readiness to implement the career transition program is at the moderate stage.	Proceedings of International Conference on Special Education (2017)
8.	Teachers' Readiness Level to Teach Student with Special Needs (SSN) at Vocational Special Education Secondary School (SMPKV)	Teachers are available in terms of pedagogical aspects of learning and classroom enrichment. The teacher's level of readiness from the aspect of communication is high and this indicates the teacher is able to communicate with the student and corresponds to the student's level.	Sains Humanika (2020)
9.	Investigating Special Education Teacher's Knowledge and Skills: Preparing General Teacher Preparation Professional Development	The essential skills that need to be present in academic teachers are usually divided into two important aspects, namely adapting the curriculum and assignments to suit the abilities of students with special needs and communication skills with all interested parties of students with special needs. This aims to obtain all pertinent information that can be helpful to the development of students with special needs.	Journal of Pedagogical Research (2020)
10.	The Classroom Impact of Trained Special Needs education Teachers	Studies explain the importance of teaching experience, methods of teacher instruction, the constraints teachers need to face in delivering the curriculum to SSN.	Frontier In Education (2021)

	in Selected Schools : An Evaluation Study		
11.	Strategies Used by Teachers in Readiness for Mainstreaming of Learners with Special Needs in Public Primary Schools in Masaba South Sub County. A Case Study of Kisii County, Kenya.	It is necessary to provide training to expose teachers to the knowledge and skills of managing students with special needs.	Asian Journal of Education and Social Studies (2021)
12.	Access to Qualified Special Educators Across Elementary Neighborhood and Exclusionary Schools	There was no significant relationship between teacher preferences and school type placement.	Sage Journals

Discussion

Table 1 shows the general information of the research articles included in this literature review. As a result of competencies aspects analysis, three main aspect related to the research, namely (1) Knowledge, (2) Skills, and (3) Attitude of special education teacher. Each of these characteristics is discussed below.

Competencies Aspect 1 : Knowledge

The Education Act 1996 which is the basis for the country's systematic education system states clearly in subsection (1) that no one can teach unless the teacher is registered under the Education Act 1996. Based on this deed, a teacher needs to undergo training and have a certificate of education before being recognized as qualified to carry out duties as an educator in any registered educational institution in Malaysia. Through this act, it is a guarantee to the professionalism of the teacher's career that emphasizes quality and knowledge.

Therefore, teacher's profession aims to deliver knowledge that can improve the students' development. To achieve this objective, teachers need to equip themselves with solid knowledge, experience and training. they serve as agents of change who can help MBPK Learning in the context of education (Mohd Razali, 2008). The importance of teachers' knowledge in ensuring smooth and impactful teaching to students is an aspect emphasized in this study. Romina et al (2010); Barnett (2010); Salleh et al (2012); Salleh and Mokhtar (2018); Farahah et al (2018) also support this view, emphasizing the need for teacher knowledge as an important factor in the teaching process.

In line with the Teacher Achievement Standard set by MOE in 2016, teacher knowledge not only involves a widespread and up-to-date understanding of Specific Vocational Skills (KVS) subjects, but also requires an understanding of the appropriate and effective PdP strategies, approaches, methods and techniques. This suggests that teachers who are proficient and knowledgeable can have a positive impact on SSN learning.

Competencies Aspect 2 : Skills

Proficiency is an element of competence required by the MOE in Standard Guru Malaysia (SGM) (Norfarahin et al., 2021). According to a study conducted by Zuber et al (2020), 21st century skills consist of a collection of knowledge, skills, work habits, characteristics that build trust and are applied in a work setting. In line with that, Carnevale (2013) also explained that skills in the 21st century involve cognitive efficiency skills, problem-solving and decision-making skills apart from the ability to maintain personal qualities.

According to the SGM, Beare (2001) has identified that some of the components of competence includes curriculum, pedagogical skills and skills in making assessments, contributions to schools and the teaching profession (Siraj & Sani, 2012). Curriculum proficiency means that teachers need to master the entire content knowledge related to the field that they are teaching. Aqila et al (2019) stated that the existing educational structure focuses more on information content, pedagogical methods and achievement in standardized examinations, thus ignoring the main needs of a special education program that should meet the diversity of SSN.

Additionally, teachers should also be able to effectively design the teaching process (Beare 2001). Accordingly, in the 2016 MOE Teacher Achievement Standard, the curriculum proficiency domain of the achievement standard involves providing lesson plans and practice sessions that include appropriate teaching and learning elements based on standard curriculum documents or practice modules. Apart from that, teachers must be able to design the implementation of teaching and learning process by applying appropriate techniques and ensuring that SSN can actively engage, master the learning and complete assignments based on their level of understanding.

Competencies aspect 3 : Attitude

The principles of psychology that shape teachers' attitudes through psychological development and integrity consist of competent traits that help teachers adjust in any situation, autonomous traits that help control life goals and how teachers form relationships with others (Wehman, 2013). Therefore, having a positive attitude is a very important necessity to ensure that the spirit of educating can maintain its momentum and teachers' efforts can continue to create a conducive teaching environment (Derapa et al., 2018). This is in line with the fact of Shaffeei (2020) in his study, that teachers who are high-spirited Abrami et al (1982) and have a sense of humor Kaplan & Pascoe (1977) can also contribute to improving the quality of their teaching.

Furthermore, this situation illustrates the relationship between teacher attitude and teacher personal quality consists of various aspects. If a person shows a great attitude in himself then this individual is considered as a competent person and is able to improve the weaknesses of the self and strive to increase the creativity (Norazilawati et al., 2014; Nooraini & Abdul Halim, 2017). In relation to that, Saedah et al (2012) have also outlined the characteristics that need to be exhibited by competent teachers in the aspect of attitude, namely can work collaboratively; committed to the task of educating and focusing on the development of educational, personal, social and moral aspects; carrying out responsibilities with good ethics, which is by respecting the rights of each individual; acting consistently and fairly; need to be innovative in finding innovative resolutions to educational issues and being able to attracts interest.

Summary and Conclusion

Teachers' readiness in teaching is important to ensure the successful implementation of vocational special education among SSN. Knowledge, skills and attitudes play an interrelated role in shaping teacher readiness. Teachers need to have a strong knowledge base about special education needs, the vocational program and evidence-based strategies. They also need to develop a range of skills, including diverse teaching and collaboration, to effectively fulfill the individual needs of SSN (Hillel Lavian, 2015). A positive attitude towards SSN is no less important, as it can create a conducive learning environment and sustain the goals of education. By dealing with this dimension of teacher readiness, educators can improve their ability to implement vocational teaching for SSN Learning.

This is also in line with Hay McBer's Iceberg Competency Model (1996) which outlines three main components of competence, namely knowledge, skills and personal characteristics (attitudes). Skills and knowledge are the components that are easily identified and acquired through courses or training. It is usually associated with a teacher's academic credentials. While personal characteristics are components that are more difficult to identify but play an important role in determining teacher performance. These are related to aspects of social roles, personality, self-confidence, motivation and values. Hay McBer's Iceberg competency model is quite popular in explaining teacher competency and is often used by researchers (Saedah & Mohammed Sani, 2012; Mestry & Grobler, 2005; Jupri et al., 2016; Jaafar, 2014).

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